

3rd International Congress on Neurobiology, Psychopharmacology & Treatment Guidance

ICNP2013



May 30th - June 2nd 2013
Thessaloniki Greece
The Met Hotel



INTERNATIONAL SOCIETY of NEUROBIOLOGY
& PSYCHOPHARMACOLOGY



World Psychiatric Association

Under the auspices of:



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Aristotle University of Thessaloniki, Greece



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ICNP2013

3rd International Congress on
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Dear colleagues,

After the great success of **ICNP2011**, this third Congress aims again at being useful for the clinician who fights everyday in the first line for the treatment of real-world patients. In this frame, our goal is to provide a global and comprehensive update of the newest developments in Psychiatry and the allied sciences, in a way which should be both focused and enriched.

Once more, many world experts have been invited to share with us their knowledge and experience, again under the support and guidance of the World Psychiatric Association and the Auspices of the School of Medicine, Aristotle University of Thessaloniki and important international associations.

The central axis is the teaching and application of clinical useful new knowledge with special focus on the informed treatment with psychopharmacological agents in a truly multidisciplinary approach. Although the congress will embrace high tech research concerning psychopathology, new treatment methods, genetics and molecular biology, it also aims to put the emphasis on the human factor, both the therapist and the patient. Because apart from the humanistic tradition of psychiatry and allied sciences, the continuous and unconditional investment on the high level training of professionals and the education of patients and their families, has emerged as a significant challenge during the last few decades. Citizen empowerment should be the ultimate goal.

Medical scientists and public health policy makers are increasingly concerned that the scientific discoveries are failing to be translated efficiently into tangible human benefit. Today, in an all the more complex and technologically advanced environment, the human factor emerges again as the most valuable one, the factor that determines the final outcome.

We count on your active participation through the presentation of your work on any of the thematic topics of the congress. Your scientific contribution will be most welcomed and your particular contributions highly appreciated.

As hosts and organizers, we shall spare no effort in making your participation scientifically rewarding and meaningful and your stay in Thessaloniki and Greece as enjoyable as possible.



Konstantinos N. Fountoulakis
As. Professor of Psychiatry,
Aristotle University of Thessaloniki, Greece

Chair of the Organizing Committee
3rd International Congress on Neurobiology,
Psychopharmacology & Treatment Guidance

Main Topics

The main topics of the Congress are the following:

- Abnormal Psychology
- Animal Models
- Anxiety disorders
- Basic Neuroscience
- Behavioural disorders
- Bioethics
- Biological rhythms
- Biomedical Technology
- Childhood and adolescence disorders
- Clinical Psychiatry
- Clinical Psychopharmacology
- Dementia
- Developmental Psychology
- Drug development
- Eating disorders
- Evidence-based psychiatry
- Experimental Psychology
- Experimental Psychopharmacology
- Forensic Psychiatry
- Health Economics and Quality of Life
- Information technology and neuroscience
- Learning abilities and disabilities
- Major disaster and mental health
- Memory and cognitive disorders
- Methodology in Psychiatric research
- Molecular Psychiatry
- Mood disorders
- Neural Networks
- Neuroimaging
- Neuropsychology
- Neurophysiology
- Neuropsychobiology
- Neuropsychoenocrinology
- Non pharmacological biological therapies
- Nosology and classification
- Personality
- Pharmacogenetics
- Psychiatric Genetics
- Psychobiology
- Psychogeriatrics
- Psychoimmunology
- Psycholinguistics
- Psychometrics
- Psychopathology
- Psychopharmacology
- Psychophysiology
- Psychosocial and other non-biological therapies and interventions
- Schizophrenia and other psychotic disorders
- Sexual behaviour and disorders
- Sleep
- Social Psychiatry
- Stress
- Substance abuse and dependence
- Suicide
- Temperament
- Transcultural Psychiatry
- Treatment guidelines
- Violence

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4th International Congress on Neurobiology, Psychopharmacology & Treatment Guidance

from Healing to Citizen Empowerment

ICNP2015



May 27th - 31st, 2015

Thessaloniki Greece



INTERNATIONAL SOCIETY of NEUROBIOLOGY
& PSYCHOPHARMACOLOGY

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Scientific Program

Thursday, May 30th 2013 - Maistros Hall

09.00-10.30 Symposium

Psycho-Endocrinology

Chairpersons: **George Mastorakos** (Greece) and **Dimitrios G. Goulis** (Greece)

Hypothalamus: Anatomic and physiologic considerations

Athina Kaprara (Greece)

Metabolic actions of CNS-acting drugs

Christos P. Tsametis (Greece)

Endocrine diseases that affect CNS function

Paschalia K. Iliadou (Greece)

Stress: the complex interaction between CNS and endocrine system

George Mastorakos (Greece)

*The Symposium is organized by
the Hellenic Association of Endocrinology*

10.30-12.00 Symposium

Bipolar Affective Disorder: Discussion about difficult clinical questions

Chairpersons: **Charalampos Touloumis** (Greece) and **Christos Tsopelas** (Greece)

Physical morbidity in Bipolar Affective Disorder

Maria Dimitraka (Greece)

Diagnosis of hypomania in outpatient clinics or private practice. Is it possible?

Christos Tsopelas (Greece)

Treatment resistant Bipolar Affective Disorder

Petros Ntounas (Greece)

12.00-12.30 Coffee Break

12.30-13.00 Plenary Lecture

Chairperson: **Gregoris Simos** (Greece)

Platelet Serotonin Re-Uptake Velocity Predicts Anterior Cingulate Activity

Lukas Pezawas (Austria)

Thursday, May 30th 2013 - Maistros Hall

13.00-14.30 **Symposium**

Addiction: A core mechanism leading to different neuro-cognitive consequences

Chairpersons: **Nash Boutros** (USA) and **Salvatore Campanella** (Belgium)

Neurophysiological frontal brain dysfunction, reward-sensitivity and sense of inefficacy in gambling behaviour

Michela Balconi (Italy)

Evaluation of Frontal Lobe Dysfunction and its relationship with electrophysiology in Cocaine-Dependent Patients

Nash Boutros (USA)

Alcohol-related context affects heavy drinkers' performance in a Go-Nogo task: an ERP assessment

Salvatore Campanella (Belgium)

Left parietal cortex event related potential (ERP) deficits in drug-free recreational Ecstasy/MDMA users, during verbal recognition memory performance

Andrew C. Parrott (UK)

*The Symposium is organized by
the WPA Psychophysiology Section*

14.30-16.00 **Break**

16.00-17.30 **Symposium**

Disturbed connectivity in schizophrenia: Integration of EEG and fMRI

Chairperson: **Christoph Mulert** (Germany)

Resting-state EEG coherence in patients with first-episode schizophrenia

Christina Andreou (Germany)

Reduced early auditory evoked gamma band response in patients with schizophrenia

Gregor Leicht (Germany)

Diffusion tensor imaging in schizophrenia: Relationship to psychopathology and genetics

Christoph Mulert (Germany)

The role of interhemispheric connectivity during dichotic listening in schizophrenia. An EEG and LORETA study.

Saskia Steinmann (Germany)



Thursday, May 30th 2013 - Maistros Hall

17.30-19.00 **Symposium**

Free Radicals and Lymphatics: Applications to Neuropsychiatry

Chairpersons: **Sofia Tsaluchidu** (Italy) and **Ian H. Treasaden** (UK)

Free radicals and the role of lymphatics

Basant K. Puri (UK)

Fibromyalgia

Ian H. Treasaden (UK)

Iron deficiency, sleep disturbances, essential fatty acids and ADHD

Shlomo Yehuda (Israel)

The pathophysiology of neurolymphatic disease

Raymond N. Perrin (UK)

Neuropsychiatric treatment implications

Sofia Tsaluchidu (Italy)

19.00-19.30 **Coffee Break**

19.30-20.00 **Plenary Lecture**

Chairperson: **Basant K. Puri** (UK)

Pharmacological treatment of sexual dysfunction in psychiatric patients

Dimitrios Hatzichristou (Greece)

20.00-21.30 **Symposium**

Challenges Encountered With Current Diagnostic Criteria

Chairpersons: **Mesut Cetin** (Turkey) and **Melina Siamouli** (Germany)

Challenges encountered in diagnosing mood disorders after trauma

Oguz Karamustafalioglu (Turkey)

Bipolar III: Is it a distinct diagnosis?

Haluk Savas (Turkey)

How to differentiate ADHD from bipolar disorder?

Ilhan Yargic (Turkey)

Do clinicians overlook denial of pregnancy in classification systems?

Nazan Aydin (Turkey)

Diagnostic and classification considerations concerning schizoaffective disorder

Melina Siamouli (Germany)

*The symposium is co-organized
by the Turkish Association for Psychopharmacology and the ISNP*

Friday, May 31st 2013 - Maistros Hall

08.30-10.00 **Symposium**

Lyme disease and neuroborreliosis

Chairpersons: **Jean A. Monro** (UK) and **Peter O. O. Julu** (UK & Sweden)

Spirochaetes and Lyme Disease

Basant K. Puri (UK)

Environmental Medicine Aspects

Jean A. Monro (UK)

Epidemiology and Symptomatology of Lyme Disease and Neuroborreliosis

Basant K. Puri (UK)

Functions of autonomic target-organs in neuroborreliosis

Peter O. O. Julu (UK & Sweden)

10.00-11.30 **Symposium**

Brain pathologies and cognition in old age

Chairpersons: **Constantin Bouras** (Switzerland)
and **Panteleimon Giannakopoulos** (Switzerland)

Brain pathologies and cognition in old age

Constantin Bouras (Switzerland)

Alzheimer disease at the crossroads: Identification of at risk individuals and
therapeutic perspectives

Panteleimon Giannakopoulos (Switzerland)

Clinical expression of microvascular burden in the elderly

Gabriel Gold (Switzerland)

Non-AD dementias: Phenotypic expression and pathological substrates

Eniko Kovari (Switzerland)

11.30-12.00 **Plenary Lecture**

Chairperson: **Apostolos Iacovides** (Greece)

**Cognitive dysfunction associated with bipolar disorder: Theoretical issues
and psychosocial implications**

Lefteris Lykouras (Greece)



Friday, May 31st 2013 - Maistros Hall

12.00-12.30 **Plenary Lecture**

Chairperson: **Apostolos Iacovides** (Greece)

Neuropsychiatry as an Interdisciplinary Medical Field

Constantinos R. Soldatos (Greece)

12.30-13.00 **Coffee Break**

13.00-14.00 **Symposium**

Recent developments in neuroscience

Chairpersons: **Feyza Aricioglu** (Turkey) and **Dimos Dimellis** (Greece)

Role of glutamatergic system in psychiatry

Feyza Aricioglu (Turkey)

Neuroimaging in depression

Ali Saffet Gonul (Turkey)

Neuroimaging in OCD

Yasin Bez (Turkey)

Pharmacogenetics of drug metabolizing enzymes in psychopharmacology

Umit Yasar (Turkey)

Novel antidepressants: the pipeline running dry

Dimos Dimellis (Greece)

*The symposium is co-organized
by the Turkish Association for Psychopharmacology and the ISNP*

14.00-14.30 **Plenary Lecture**

Chairpersons: **Ioannis Diakogiannis** (Greece) and **Vasilis P. Bozikas** (Greece)

Are Bipolar Mixed States more than Depression and Mania?

Giulio Perugi (Italy)

14.30-15.00 **Plenary Lecture**

Chairpersons: **Ioanna Ierodiakonou-Benou** (Greece)
and **Athanasios Douzenis** (Greece)

**Mitochondrial function and autophagy - new avenues in the research of
bipolar disorder and its treatment**

Haim Einat (Israel)

Friday, May 31st 2013 - Maistros Hall

15.00-15.30 **Break**

15.30-16.00 **Plenary Lecture**

Chairpersons: **Michael Sotiriou** (Greece) and **Stamatia Mageiria** (Greece)

Rhythm desynchronization and clock resetting

Yvan Tuitou (France)

16.00-17.30 **Symposium**

Research Advances in Affective Temperaments

Chairpersons: **André F. Carvalho** (Brazil) and **Thomas N. Hyphantis** (Greece)

Towards an integrative model for the comprehension of psychopathology

Hudson de Carvalho (Brazil)

Affective temperaments: intermediate phenotypes for affective disorders?

André F. Carvalho (Brazil)

Affective Temperaments, Ego Defense Mechanisms and Somatization

Thomas N. Hyphantis (Greece)

The pathoplastic role of affective temperaments in the emergence of suicidal behaviour

Xenia Gonda (Hungary)

17.30-18.00 **Plenary Lecture**

Chairpersons: **Christina Toni** (Italy) and **Athanasios Vidalis** (Greece)

Precision psychiatry: First steps towards individualized treatment of Bipolar disorder

Dina Popovic (Spain)

18.00-18.30 **Plenary Lecture**

Chairperson: **Haim Einat** (Israel)

Genetic factors contributing to medical comorbidity in schizophrenia

Dimitrios Dikeos (Greece)

18.30-19.00 **Coffee Break**



Friday, May 31st 2013 - Maistros Hall

19.00-20.30 **Symposium**

The project for the development of Greek Clinical guidance for mental illness

Chairpersons: **Venetsanos Mavreas** (Greece) and **Ioannis Nimatoudis** (Greece)

Introductory remarks

Venetsanos Mavreas (Greece)

Schizophrenia

Ioannis Nimatoudis (Greece)

Bipolar disorders

Konstantinos N. Fountoulakis (Greece)

Unipolar depression

Lefteris Lykouras (Greece)

Anxiety disorders

Petros Skapinakis (Greece)

Dementia

Antonis Politis (Greece)

20.30-22.00 **Satellite Symposium**

Chairperson: **Ioannis Nimatoudis** (Greece)

Neurobiological mechanisms mediating the treatment effect in bipolar disorder

Stephen Stahl (USA)

Clinical research proof for acute and long term treatment in bipolar disorder

Konstantinos N. Fountoulakis (Greece)

The symposium is sponsored by AstraZeneca

Saturday, June 1st 2013 - Maistros Hall

08.30-10.00 **Symposium**

Psychotherapy in Psychiatry - a German perspective

Chairperson: **Georg Juckel** (Germany)

Operationalized psychodynamic diagnostics (OPD) in patients in prodromal states of schizophrenia-implications for psychotherapy

Georg Juckel (Germany)

Dialectic-Behavioral Therapy in outpatients with Borderline personality disorder

Oliver Hole (Germany), **Elina Sakellaridou** (Germany),
Christos Chrysanthou (Germany)

Bridging the gap between psychological first aid and traumatherapeutic interventions: The psychotherapeutic emergency management of large scale disasters

Alexandra Dittmann-Balcar (Germany), **Stefan Bender** (Germany)

10.00-11.30 **Symposium**

Treatment of bipolar disorder accorss the life span: From research into the clinical arena

Chairperson: **Martha Sajatovic** (USA)

The clinical approach to patient with bipolar disorder diagnosis

Giuseppe Tavormina (Italy)

Bipolarity in adolescent: Difficulties for the diagnosis

Nicolas Zdanowicz (Belgium)

How to prove that a patient has bipolar disorder

Mark Agius (UK)

An update on treatments of later-life bipolar disorder

Martha Sajatovic (USA)

11.30-12.00 **Plenary Lecture**

Chairperson: **Giuseppe Tavormina** (Italy)

Psychiatric genetics 2020: A roadmap approach

Thomas G. Schulze (Germany)

Saturday, June 1st 2013 - Maistros Hall

12.00-12.30 Plenary Lecture

Chairperson: **Anna Maria Moeller-Leimkühler** (Germany)

Efficacy assessment of anti-manic agents via use of direct and indirect evidence

Ayşegül Yildiz (Turkey)

12.30-13.00 Coffee Break

13.00-14.30 Satellite Symposium

Setting the Treatment Goals in Schizophrenia & Schizoaffective Disorder

Chairperson: **Elias Aggelopoulos** (Greece)

Paliperidone & Paliperidone Palmitate: an evaluation of the present whilst awaiting the future developments

Charalampos Touloumis (Greece)

A Debate on Treatment Therapy Approaches in Schizophrenia

Dimos Dimellis (Greece) - **Panagiotis Kakkavas** (Greece)

The symposium is sponsored by Janssen

14.30-16.00 Symposium

The meta-analytic studies in Psychiatry: Have we learned anything?

Chairpersons: **Hans-Jurgen Moeller** (Germany) and
Konstantinos N. Fountoulakis (Greece)

40000 patient network meta-analysis of 15 antipsychotic drugs in schizophrenia

Stefan Leucht (Germany)

Recent meta-analyses in mood disorders: An ongoing debate

Konstantinos N. Fountoulakis (Greece)

The pharmacological management of obsessive compulsive disorder:

The evidence from published meta-analyses.

Petros Skapinakis (Greece)

Four decades of research on psychotherapy for depression: An overview of meta-analyses

Pim Cuijpers (The Netherlands)

Saturday, June 1st 2013 - Maistros Hall

16.00-16.30 **Plenary Lecture**

Chairperson: **Ioannis Nimatoudis** (Greece)

DSM-5 and its potential consequences for treatment

Hans-Jurgen Moeller (Germany)

16.30-17.00 **Satellite Lecture**

Chairperson: **Philippos Kouniakis** (Greece)

What we Expect from Antipsychotic treatment? The Role of Ziprasidone

Georgios Papageorgiou (Greece)

The lecture is sponsored by Pfizer

17.00-17.30 **Plenary Lecture**

Chairperson: **Lukas Pezawas** (Austria)

Revisiting “The Self-Medication Hypothesis” in Light of Recent Neurobiology of Comorbid Addictive States in Schizophrenia

George Awad (Canada)

17.30-18.00 **Plenary Lecture**

Chairperson: **Martha Sajatovic** (USA)

Introduction into the schizophrenia guidelines of the World Federation of Societies of Biological Psychiatry

Peter Falkai (Germany)

18.00-18.30 **Plenary Lecture**

Chairperson: **Hans-Jurgen Moeller** (Germany)

Antidepressant response and subthreshold bipolarity in “unipolar” major depression - Implications for practice and drug research

Zoltán Rihmer (Hungary)

18.30-19.00 **Plenary Lecture**

Chairperson: **Hans-Jurgen Moeller** (Germany)

The challenges facing the makers of classifications of mental disorders

Norman Sartorius (Switzerland)

19.00-19.30 **Coffee Break**



Saturday, June 1st 2013 - Maistros Hall

19.30-21.00 **Satellite Symposium**

Achieving treatment goals in depression

Chairperson: **Georgios Garyfallos** (Greece)

Introduction

Georgios Garyfallos (Greece)

The importance of full remission in depression

Vasilis P. Bozikas (Greece)

Unmet needs: Do we have answers?

Dimos Dimellis (Greece)

Switching to SNRIs from other antidepressants: Why and how

Petros Fotiadis (Greece)

The symposium is sponsored by Pharmaserve-Lilly S.A.C.I.

21.00-21.30 **Awards ceremony** chaired by **Hagop S. Akiskal** (USA)

21.30 **Congress party**

Open for all congress participants

Sunday, June 2nd 2013 - Maistros Hall

08.30-09.00 **Plenary Lecture**

Chairperson: **Philippos Kouniakis** (Greece)

Association of GDNF gene variants with tobacco consumption in three ethnic groups from India

Arundhuti Das (India)

09.00-10.30 **Symposium**

Depression and anxiety: conceptualization and treatment

Chairpersons: **Konstantinos N. Fountoulakis** (Greece)
and **Stamatia Mageiria** (Greece)

Anxiety and depression: an overview

Stefania Moissidou (Greece)

Non-biological etiopathogenesis of depression and anxiety and their comorbidity

Ioanna Koufaki (Greece)

Non-biological treatments

Stella Miziou (Greece)

Neurobiological etiopathogenesis of anxiety, depression and their comorbidity
- Biological treatment options

Stamatia Mageiria (Greece)

10.30-12.00 **Symposium**

Bipolar Disorder: The cognitive perspective

Chairpersons: **Georgios Garyfallos** (Greece), **Vasilis P. Bozikas** (Greece)

The predictive significance of neuro-cognitive factors for functional outcome in bipolar disorder

Vasilis P. Bozikas (Greece)

Semantic priming in remitted patients with bipolar disorder

Christina Andreou (Germany)

Familial comorbidity of bipolar disorder and multiple sclerosis:

Genetic susceptibility, coexistence or causal relationship?

Mary H. Kosmidis (Greece)

Controlled shifting of attention while inhibiting spontaneous responding in schizophrenia and bipolar disorder through a dichotic listening paradigm

Stella Tsotsi (Greece)



Sunday, June 2nd 2013 - Maistros Hall

12.00-13.30 **Symposium**

The Phenomenology of Voluntary Control

Chairperson: **Philip V. Kargopoulos** (Greece)

Primary and secondary consciousness in voluntary control

Koralia Paspala (Greece)

The phenomenology of volition

Manina Donikis (Greece)

Structure and composition of the inventory for evaluating human behavior
consciousness and volition

Magda Nigritinou (Greece)

Ways for assessing willingness and consciousness in human activities

Elena-Ioanna Nazlidou (Greece), **Magdalini Baxevani** (Greece),

Krystallia Pantiou (Greece)

13.30-15.00 **Symposium**

MicroRNAs and schizophrenia

Chairperson: **Emmanouil Rizos** (Greece)

MicroRNAs and Human Disease

Nikolaos Siafakas (Greece)

MicroRNAs in cellular physiology and psychiatric disorders

Vassilis Zoumpourlis (Greece)

MicroRNAs as biomarkers for schizophrenia cancer and other CNS disorders -
The role of mir-183 as a possible molecular protective biomarker for cancer in
schizophrenic subjects

Emmanouil Rizos (Greece)

15.00

Closing Ceremony

Saturday, June 1st 2013 - Zephyros Hall

11:00-12:30 Satellite Health Educational workshop
Administration of Long-Acting Injectable Antipsychotics

Maria Nystazaki
Psychiatric Nurse, MSc, Greece

The Depot and Long-Acting Injectable (LAIs) antipsychotics are regularly administered by nurses in hospital and community mental health or primary care facilities. The Depots and LAIs help in better patient compliance. Nurses can play an important role in promoting the health of patients by injection therapy. Current literature data add important new information to our basic knowledge for intramuscular administration.

Evidence based practices regarding the administration of Depots/LAIs formulations focus on new techniques and sites for injection that if adopted by nurses could lead to improved mental health services for users of.

The purpose of this workshop is providing documented information on practical issues of LAIs/Depot administration and improving administration skills by adopting new techniques.

Sponsored by Pharmaserve-Lilly S.A.C.I.



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Athanasios Koukopoulos
(1931-2013)



Odysseas Mouzas
(1955-2013)

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Neurobiology, Psychopharmacology and Treatment Guidance
May 30th - June 2nd 2013, Thessaloniki, Greece, The Met Hotel

This is accredited with CME credits by SEMS-EACCME

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- European Psychiatric Association

THE ONLINE SUBMISSION SYSTEM IS CLOSED. WE REQUEST YOU TO SUBMIT THE ABSTRACTS UNTIL MAY 10th 2013.

DOWNLOAD THE SCIENTIFIC PROGRAM OF THE CONGRESS

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Written by Antonios Mousoulas, 12 July 2013

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Recently published articles

- Major Depressive Disorder: Amino acid synthesis after failure of the initial treatment
- Treatment of acute bipolar depression
- ICD-10 vs ICD-11 on Diagnostic Criteria for Schizophrenia - Editorial comment
- Antipsychotic Polypharmacy
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General Information

Congress Venue

The Met Hotel, Thessaloniki, Greece
48, 26th October Str., Tel: +30 2310 017 000, www.themethotel.gr

How to get to The Met Hotel

The Met Hotel can be reached easily by public transport or by taxi. Please visit the official web site to see the city map for further information.
(www.psychiatry.gr)

Official Language

English will be the official language of the Congress.
All printed material and poster presentations will be in English.

CME Accreditation

The congress has been accredited with **21 CME** credits for the main congress program, by the European Accreditation Council for Continuing Medical Education (EACCME) Institution of the UEMS, to provide CME activity for medical specialists, recognized by the American Medical Association (AMA).

Certificate of Attendance

Certificates of attendance will be handed out upon request from the registration counter on Sunday, June 2nd 2013.

E-Posters

All E-posters will be presented electronically and they will also be available on-line. No hardcopies will be handed. The E-posters will be presented on Friday, May 31st and Saturday, June 1st, 2013 in the exhibition area.

Poster Awards

The International Society on Neurobiology and Psychopharmacology announces 5 awards for the 5 best posters which will be presented during the 2013 conference.

All submitted posters are considered candidates for the awards, unless otherwise stated by the author(s).

Chairperson of the Posters Award Jury: Giulio Perugi (Italy)

Abstract Book

The scientific program will be available online (pdf format) at www.psychiatry.gr/3icnpepatg/final-program.pdf. The abstract book will be published as a hard copy and will be available online at www.psychiatry.gr/3icnpepatg/abstract-book.pdf.

The full posters will be available online (pdf format) at www.psychiatry.gr/3icnpepatg/posters.pdf.

Exhibition

Within the Congress area there will be an exhibition of medical equipment and pharmaceutical products.

Presentations

Available visual equipment for all presentations will be through power point presentation. For power point use, your presence to the “technical reception desk” is required one hour prior to the time of your presentation in order to check the compatibility of your cd or usb stick and to copy the relevant files. Use of personal computers will not be feasible.

Registration Fees

TYPE OF REGISTRATION	GROUP A countries	GROUP B countries	GROUP C countries	GROUP D countries
Specialists	300€	150€	100€	Free
Residents	150€	75€	50€	Free
Other mental health professionals	50€	Free	Free	Free
Students	Free	Free	Free	Free

Note: For countries classification visit the official web site (www.psychiatry.gr).

For free registrations the congress bag will be provided for 25 euros and according to availability.

All the scientific proceedings including book of abstracts will be available for free online in pdf format.

On-site Registration

Participants who wish to register on-site are advised to arrive early. On-site registration will be processed on a first-come, first-served basis. Priority will be given to pre-registered delegates. Depending on the number of onsite registered delegates, availability of congress bags may be limited.

Name Badges

All participants are requested to wear their name badge at all times during all Congress Events.

Hotel Rates

Hotel Name	Type	Room for Single and Double use
The Met Hotel	Deluxe	145€
Porto Palace Hotel	Deluxe	115€

The above rates are daily per room including continental breakfast and taxes in Euro.

Taxis

Taxis are available in front of the airport as well as the hotel entrance.

Insurance

We can not accept responsibility for any personal loss, accidents or damages to participants and/or accompanying persons. Participants are strongly advised to obtain personal insurance to cover any eventuality that may occur during the Congress.

Climate

The climate in Thessaloniki is relatively mild and is typically mediterranean. In late May the average temperature is approximately 30 °C during the day. Fluctuation between day and night temperatures is about 5 °C.

Travel to Thessaloniki

Thessaloniki has one international airport, the Makedonia Airport with international flights to major cities all over the world. It is linked to public transportation and there is also a taxi station nearby.

For further information regarding the Congress visit the Congress's web site:

www.psychiatry.gr

Congress Secretariat



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PROCEEDINGS

Thursday, May 30th 2013 - Maistos Hall

09.00-10.30 **Symposium**

Psycho-Endocrinology

Chairpersons: **George Mastorakos** (Greece) and **Dimitrios G. Goulis** (Greece)

*The Symposium is organized by
the Hellenic Association of Endocrinology*

Hypothalamus: Anatomic and physiologic considerations

Athina Kaprara

Unit of Reproductive Endocrinology, First Department of Obstetrics & Gynecology, Medical School, Aristotle University of Thessaloniki, Greece

The field of psychoendocrinology has expanded its limits to encompass multiple reciprocal interactions between endocrine functions and central nervous system through the regulated secretion of hormones, neurotransmitters and neuromodulators by specialized secretory cells.

The hypothalamus is one of the most essential regions of the mammalian brain and it orchestrates coordinated endocrine, autonomic and behavioral responses through outputs to regulatory sites, such as anterior and posterior pituitary gland, cerebral cortex, premotor and motor neurons in the brain stem and spinal cord, and parasympathetic and sympathetic preganglionic neurons.

The pituitary gland or hypophysis is an endocrine gland that protrudes of the bottom of the hypothalamus at the base of the brain. It can be divided into two parts, the adenohypophysis or anterior pituitary and the neurohypophysis or posterior pituitary. Both lobes are functionally linked to the hypothalamus by the pituitary stalk. The adenohypophysis comprises the pars tuberalis, and the pars distalis. The neurohypophysis, in turn, is composed of the infundibular stem, the pars nervosa and median eminence. In most vertebrates, the pituitary contains a third anatomically distinct lobe, the pars intermedia or intermediate lobe. In adult humans, only rudimentary vestiges of the intermediate lobe are detectable, with the bulk of its cells being dispersed in the anterior and posterior lobes. Pituitary's function is regulated by hypothalamic inputs, feedback effects of circulating hormones, and paracrine and autocrine secretions of the pituitary itself. The hypothalamus releases hypothalamic-releasing factors that descend down the pituitary stalk and into the pituitary gland where they stimulate the release of pituitary hormones.

Metabolic actions of central nervous system-acting drugs

Christos P. Tsametis

Unit of Reproductive Endocrinology, First Department of Obstetrics and Gynecology, Medical School, Aristotle University of Thessaloniki, Greece

The use of central nervous system (CNS)-acting drugs, such as anti-psychotics, mood stabilizers and antidepressants, is associated with a wide range of adverse endocrine and metabolic effects including hyperprolactinemia, disorders of water homeostasis, hypothyroidism, hyper-

parathyroidism, reproductive dysfunction, weight loss, weight gain and metabolic syndrome (type 2 diabetes mellitus, dyslipidaemia and hypertension). Metabolic disturbances are more prevalent in patients treated with second-generation (atypical) antipsychotics. Antipsychotic-related metabolic abnormalities are most worrisome, as they are risk factors for cardiovascular morbidity and mortality. The endocrine and metabolic adverse effects of CNS-acting drugs are prevalent and complex but can be managed clinically when recognized.

Options for management of hyperprolactinaemia include lowering doses, switching to agents such as aripiprazole, clozapine or quetiapine, carefully considering the use of dopamine receptor agonists or initiating hormone replacement therapy in women to treat the estrogen deficiency and prevent bone loss.

Disorders of water homeostasis include syndrome of inappropriate antidiuretic hormone (SIADH), which is associated with carbamazepine, oxcarbazepine or selective serotonin-reuptake inhibitors (SSRIs) and can be managed by water restriction or slow replacement by hypertonic saline along with drug discontinuation. Safe management of diabetes insipidus, commonly associated with lithium, involves switching mood stabilizer and consideration of potassium-sparing diuretics.

Hypothyroidism may be associated with quetiapine, antidepressant and lithium use, and can be managed by thyroxine replacement. Hyperparathyroidism is also associated with lithium and requires comprehensive medical evaluation for occult tumours.

Finally, management strategies for obesity and metabolic syndrome include risk assessment, frequent monitoring and interventions, such as lifestyle changes, metformin, symptomatic treatment of emerging problems and switching to an antipsychotic agent that has a lower liability for weight gain or dyslipidaemia.

Endocrine diseases that affect central nervous system function

Paschalia K. Iliadou

Endocrinologist, research associate, 1st Department of Obstetrics and Gynecology, Aristotle University of Thessaloniki, Greece

The endocrine and central nervous systems (CNS) interact extensively, producing results that shape behavior and cognition. Hormones regulate functions such as mood, appetite, learning, memory and sexual activity.

There are a number of examples of CNS abnormalities associated with hormone excess or deficiency. These include depressed mental status that can progress to coma with severe hypothyroidism; psychosis that can occur with glucocorticoid excess; and coma that can occur with hypoglycemia due to insulin excess.

Psychiatric disturbances are frequently observed during the course of endocrine disorders. The differential diagnosis can be complex as the behavioral effects of endocrinopathies often suggest many different psychiatric illnesses. Psychiatric syndromes associated with endocrine dysfunction include mood disturbances, anxiety, cognitive dysfunction, dementia, delirium, and psychosis. Psychiatric symptoms may be the first manifestation of endocrine disease, but often are not recognized as such.

A treatment that primarily targets the endocrine disease may be more effective than psychotropic drugs in affective syndromes associated with such diseases. Examples are the favourable

effects of transsphenoidal adenomectomy upon depression in Cushing's disease or antithyroid agents on anxiety in hyperthyroidism. However, disappearance of psychiatric symptoms upon proper endocrine treatment is not always the case. Long-standing endocrine disorders may imply a degree of irreversibility of the pathological process and induce highly individualized affective responses based on each patient's psychological assets and liabilities.

Stress: the complex interaction between CNS and endocrine system

George Mastorakos

Associate Professor, Endocrine Unit, Aretaieion Hospital, Athens University School of Medicine, Greece

Vertebrates respond to stress with activation of the hypothalamic-pituitary-adrenal (HPA) axis, the adrenergic and the autonomic nervous systems. The principal central nervous system regulators of the HPA axis are corticotropin releasing hormone (CRH) and antidiuretic hormone (AVP). Thus, the stress response is part of the homeostatic response to internal or external challengers of physiological homeostasis. In this presentation paradigms of the functional association between the CNS and the stress response will be elaborated. These will include appetite and food intake, exercise, in utero and postpartum stress and fetal programming, ageing, the immune/inflammatory response and social stress. Special effort will be given to the integrative and eventually teleological interpretation of these mechanisms and adaptive responses.

10.30-12.00 **Symposium**

Bipolar Affective Disorder: Discussion about difficult clinical questions

Chairpersons: **Charalampos Touloumis** (Greece) and **Christos Tsopeles** (Greece)

Physical morbidity in Bipolar Affective Disorder

Maria Dimitraka

Consultant Psychiatrist in Adult Psychiatry, Psychiatric Hospital of Attica, Athens, Greece

Medical comorbidity is more common and more likely to be multiple in patients with bipolar affective disorder compared with control individuals in the general population and is associated with increased premature mortality secondary to general medical illnesses. Cardiovascular disease is responsible for the majority of excess deaths. Bipolar patients are likely to be overweight or obese and to have other cardiovascular disease risk factors that comprise the metabolic syndrome (diabetes mellitus, dyslipidemia and hypertension).

There are a number of possible reasons and contributing factors able to explain the increased level of general medical comorbidity among bipolar patients. Most of the studies assess factors such as poor dietary health, smoking and sedentary lifestyle, substance abuse, decreased access to care and biased attitudes among health care providers, social deprivation or increased risk taking. Recently, there has also been a discussion about the biological factors associated with bipolar illness which may also increase mortality risk from natural causes. Chronic stress which patients experience during the phases of bipolar disorder, is associated with increased

cortisol levels, lack of cortisol suppression, and changes in hypothalamic-pituitary-adrenal axis responses. This metabolic dysregulation may increase insulin resistance and can lead to hyperglycemia, increased oxidative stress, metabolic syndrome, and atherosclerosis. In addition, patients with bipolar illness have increased activity of the sympathetic nervous system, which may also lead to insulin resistance and metabolic syndrome.

There are also the metabolic side effects of the pharmacotherapies used to treat bipolar disorder which increase physical morbidity. Evidence shows that some atypical antipsychotics are associated with weight gain, hyperglycemia, dyslipidemia and other metabolic abnormalities and mood stabilizers, such as lithium, are also associated with increased risks of obesity and metabolic syndrome.

All the above mentioned demonstrate the burden of disease among patients with bipolar disorder and highlight the importance of increased physicians' awareness of comorbid conditions and their prevention, early diagnosis, and treatment which is critical to improving their prognosis. Optimal management in patients with bipolar disorder involves coordination between psychiatric and general medical care although the psychiatrists may need to assume responsibility for monitoring and counseling especially when prescribing medications with potential for metabolic complications.

Diagnosis of hypomania in outpatient clinics or private practice. Is it possible?

Christos Tsopelas

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Contemporary research shows that bipolar disorders are very often faced initially as depression, while the precise diagnosis usually delays 8-10 years or more. As a result of this delay in the diagnosis, the patients do not receive appropriate treatment and are not led to recession of their symptoms. Roughly one third of depressed patients are treated at mental health services and two thirds at the primary care health services. Regarding the psychiatric patients that are treated in the secondary and tertiary mental health services, various researches indicate that the bipolar disorders and especially Bipolar Disorder II are under diagnosed and consequently they do not receive satisfactory treatment with important repercussions in the professional and social existence of Bipolar Disorders' patients. The imperative need for early diagnosis and treatment in patients with bipolar disorders is obvious, in order to decrease the big time of delay in the diagnosis of Bipolar disorders. In this context patient self-completed questionnaires, which are small in duration and well structured, can contribute in the early recognition of disorders of bipolar spectrum in patients that are treated at the outpatient clinics, along with other ways to gain information about each patient's personal history.

Treatment resistant Bipolar Affective Disorder

Petros Ntounas

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The treatment of bipolar disorders is challenging for multiple reasons. Bipolar disorders constitute a heterogeneous group of illness with varying mood symptoms, courses of illness and

comorbid conditions and thus are inherently complex. Nevertheless, efforts to conceptualize how to manage these conditions have met with some success.

Depression is commonly the predominant mood disturbance during the course of bipolar illness. Diagnosing and treating bipolar depression by consequence, constitute one of the most common clinical challenges for clinicians and patients.

The multiphase treatment strategy is a systematic approach to the management of mood disorders based on modification of treatment related to the current illness phase. The foundation of this approach is the notion that there are important differences in therapeutic strategies across three treatment phases: 1) acute treatment 2) continuation treatment 3) maintenance treatment. In view of the complexity of treatment resistant bipolar disorder practice guidelines can be useful.

12.30-13.00 **Plenary Lecture**

Chairperson: **Gregoris Simos** (Greece)

Platelet Serotonin Re-Uptake Velocity Predicts Anterior Cingulate Activity

Lukas Pezawas

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Introduction: Anterior cingulate cortex (ACC) activity has been related to emotion and social stress processing and alterations of ACC function have been implicated in the most severe and prevalent neuropsychiatric diseases such depression. Although the serotonin transporter (5-HTT) rich subgenual portion of the ACC (sACC) has been demonstrated to be under significant genetic control of the serotonin transporter gene (SLC6A4), it remains unknown today whether transmembrane 5-HTT function mediates sACC activity under physiological conditions in adult humans.

Methods: Subjects. Eight healthy male subjects (mean age 28 ± 3.6) were included in our PET study. Forty-eight healthy subjects (mean age 25 ± 4.6 , 31 females) were enrolled in our MRI study.

Data Acquisition. PET: At bolus injection of [^{11}C]DASB the data acquisition started measuring brain radioactivity in a series of 30 consecutive time frames. Total acquisition time was 90 min (15 frames/min plus 15 frames/5 min). Data were reconstructed using an iterative filtered back-projection algorithm (FORE-ITER) with a spatial resolution of 4.36 mm full-width at half maximum (FWHM) at the centre of the field and with a centre-to-centre distance of 3.125 mm resulting in volumes consisting of 35 transaxial sections (128 x 128 matrix). MRI: Scanning of subjects was performed on a 3T Siemens Trio Scanner. Functional magnetic resonance images (fMRI) have been acquired using a phase corrected blipped GE, single shot EPI sequence (TE/TR = 42/2000ms, 96x96 matrix, 210mm square FOV, 20 axial slices, slice thickness = 4mm, slice gap = 1mm). Subjects underwent a paradigm in block-design fashion comprising an emotional (angry/fearful faces and fearful/threatening scenes) and a neutral control matching task (simple shapes).

Uptake experiment: Resuspended platelet solution (50 μl) was incubated for three minutes with various 5-HT (0.03, 0.1, 0.3, 1.3, 10 μM unlabeled and [^3H]5-HT; specific activity 21.5-25.8 Ci/

mmol; constant (0.03 μM), 500 μl KH). Nonspecific uptake was determined at 10 μM serotonin in the presence of 1 μM paroxetine. Uptake was assessed by using a dilution technique with unlabeled 5-HT to reveal V_{max} and K_{m} values (by recalculating and fitting the background-corrected uptake data to Michaelis-Menten kinetics, with c.p.m. values at the highest [5-HT] being 3-9 times over background). Genotyping: DNA samples were subjected to polymerase chain reaction (PCR) to amplify long/short promoter (L/S) DNA fragments. PCR products were separated on 5% Criterion Gels (Biorad) to detect long and short promoter alleles. Part of the PCR reaction was digested by HpaI (New England Biolabs) to detect rs25531. Digestion products were separated on 2% agarose gels.

Results: Here we show a linkage between maximal serotonin uptake velocity (V_{max}) using a *in vitro* model system of neural 5-HTT function in blood platelets and neural activity of the sACC assessed by functional magnetic resonance imaging, a region also showing maximal 5-HTT availability within the cingulate cortex with positron emission tomography. We further report that genetic variation within SLC6A4 cannot sufficiently explain this linkage, which contributes to the understanding of the complex gene-protein-function relationship of 5-HTT.

Conclusions: Our findings expand the knowledge of neuronal consequences of altered 5-HTT protein function by relating *in vitro* measures of 5-HTT function to *in vivo* human brain activity for the first time. While genetic studies investigating the 5-HTT gene have provided insights about developmental effects on brain wiring and consecutive functional changes, this study among others underscores the importance to investigate protein function in order to untangle the complex gene-protein-function relationship in the context of mental illness.

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13.00-14.30 **Symposium**

Addiction: A core mechanism leading to different neuro-cognitive consequences

Chairpersons: **Nash Boutros** (USA) and **Salvatore Campanella** (Belgium)

*The Symposium is organized by
the WPA Psychophysiology Section*

Neurophysiological frontal brain dysfunction, Reward-sensitivity and sense of inefficacy in gambling behaviour

Michela Balconi

Department of Psychology, Laboratory of Cognitive Sciences, Catholic University of Milan, Italy

Introduction: The awareness of being involved and causally determinant in action is a main

constituent of the sense of our behavioural efficacy, and the ability to self-attribute the origin and the consequence of an action to ourselves is important for the understanding of self in relation to action. Disruption of the sense of being effective and causally determinant in performing an action was explored in the present research by considering the subjective responses in pathological gamblers and control subjects. Indeed it was supposed that the sense of inefficacy may conditionate gamblers behavior and engage them to go on with their dysfunctional behaviour of compulsive games. Secondly, the relationship between BIS/BAS system, frontal EEG modulation (theta band) and gambling attitude were considered as explicative factors that may integrate the sense of inefficacy.

Method: EEG were recorded from fifteen pathological gamblers and twenty control subjects when they were submitted to IOWA gambling task. In addition, subjective sensitivity to the external cues was monitored by BIS (Behavioural Inhibition System) and BAS (Behavioural Activation System, especially about the Reward subscale) measures, as well as behaviour identification process was tested by BIF (Behavior Identification Form). Frontal theta frequency band oscillations (ERD) and behavioural measures (BIS/BAS; BIF) were recorded during IOWA performing for the two groups.

Results: Based on a set of ANOVAs and correlational analysis (Pearson coefficient) an increased theta desynchronization (band amplitude reduction), increased Reward-sensitivity and reduced BIF was found in pathological gamblers in comparison with controls. Specifically, they experienced less self-monitoring behaviour and showed decreased frontal theta power during more risk choices than conservative choices of the game. Moreover, a similar profile to that revealed by clinical subgroups was found for a sub-category of control subjects who showed an increased risk-seeking behaviour (more gambler attitude during IOWA).

Conclusions: We supposed that frontal oscillations desynchronization, integrated with Reward-sensitivity and the increased sense of inefficacy, may modulate the gambling attitude, pointing out the interrelation between neurophysiological correlates (frontal dysfunction), trait personality components (Reward), and self-monitoring mechanisms (BIF) of our own behavior. They may be considered as predictive factors of gambling attitude for clinical condition as well as risk factor for sub-clinical condition.

Evaluation of Frontal Lobe Dysfunction and its relationship with electrophysiology in Cocaine-Dependent Patients

Nash Boutros

Wayne State University, Department of Psychiatry and Behavioral Neurosciences, USA

Introduction: There is fairly significant evidence that frontal lobe functioning is affected in Cocaine-dependent subjects. Frontal lobe dysfunction may be the sequelae, a comorbid syndrome, or a risk factor for cocaine use. The relationships between frontal lobe dysfunction and electrophysiological measures of inhibition in cocaine use are unclear. In order to elucidate these relationships, it is necessary to characterize the presence and nature of frontal lobe dysfunction in cocaine-dependent patients, as well as to estimate cortical and subcortical inhibition by means of transcranial magnetic stimulation (TMS) and evoked potential (EP) techniques.

Methods: Using the Frontal System Behavioral Scale (FrSBe), frontal lobe dysfunction was compared between a group of abstinent cocaine-dependent subjects (N=49) and healthy controls

(N=32). The FrSBe scale is a 46 item-self-reporting measure assessing apathy, disinhibition, and executive dysfunction. Furthermore, by obtaining TMS and EP-based electrophysiological measures of inhibition, we assessed the differential associations between these measures with FrSBE-based estimates of frontal lobe dysfunction.

Results: Two-tailed independent samples t-tests showed that patients had significantly higher average scores for disinhibition (Patients: 37.37 ± 5.60 and Controls: 33.22 ± 4.61 ; $t_{79}=3.48$, $p=.0001$) and executive dysfunction (Patients: 45.41 ± 3.98 and Controls: 42.81 Patients: 45.41 ± 3.57 ; $t_{79} = 3.11$, $p=.0003$). However, apathy scores showed only a weak trend towards significance in comparison between groups (Patients: 37.67 ± 4.52 and Controls: 36.22 ± 2.67 ; $t_{79} = 1.64$, $p= 0.11$). Stronger inhibitory function from P200 EP sensory gating measure was significantly associated with lower executive dysfunction in healthy controls ($r= 0.491$, $p=0.007$), but not in cocaine abusers ($r= -0.178$, $p=0.261$). Weaker inhibitory function from N100 EP sensory gating measure was significantly associated with apathy scores in cocaine patients ($r= 0.319$, $p=0.039$), but not in healthy controls ($r= 0.177$, $p=0.358$). Finally, TMS-based measures of cortical inhibition (CSP, LIC1, SIC1) and N100 EP measure of sensory gating, showed a differential correlation with disinhibition score of FrSBe.

Conclusion: Cocaine-dependent patients have disinhibition and executive dysfunction alteration according to FrSBe. Relationships between FrSBe scores and TMS- and EP-based measures, point to potential neurophysiological mechanisms underlying the frontal lobe dysfunction in cocaine-dependent patients.

Alcohol-related context affects heavy drinkers' performance in a Go-NoGo task: an ERP assessment

Salvatore Campanella

Laboratory of Psychological Medicine and Addiction, Free University of Brussels, Belgium

Introduction: Increased alcohol-cue reactivity and altered inhibitory process in heavy social drinkers have been described in studies using event-related potentials (ERPs). Both processes are supposed to be highly active in alcohol-dependent patients to induce relapse. However, in social drinkers, these ones have been classically studied by using brief presentations of pictures and in separate studies. Our aim was, by using long-lasting background pictorial context, to confront social drinkers to a task eliciting high alcohol-cue reactivity in order to verify whether this specifically led to a disrupted inhibitory performance.

Method: We use a visual Go/NoGo task during an ERP recording in which social drinkers have to answer to frequent Go trial (letter M) and to inhibit response towards rare NoGo trials (letter W) that are superimposed on 3 types of background contexts: no context (black screen), alcohol-related and non alcohol-related contexts.

Results: Data suggested that social heavy drinkers displayed more commission errors than light drinkers, but only in the alcohol-related context. This was neurophysiologically indexed by a delayed NoGo P3 component.

Conclusions: Higher alcohol-cue reactivity may lead in social heavy drinkers to poorer inhibitory performance. This may be considered as an important vulnerability factor to develop alcohol misuse. Prevention programs should be designed in order to decrease high arousal of alcohol cues and strengthen cognitive control in young people at-risk.

Left parietal cortex event related potential (ERP) deficits in drug-free recreational Ecstasy/MDMA users, during verbal recognition memory performance

Andrew C. Parrott

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Introduction: 3,4 Methylendioxyamphetamine (MDMA) or “Ecstasy” is a serotonergic neurotoxin in laboratory animals and humans. Abstinent recreational users have been found to display reduced levels of SERT (the serotonin transporter) across all regions of the cerebral cortex (Kish et al, 2010). Ecstasy users also show many memory deficits and other cognitive impairments (Parrott, 2006). This study investigated EEG activity during performance of a memory recognition task.

Method: Fifteen abstinent Ecstasy/polydrug users, were compared with 15 abstinent cannabis users, and 15 non-user controls. Event-related potentials were recorded during performance of a continuous recognition test (Burgess and Gruzelier 2000). The memory stimuli were verbal (words), and non-verbal (faces), with each stimulus type design to preferentially activate the left and right hemispheres respectively (Burgess and Gruzelier 1997).

Results: Memory task performance did not differ significantly across drug-user subgroups and controls. The Ecstasy/MDMA polydrug users however, showed a significant reduction in late-positivity in the left parietal region, an area specifically associated with memory recollection (Burgess et al, 2011). This attenuation occurred during word recognition, but not during facial recognition. Furthermore, the extent of this ERP reduction was statistically associated with subjective reports of poor-memory by the Ecstasy/MDMA users. The left parietal deficit is consistent with other empirical evidence that left hemisphere functions are disproportionately affected by Ecstasy, possibly because the serotonergic system is laterally asymmetrical. For instance acute tryptophan depletion selectively impairs recollection, confirming the modulatory role of the serotonin system for some aspects of neurocognition (Parrott, 2012).

Conclusions: Abstinent recreational Ecstasy/MDMA users displayed reduced brain activity in the left parietal cortex during performance of a verbal recognition task. This finding is consistent with the notion of serotonergic neurotoxicity in the human cerebral cortex.

16.00-17.30 **Symposium**

Disturbed connectivity in schizophrenia: Integration of EEG and fMRI

Chairperson: **Christoph Mulert** (Germany)

Resting-state EEG coherence in patients with first-episode schizophrenia

Christina Andreou

University Medical Center Hamburg-Eppendorf, Department of Psychiatry and Psychotherapy, Psychiatry Neuroimaging Branch, Germany

Adaptation to a complex environment requires the integration of several sources of knowledge such as multimodal sensory information and previous experience. This is thought to be achieved through coherent neural activity along distributed cortical functional networks. In re-

cent years, imaging studies have increasingly focused on the coherent spontaneous activity of the resting brain rather than activity during cognitive tasks. Such experimental designs have the advantage of not being dependent either on performance (often deficient in patients) or on task design differences.

In patients with schizophrenia, fMRI studies have provided evidence for disturbed connectivity in the resting brain, primarily between temporal and prefrontal cortical areas. However, the dynamics of fMRI resting-state networks are quite slow, which is hardly compatible with the fast fluctuations of local and global neuronal oscillations. So far, few studies have assessed functional resting-state connectivity in patients with schizophrenia by means of EEG. Although these studies have provided evidence for diminished neural interactions in patients with schizophrenia compared to healthy controls, the exact dynamics and spatial distribution of these disturbances have not been completely clarified yet.

Here, results are presented from an ongoing study investigating resting-state connectivity, measured by means of EEG source-level lagged phase coherence, in patients with first-episode schizophrenia compared to age-, gender- and education matched healthy controls.

Reduced early auditory evoked gamma band response in patients with schizophrenia

Gregor Leicht

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There is growing evidence of abnormalities of high-frequency oscillations in the gamma range of the electroencephalography in schizophrenia. The generation of neural activity in the gamma band was shown to be critically related to a glutamatergic and GABAergic microcircuit which is also known to be involved in the pathophysiology of schizophrenia. One example of such gamma oscillations is the early auditory evoked gamma band response (aeGBR). We aimed to investigate whether there are altered aeGBR and activity of its sources in the anterior cingulate cortex and/or the auditory cortex (identified as sources of the GBR previously) in schizophrenic patients and in first-degree relatives of schizophrenia patients.

We investigated the early aeGBR and its sources (LORETA source localisation) in 90 medicated patients with schizophrenia and in 17 unaffected first-degree relatives of patients with schizophrenia using an auditory reaction task (comparison with age-, gender- and educational-level-matched control groups).

Evoked power and phase locking of the aeGBR was reduced in schizophrenia patients and healthy first-degree relatives of patients with schizophrenia. This effect was due to a reduced activity in the auditory cortex and the anterior cingulate cortex.

The findings are in line with the hypothesis of a disturbed GABAergic interneural modulation of pyramidal cells in schizophrenia and findings of different schizophrenia risk genes associated with transmission at glutamatergic and GABAergic synapses. The results regarding the first-degree relatives of patients with schizophrenia point to the applicability of this marker as a heritable intermediate phenotype for schizophrenia.

Diffusion tensor imaging in schizophrenia: Relationship to psychopathology and genetics

Christoph Mulert

University Medical Center Hamburg-Eppendorf, Department of Psychiatry and Psychotherapy, Psychiatry Neuroimaging Branch, Germany

Introduction: Schizophrenia is a severe and relatively common mental illness of yet unknown etiology and pathogenesis. Brain dysconnectivity appears to play a crucial role and could be closely related to abnormalities in the brain's white matter tracts. Microstructure of these tracts is widely investigated using Diffusion Tensor Imaging (DTI) and most commonly quantified by Fractional Anisotropy (FA), and a large body of evidence supports abnormalities in schizophrenia.

Methods: Here, we present data of several groups of patients with schizophrenia, including both first episode patients and chronic patients using different analysis techniques for DTI such as streamline tractography after tracing regions of interest (interhemispheric auditory fibers) and TBSS, part of the Oxford Center for Functional MRI of the Brain (FMRIB) Software Library (FSL) for the whole brain. Genotyping was done for 31 SNPs within the CNTNAP2 gene.

Results: Both first episode patients and chronic patients with schizophrenia showed a significant relationship between auditory hallucination scores and the FA values in the interhemispheric fibers. We found a significant influence of several SNPs of the CNTNAP2 gene to fiber tracts in the brain such as the cingulum bundle.

Conclusions: Disturbed structural connectivity in schizophrenia critically depends on genes influencing brain development such as CNTNAP2 and is related to symptoms like auditory verbal hallucinations.

The role of interhemispheric connectivity during dichotic listening in schizophrenia. An EEG and LORETA study

Saskia Steinmann

University Medical Center Hamburg-Eppendorf, Department of Psychiatry and Psychotherapy, Psychiatry Neuroimaging Branch, Germany

Introduction: The dichotic listening (DL) is a common technique to study hemispheric laterality in the auditory domain. In this paradigm, two different consonant-vowels (CV)-syllables were paired and presented simultaneously: one in the right (RE) and another one in the left ear (LE). Typical finding across studies in healthy right-handers is the so-called Right Ear Advantage (REA), which is explained with the preponderance of the contralateral pathways running from the RE to the speech-dominant left hemisphere. According to the "callosal relay model" the stimuli arriving from the LE to the non-dominant right hemisphere requires interhemispheric transfer across the Corpus Callosum (CC) to be efficiently processed in the dominant left hemisphere. Recently, reductions of the REA as well as altered interhemispheric auditory pathways in schizophrenic patients - especially in those who suffer from auditory verbal hallucinations (AVH) - were reported. Moreover, patients with SZ showed a reduced ability to generate gamma

oscillations, which are seen to be related to general interhemispheric auditory transfer functions in dichotic listening. In this study, we aimed to determine alterations in the functional connectivity in patients with SZ compared to healthy controls (HC), and to assess correlations with psychopathological symptoms like AVH.

Methods: 64-channel EEG was recorded in 21 patients with SZ and in 21 ages-, gender- and education-matched HC during a dichotic listening task of six CV-syllables /ba/, /da/, /ga/, /pa/, /ta/ and /ka/. Functional connectivity was investigated between each of the right and left primary and secondary auditory cortices in five frequency bands (delta, theta, alpha, beta and gamma) using a novel nonlinear connectivity method called “lagged phase synchronization” (LSP) provided by eLORETA.

Results: Patients with SZ showed a significant reduced REA compared to HC. Interhemispheric LPS was significantly increased in HC in the gamma range, between right and left secondary auditory cortices, but in no other frequency band, when subject reported the syllable presented to the LE. Furthermore, a significant negative correlation was found between gamma synchrony and laterality index, indicating that stronger interhemispheric connectivity in the gamma range improves the LE-report. Finally, the results of the LPS analysis in patients with SZ will be presented.

Conclusions: Source localization and EEG-based coherence analysis are efficient tools in order to determine mechanisms involved in interhemispheric coupling both in healthy controls as in patients with schizophrenia.

17.30-19.00 Symposium

Free Radicals and Lymphatics: Applications to Neuropsychiatry

Chairpersons: **Sofia Tsaluchidu** (Italy) and **Ian H. Treasaden** (UK)

Free radicals and the role of lymphatics

Basant K. Puri

Imperial College London, UK

There has been an explosive growth in our understanding of the importance of free radicals and the lymphatic system in neuropsychiatric disorders. This lecture will cover the following areas: oxygen toxicity and reactive species; the chemistry of free radicals and related reactive species; antioxidant defences; cellular responses to oxidative stress; oxidative stress and central nervous system disorders; and the lymphatic system.

Fibromyalgia

Ian H. Treasaden

West London Mental Health NHS Trust, UK

Fibromyalgia affects 2% of the adult population, occurring in a sub-group of those with chronic widespread pain. However, 75%-90% of patients are women. It is characterised by altered pain processing which is reflected in abnormalities on functional magnetic resonance imaging

(fMRI). Structural brain changes have also been identified by our research group. However, the exact aetiology remains unclear. There is a high comorbidity with Chronic Fatigue Syndrome (M.E.), Sleep Disturbance, Mood Disorder and Cognitive Symptoms. This presentation will review the current evidence regarding the aetiology of Fibromyalgia, including the evidence for the disorder being due to free radical damage and the implications of this for treatment.

Iron Deficiency, Sleep disturbances, Essential Fatty Acids and ADHD

Shlomo Yehuda

Psychopharmacology Lab., Dept. of Psychology, Bar Ilan University, Ramat Gan, Israel

The hallmarks of ID include decreased mental performance and reversal of several circadian cycles, such as thermoregulation and motor activity. ID reduces the rate of dopamine production and reduces affinity to dopamine D2 receptors. Not least, the disruption in normal functioning of sleep is a prominent consequence.

While the neurochemical basis of sleep mechanisms is controversial the phenomenon itself is known to be mediated by more than a single molecule.

Sleep disturbances accompany a number of the brain related disorders such as ADHD and anxiety. Sleep disturbance is a commonly noted in iron deficient rats and humans, and it is a significant contributor to cognitive deficits. Treatment with a specific mixture of fatty acids improved both the cognitive level and hematological values.

For example, REM deprivation results in increased corticosterone and anxiety levels. In addition, the immune system is also affected, and an increase in proinflammatory and angiogenic interleukins (e.g., IL-1, IL-6, IL-17) has been found. Pretreatment with the mixture of fatty acids protects rats from the angiogenic and the immunological effects of REM deprivation. The relationships between anxiety and free radicals will be discussed.

The relationship between essential fatty acids (EFA) deficiency and ADHD has been demonstrated before. EFA supplementation in deficient ADHD children treated with a mixture of essential fatty acids (ratio 1:4) for 6 weeks showed improvement in subjective and objective measurements of ADHD. Among non deficient children, no difference in treatment effects between the EFA treatment and placebo control groups were noted.

In a study with ADHD children suffering from severe sleep disturbances, most of these children were also iron deficient. The EFA treated group showed improvement in subjective and objective measurements (including hemoglobin level), except for the placebo group.

The pathophysiology of neurolymphatic disease: A possible new classification of chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME) and other neurological disorders

Raymond N. Perrin

UCLAN, UK

New scanning techniques have provided the first visible evidence of the existence of a drainage system for proteins and other large molecular structures from the central nervous system which



involves cerebrospinal drainage through perivascular spaces into the lymphatic system. This latest finding supports the long held view of the author that CFS/ME is a disorder causing a back flow of this drainage system leading to neurotoxic build up within the central nervous system and the ensuing cascade of many symptoms of autonomic dysfunction. Indeed with supporting evidence it is argued that CFS/ME is possibly just one of many neurological disorders that affect this neurolymphatic pathway such as Alzheimer's, Creutzfeldt-Jakob disease and Meniere's disease.

Neuropsychiatric treatment implications

Sofia Tsaluchidu

University of Bologna, Italy

Free radicals overwhelm antioxidant defenses and is one of the factors that contribute to accelerate the normal aging process and involved in the pathogenesis of many neuropsychiatry diseases. The antioxidant systems deputies to the detoxification of free radicals are essentially of two types: enzymatic and non-enzymatic. Much of the focus has been on the key scavenging antioxidant enzymes: Super Oxide Dismutase SOD, glutathione-peroxidase GSH-POD and catalase CAT Of these. Antioxidant molecules such as albumin, cysteine, carnosine, uric acid, citric acid and ascorbic acid are known to account for the major contributions (>85%) to the total antioxidant capacity in human plasma. This predominance is largely due to their high concentrations relative to those of other antioxidants in blood, e.g.. bilirubin, a-tocopherol , P-carotene, Minerals (Se, Zn, Cu, Mg) and secondary metabolites of plants the polyphenols. The total antioxidant status (TAS) serves as an index for the state of balance from various antioxidants in plasma. The alteration of the activity or the lack of one of these, without compensatory changes of others, can make the cell membranes vulnerable to damage from free radicals. Induced damage results at the level of the lipid membranes peroxidation, occurring with an unstable structure, fluidity, permeability and consequently alters the signal transduction, resulting in alterations in receptor and mitochondrial and nuclear DNA. The brain is rich in polyunsaturated fatty acids (PUFA), has virtually no cell turnover and is therefore particularly sensitive to damage mediated by free radicals. There is already evidence that this may be the case in respect of depression, Huntington's disease and attention-deficit hyperactivity disorder. The treatment implications against oxidative damage may include: **1.** Nutraceutical or dietary supplements which are sourced produce vegetable such *Olea europea*, *Vitis vinifera*, *Camela sinensis* Kuntze Theaceae, *Ginkgo biloba*, Berries, Citrus or fish for their component in omega 3 fatty acids plays a protective, anti-inflammatory role and indirectly an antioxidant role. The pure eicosapentanoic acid omega-3 fatty acids in combination with γ -linolenic acid as a component of *eonothera biennis* oil have won a good deal of attention recently for their effects in neuropsychiatry diseases. A cocktail of multiple antioxidants with anti-inflammatory agents and may be more beneficial in the prevention and treatment of neurophichiatic disease. **2.** Drug. The pharmacological strategies are diverse and wide-ranging: drugs that inhibit lipid peroxidation or apoptosis, glutamate antagonists, GABA agonists, sodium and calcium channel blockers, neurotrophic e gliotrophic drugs and so on.

There is increasing awareness of the ubiquitous role of oxidative stress in. A continuing challenge is to be able to distinguish between oxidative changes that occur early in the disease from

those that are secondary manifestations of neuropsychiatry disease.

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19.30-20.00 **Plenary Lecture**

Chairperson: **Basant K. Puri (UK)**

Pharmacological treatments for psychogenic sexual dysfunction

Dimitrios Hatzichristou

Professor of Urology, Aristotle University of Thessaloniki, Greece

During the last 30 years, the field of sexual medicine was characterised by revolutionary pharmacotherapeutic treatments for sexual dysfunctions, which in turn, significantly influenced the way sexual problems were approached and treated. The biggest part of change occurred because of the availability of oral and injectable drugs with indication for the treatment of erectile dysfunction (phosphodiesterase 5 inhibitors and alprostadil), and the treatment of premature



ejaculation (dapoxetine). Several other drugs are in clinical trials, with one of them waiting final decision from the FDA (flibanserin for women hypoactive sexual desire disorder). However, the off label use of older SSRI's for the treatment of premature ejaculation, androgens for female hypoactive sexual desire disorder, as well as the use of anti-androgens and antidepressants for paraphilic sexual behaviors are extensive. Although the above treatments never got regulatory approval, ample outcome studies and widespread use of these drugs in clinical practice, lead to an increase in the use of pharmacotherapeutic agents for the treatment of psychogenic sexual dysfunctions. However, the high drop out rates consistently reported by patients, suggests that pharmacotherapy alone may not be enough. Today, outcome studies support the use of combined therapies as opposed to pharmacotherapy or psychotherapy alone, and the need for further development and assessment of combined therapies has been advocated. There is an emerging need for well designed clinical trials, combining pharmacotherapy with all forms of psychosexual therapies.

20.00-21.30 **Symposium**

Challenges Encountered With Current Diagnostic Criteria

Chairpersons: **Mesut Cetin** (Turkey) and **Melina Siamouli** (Germany)

*The symposium is co-organized
by the Turkish Association for Psychopharmacology and the ISNP*

Challenges encountered in diagnosing mood disorders after trauma

Oguz Karamustafalioglu

Professor of Psychiatry, Üsküdar University Istanbul Turkey

Mood disorders, especially major depression seems to be very frequent in trauma survivors. Irritability and dissociation can be seen very often in patients after trauma which is also diagnosed as bipolar disorder.

Earlier studies present that disorders like obsessive compulsive disorder, phobias etc may be seen after trauma in the literature. Mood disorders appearing after trauma is not rare. There is not a clear answer if such disorders could be named as post traumatic mood disorders. Another critical point is that some patients may face the trauma in earlier childhood and may develop mood disorders in later life periods. Is there any possible relationship or is there phenomenological difference in the symptom profile of such patients?

There are not well designed prospective studies that studies the interrelationship between trauma and mood disorders. Biological studies suggest that there may be differences in patients with PTSD alone and patients with PTSD and comorbid mood disorders. The current evidence needs to be supported by novel approaches.

Bipolar III: Is it a distinct diagnosis?

Haluk Savas

Gaziantep University School of Medicine, Department of Psychiatry, Gaziantep, Turkey

It is a known fact that antidepressant treatment causes manic or hypomanic switches. These tables that form as a result of antidepressant medication is not referred to in the DSM-IV and the ICD-10, and have no authentic diagnostic tools. The term “bipolar disorder III” is occasionally used to define the mania or hypomania caused by using antidepressants. At present, the term bipolar is assessed on a large spectrum. This spectrum defines mood disorders that include episodes of hypomania/mania and depression at different levels and severity, previously defined as manic-depressive.

Whether the manic/hypomanic switch based on antidepressants is a side effect of using this medication or whether it illustrates that the individual has a tendency towards bipolar disorders is a long-standing argument. Within this framework, various studies have been conducted to compare the clinical properties of hypomania that develops with medication and hypomania that develops spontaneously. Studies have concluded that there are differences between hypomania that develops spontaneously and hypomania that develops due to medication in terms certain characteristics such as suicide risk, psychotic properties, and age. It should also be noted that wrong diagnosis in bipolar disorders is an important issue. Most patients are monitored under the diagnosis of unipolar depression instead of bipolar disorder. The majority of patients that are treated for unipolar depression and have affective shifts develop bipolar disorders eventually.

In conclusion, mania or hypomania episodes may occur during antidepressant treatment applied to unipolar depression. The fact that there are clinical similarities between hypomania caused by antidepressants and hypomania that develops naturally, and that patients treated due to diagnosis of unipolar depression and having emotion shifts eventually have bipolar disorder support the view that patients that develop mania or hypomania while using medication are “actually patients with bipolar disorders.” Antidepressant drugs, proved by many studies to be ineffective during the depressive period of bipolar disorders, also have an adverse effect on the course of bipolar disorders. The subject of “hypomania triggered by antidepressants”, will be re-evaluated in this talk.

How to differentiate attention deficit hyperactivity disorder (ADHD) from bipolar disorder (BD)

Ilhan Yargic

Professor of Psychiatry at the İstanbul University, Turkey

Diagnostic criteria of both attention deficit hyperactivity disorder (ADHD) and bipolar disorder (BD) include symptoms of distractibility, psychomotor agitation and talkativeness, along with associated emotional features (irritability and emotional lability). A broader approach to BD blurs the boundaries even further. Especially in pediatric population it may be difficult to differentiate irritable children with ADHD from children with BD. The relationship between ADHD and



BD may be due to only a superficial symptomatological similarity and they may originate from different neurobiological mechanisms. But there is data implying an etiological relationship between these disorders. Neurobiological studies report differences and similarities between the two disorders. Comorbidity and family studies show that the two disorders may occur together and aggregate in families at higher than expected rates. Although population studies reveal a high co-occurrence of ADHD and BD, longitudinal studies fail to consistently show developmental link between ADHD and BD. The differential diagnosis of the two disorders or the diagnosis of the other disorder while the patient is in treatment for one of these disorders is very important, because this influences the prognosis, they necessitate totally different pharmacological approaches and incorrect treatment can lead to non-response or exacerbation of symptoms in the case of ADHD and BD.

Do clinicians overlook the denial of pregnancy in classification systems?

Nazan Aydin

Ataturk University School of Medicine, Department of Psychiatry, Erzurum, Turkey

Denial of pregnancy is a woman's subjective lack of awareness of being pregnant. That is, a woman is not aware of being pregnant and does not receive a diagnosis of pregnancy during the first 20 weeks or more of gestation.

The common view is that denied pregnancies are rare events. Women with denied pregnancies are also suspected of either lying or being severely psychotic. Denial of pregnancy is more common than expected, with an incidence of approximately 1 in 475 (1). When pregnancy is denied throughout most of gestation, or even up to totally unexpected 'sudden' delivery, significant risks to both the mother and the fetus may arise because of inadequate prenatal care, such as poor nutrition, fetal abuse, unattended or precipitous delivery. Furthermore, a significantly increased neonatal risk has been confirmed for outcome parameters as prematurity, low birth weight, and small for gestational age (2). Therefore, denial of pregnancy should be recognised during the pregnancy for prevention of unwanted consequences. Especially, midwives should learn about various aspects of denied pregnancies as they learn about many other harmful conditions during pregnancy and childbirth. Denial of pregnancy should take place in classification systems, so that it will facilitate awareness.

There are calls to incorporate denial of pregnancy as a new category in classification systems. Some researchers propose a new Diagnostic and Statistical Manual (DSM) and International Classification of Diseases (ICD) category concerning reproductive dysfunctions not caused by organic disorder (3). If this were to happen, healthcare professionals could refer these women for appropriate psychiatric help. Furthermore, this would facilitate research in this extremely important area of health care.

In this presentation, denial of pregnancy will be discussed as a separate diagnostic category. Also, preliminary results of the conducted study on denied pregnancies in Turkey will be presented.

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Diagnostic and classification considerations concerning schizoaffective disorder

Melina Siamouli

Research Associate, LMU, Munich, Germany

It is well known that Kraepelin divided the psychoses into dementia praecox and manic-depressive illness on the basis of a supposed progressive deterioration for the first and a better long term outcome for the latter. However even Kraepelin himself reported that his clinical experience included many patients with features of both disorders. Bleuler suggested that the existence of mood and schizophrenic symptoms during the same episode should not change the diagnosis of schizophrenia. Jacob Kasanin was the first to coin the term schizoaffective psychosis in 1933. In 1937, Langfeldt described the so-called 'schizophreniform psychoses' with many affective clinical elements and favourable outcome. Valuable contributions in the nosology were made by Kurt Schneider (1887-1967) who described the so-called 'cases in between' (zwischen-fälle) schizophrenia and affective psychosis. More recently it has been argued that schizoaffective disorder is simply the result of a number of weaknesses in contemporal classification systems. It is obvious that with strict application of the operationalized criteria, the diagnosis of schizoaffective disorder is limited to a small group of individuals, which might more probably be chronically ill and relatively treatment resistant. Nomenclature and classification of these cases has always been a problem. Several operationalized criteria sets were developed, and all of them required the presense of both affective and schizophrenic symptoms in some kind of combination and with a minimum duration. The best known are the Research Diagnostic Criteria developed by Spitzer et al in 1978. DSM-III-R, DSM-IV and the DSM-IV-TR focused on defining better the duration and the relationship between 'schizophrenic' and mood symptoms. The ICD-10 follows a different approach, and requires that both mood and psychotic symptoms constitute a prominent part of the clinical picture with a balance between their number, severity, and duration.



Friday, May 31st 2013 - Maistros Hall

08.30-10.00 **Symposium**

Lyme disease and neuroborreliosis

Chairpersons: **Jean A. Monro** (UK) and **Peter O. O. Julu** (UK & Sweden)

Spirochaetes and Lyme Disease

Basant K. Puri

Imperial College London, UK

This lecture will describe the biology of spirochaetes in general and then describe details of those species belonging to the genus *Borrelia* which are implicated in Lyme disease, including *Borrelia burgdorferi sensu stricto*, *Borrelia afzelii* and *Borrelia garinii*.

Environmental Medicine Aspects

Jean A. Monro

Medical Director, Breakspear Hospital, Wood Lane, Hemel Hempstead, Herts, UK

Great fleas have little fleas upon their backs to bite 'em,
And little fleas have lesser fleas, and so ad infinitum.
And the great fleas themselves, in turn, have greater fleas to go on;
While these again have greater still, and greater still, and so on.

Augustus De Morgan (1806 - 1871). A Budget of Paradoxes.

Lyme disease is a zoonosis, named after the town Lyme in Connecticut in the USA where it was discerned.

In 1978 Dr Willy Burgdorfer noticed movement between the cells and tissue of six ticks he dissected. The movement came from larvae that were developing into an infection found in deer. In 1981, while testing more than 100 deer ticks, Dr Burgdorfer noticed, in two ticks, the same larvae-type movement he had observed in 1978. The infection caused by the spirochaete is called Lyme borreliosis.

Lyme borreliosis is the most complex of zoonoses because it has 3 hosts and a carrier. It is a spirochaete which must survive very complex environmental conditions

We have to consider the life cycle of the tick which is:

1. egg
2. larva
3. nymph
4. adult

Conditions which can affect the tick are:

- complex ecology
- in the course of a meal, the ticks can acquire *Borrelia* from an infected host and then transmit this by its second bite either as a nymph or an adult.

Factors relating to the complex life cycles of the tick: small animals and the larger animals have to be considered. The distribution of ticks is of relevance.

The Borrelia organism itself has its own epidemiology in its host and this will be discussed.

Epidemiology and symptomatology of Lyme disease and neuroborreliosis

Basant K. Puri

Imperial College London, UK

This lecture will cover details of the epidemiology of Lyme disease and neuroborreliosis, including the results of recent studies by our group. The corresponding symptomatology, including neuropsychiatric aspects, will be detailed, again including results from our recent research.

Functions of autonomic target-organs in neuroborreliosis

Peter O. O. Julu

Imperial College London; Breakspear Clinic, UK and National Rett Center, Frösön, Sweden

In this lecture, Dr. Peter Julu will describe some of the major features of autonomic nervous system neurophysiology and how they can be objectively measured. He will then describe the results of the first systematic study of autonomic target-organ functions in patients suffering from neuroborreliosis.

10.00-11.30 **Symposium**

Brain pathologies and cognition in old age

Chairpersons: **Constantin Bouras** (Switzerland)

and **Panteleimon Giannakopoulos** (Switzerland)

Brain pathologies and cognition in old age

Constantin Bouras

Professor, University of Geneva, Switzerland

The formation of neurofibrillary tangles (NFTs), senile plaques (SPs) and synaptic loss characterize the neuropathology of normal aging in both cognitively intact individuals and patients with Alzheimer's disease (AD). Various observations suggest that there is a differential cortical vulnerability to the degenerative process in extreme aging. In very old individuals the distribution and severity of the AD-type lesions could be different compared to younger persons.

In normal aging NFTs are usually restricted to the hippocampus, and it is well known that clinical signs of dementia appear when associative neocortical areas are involved.

In contrast, the AD type lesions in the centenarian brains show an important variability, so the clinicopathological correlations reported in younger cases are often absent. Moreover, in contrast to younger demented patients, neuron densities are preserved in the CA1 field, dentate gyrus, and subiculum in centenarians with AD.

Recent observations focusing on A β oligomer toxicity have postulated that SPs may represent the brain's effort to control the deleterious effect of soluble A β by-products. The histological localization and distribution of A β oligomers in the normal and pathological human aging paralleled the amyloid plaques.

Another characteristic of the aging brain is the microvascular pathology and the progressive accumulation of vascular lesions throughout the human lifespan. The role of microvasculature changes in advanced age and the mean capillary diameter is also discussed. Vascular pathology, including amyloid angiopathy, increases with age, but remains less important in the oldest-old people.

Finally, the important anatomical inter-individual variability, mainly of the entorhinal cortex, could be related to functional reserve at the onset of cognitive decline.

Alzheimer disease at the crossroads: identification of at risk individuals and therapeutic perspectives

Panteleimon Giannakopoulos

Professor of Psychiatry, University of Geneva, Switzerland

Since the first description of the case of Auguste Deter, presented in Tübingen in 1906 by Alois Alzheimer, there has been an exponential increase of our knowledge regarding neuropathological, cellular and molecular substrates of Alzheimer disease (AD). The concept of AD pathogenesis has evolved from a static, binary view discriminating cognitive normality from dementia, towards a dynamic view that considers AD pathology as a long lasting morbid process that takes place progressively years, or even decades, before the first symptoms become apparent operating in a continuum between the two aforementioned extreme states. Several biomarkers have been proposed to predict AD-related cognitive decline, initially in cases with mild cognitive impairment and more recently in cognitively intact individuals. These early markers define at risk individuals that are thought to be at the preclinical phase of AD. However, the clinical meaning of this preclinical phase remains controversial. The fate of these cognitively intact individuals positive for some early AD biomarkers is a matter of hot debate. Here we advocate the point of view that although the majority of these preclinical cases evolve to clinically overt AD, some of them have efficient compensatory mechanisms and virtually never develop dementia. We critically review currently accessible early AD markers, discuss their clinical relevance, and propose a novel classification of preclinical AD that designates these non-progressing cases as the stable asymptomatic cerebral amyloidosis.

Clinical expression of microvascular burden in the elderly

Gabriel Gold

Professor, University of Geneva, Switzerland

The relationship between macroinfarcts and both depressive features and cognitive impairment has been extensively studied and well described. More recently, community-based autopsy studies have revealed a very high frequency of small and microscopic vascular lesions in

aging brains in cases with and without depression or cognitive disorders.

To identify the clinical impact of such lesions we have carried out several clinicopathological studies in old and very old hospitalized populations.

Such studies have identified the important influence of microinfarcts and thalamic and basal ganglia lacunes on cognitive aging. Recent literature review supports these findings. Neuroimaging data and neuropathologic examinations have also provided evidence for a relationship between microvascular pathology and late onset depression or bipolar disorder.

In conclusion, we provide strong evidence that cerebral microinfarcts are a key determinant of cognitive aging and that small vascular lesions can impact both affective and cognitive functions. We believe such lesions are new and promising targets for future therapeutic trials in age-related cognitive and mood disorders.

Non-AD dementias: phenotypic expression and pathological substrates

Eniko Kovari

Professor, University of Geneva, Switzerland

Although Alzheimer's disease (AD) is the most common neurodegenerative disorder, accounting for 75% of all cases of dementia, other degenerative pathologies could present as clinically overt dementia. Due to the genetic and molecular discoveries in this field, the classification of degenerative dementias has been changed in the last years. Today, the final, neuropathological diagnosis is not possible without the definition of molecular background of the disease. We review the major categories and the new discoveries in the field of non-AD type degenerative dementias, including dementia associated with extrapyramidal features (Parkinson's disease dementia, Lewy body dementia), progressive supranuclear palsy, corticobasal degeneration and the group of frontotemporal dementias.

Overmore, mixte pathologies in the neurodegenerative group, mainly AD with Lewy body pathology and more often with vascular lesions are frequently seen.

11.30-12.00 **Plenary Lecture**

Chairperson: **Apostolos Iacovides** (Greece)

Cognitive dysfunction associated with bipolar disorder: Theoretical issues and psychosocial implications

Lefteris Lykouras

Professor Emeritus, Kapodistrian University of Athens, Greece

During the recent years there has been a growing interest in the presence of cognitive dysfunction in individuals with bipolar disorder across all phases of illness, including euthymia. In general, the domains affected include attention, executive function and verbal memory. Nonetheless, the etiology of cognitive deficits remains under discussion. Few data demonstrate that neuropsychological impairment predicts occupational outcome of bipolar disorder. Thus, treatments targeting cognitive deficits may be essential to promote functional outcome. Finally,

future research is needed including serial clinical studies to track the relationship between cognitive function and longitudinal psychosocial outcome across bipolar illness phases. Likewise, better assess treatments and factors other than mood symptoms contributing to poor psychological functioning are required.

12.00-12.30 **Plenary Lecture**
Chairperson: **Apostolos Iacovides** (Greece)

Neuropsychiatry as an Interdisciplinary Medical Field

Constantinos R. Soldatos

Mental Health Care Unit, Evgenidion Hospital, University of Athens, Greece

Neuropsychiatry lies in the interface between psychiatry and neurology by assessing and treating the disturbances of higher cognitive functions, emotion, and their behavioral repercussions. As such, neuropsychiatry focuses on CNS disorders and the neurobiological deficits leading to abnormalities of behavior. It attempts to integrate at a tertiary level diverse disciplines; this makes it a rapidly growing clinical discipline that holds strong on clinical and basic research and therefore should be viewed as an interdisciplinary field which is based on solid empirical evidence. Innovative diagnostic technologies, remarkable developments in neurosciences, and integrative approaches to clinical problems have greatly enhanced disease understanding, diagnosis and management from a neuropsychiatric perspective. These developments help to lift the traditional barriers between psychiatry and neurology and forge a novel rational approach wherein the clinician is familiarized with the language and methods of both psychiatry and neurology to the benefit of patients. Thus, the neuropsychiatrist serves as a consultant to patients and their close environment, as well as a liaison between the other physicians/clinicians who are involved in the management of their treatment. Moreover, the neuropsychiatrist, through his integrative approach, is a strong advocate for the implementation of the optimal methods of care in clinically complex cases.

13.00-14.00 **Symposium**
Recent developments in neuroscience
Chairpersons: **Feyza Aricioglu** (Turkey) and **Dimos Dimellis** (Greece)

*The symposium is co-organized
by the Turkish Association for Psychopharmacology and the ISNP*

Role of glutamatergic system in psychiatry

Feyza Aricioglu

Professor of Pharmacology, Marmara University, School of Pharmacy, Department of Pharmacology and Psychopharmacology Research Unit, Haydarpasa, Istanbul, Turkey

Mental disorders, such as depression, anxiety and schizophrenia, have become a large medical and social problem recently. Studies performed in animal tests and early clinical investigations

brought a new insight in the pharmacotherapy of these disorders. Latest investigations are focused mainly on the glutamatergic system, an excitatory amino acid neurotransmitter in the brain. Its ionotropic and metabotropic receptors function in a great variety of activities. Besides, their function in regulating some growth factors, such as BDNF (brain-derived neurotrophic factor), explains their wide range of therapeutic potentials. The most challenging approaches in disease mechanism involve glutamatergic system's contribution, neuroinflammation, neuroplasticity and neurotrophic factors issues, genetic factors and some intracellular signaling pathways. Preclinical and clinical studies demonstrate that these factors might play a critical role. A majority of neurons and synapses and circuits use glutamate as neurotransmitter, it would be limiting to maintain that glutamate is in some way involved in psychiatric disorders; rather it should be recognized that the glutamatergic system is a primary mediator of psychiatric pathology and, potentially, also a final common pathway for the therapeutic action of agents. The glutamatergic system has been implicated in the pathophysiology in psychiatric disorders unique clinical and neurobiological ways. Overall, this system holds considerable promise for developing the next generation of novel therapeutics targeting the molecular mechanisms involved in pathologies in psychiatry.

Neuroimaging in depression

Ali Saffet Gonul

Ege University School of Medicine, Department of Psychiatry, Izmir, Turkey

It is generally accepted that patients with major depressive disorder have smaller hippocampus size compared to healthy people. However, it is still not known if this situation exists before the onset of the disease or is a result of the toxic mechanism created by the depression itself. The findings of the long-term follow-up studies of first-episode depressed patients might contribute to solve the ongoing problem. In this study, the hippocampus of 18 first-episode patients who were followed-up for 5 years, were compared with those of healthy controls. There were no volumetric differences among groups neither at the baseline nor after 5 years of follow-up. However, shape analyses, using high dimensional mapping methods, revealed regional structural changes in the head and tail of the hippocampal formation in CA1 and subiculum regions in patients at the follow-up. Furthermore, a significant negative correlation was found with the number of days in depression without antidepressant treatment in the CA1 region in the head and tail of the hippocampal formation bilaterally. The findings of this study support the hypothesis that pathophysiological processes of depression induce structural alterations in depressed patients.

Neurobiology of OCD

Yasin Bez

Associate Professor of Psychiatry (on Behalf of Prof. Dr. Murad ATMACA), Dicle University School of Medicine, Department of Psychiatry, Diyarbakir, Turkey

Neuroimaging studies have been intensively performed for the last two decades to understand better the neurobiology of OCD. Consequently, orbitofrontal cortex (OFC), thalamus, anterior

cingulate cortex (ACC), and caudate nucleus have been emphasized as the key brain regions for OCD. Almost all studies have shown smaller volumes of OFC in OCD patients. A negative correlation of disease severity of volumetric reduction of OFC has also been reported. Thalamus which is accepted as gate for motor and sensory stimuli seem to be increased in size in OCD patients. In a study it was found to be greater in treatment-refractory patients when compared to treatment responders which lead the authors to suggest it as a region related with refractoriness. Many studies except one reported no volumetric change in caudate nucleus of OCD patients compared to healthy subjects. Another key brain region for understanding neurobiology of OCD is ACC. It is really a complex structure and has boundaries hard to identify. Current published studies concerning ACC are limited in number and seem to be inconclusive yet. There are also some candidate regions studied in OCD patients. Some recent studies reported smaller pituitary volumes in OCD patients that is suggested to be related with early age of onset and severity of compulsions in patients. Due to its intense connections with OFC the hippocampus-amygdala complex became another focus of interest in OCD studies. A few studies conducted showed decreased hippocampal volume. Concerning amygdala studies have diverse results. A recent approach in psychiatry has been the attempts to integrate psychoanalytical theory and neurobiology. In this presentation some recent examples of these kind of studies will also be discussed.

Pharmacogenetics of Drug Metabolizing Enzymes in Psychopharmacology

Umit Yasar

Hacettepe University, Faculty of Medicine, Department of Pharmacology, Turkey

Patients vary widely in response to drug treatment. The response to drug therapy is influenced by environmental, physiological and genetic factors: such as age, weight, comorbidity, comedication and genetic variations of drug metabolising enzymes. Slow and ultrarapid metaboliser individuals are under increased risk for treatment failure or drug side effects. Drug metabolising enzymes are genetically polymorphic. Many genetic polymorphisms have been identified for the cytochrome P450 (CYP) enzymes (www.cypalleles.ki.se). Human genome project and later studies demonstrated that about 10,000 single nucleotide polymorphisms have been estimated to be related with pharmacogenetics/pharmacogenomics.

The well-recognised examples of genetic polymorphisms of drug-metabolising enzymes are responsible for disposition of about 1/3 of all drugs. Half of the adverse drug reactions have been associated with drugs that are substrates for polymorphic drug metabolising enzymes. Among them CYP2D6, CYP2C19 and CYP1A2 are related with the metabolism of several antidepressant and antipsychotic drugs and represent clinically relevant cases.

In today's research, major challenge is to identify the genetic polymorphisms that are relevant for a specific therapy and to determine the clinical impact with respect to right drug choice at right dose based on the individual characteristics. Genetic testing is currently limited to a few enzymes because the evidence base supporting pharmacogenetic analysis prior to drug therapy is not strong for most of the drug metabolising enzymes. Large prospective studies are warranted for the assessment of role of pharmacogenetics related with drug metabolising enzymes. The effects of different drug metabolising enzymes regarding to drug safety and efficacy will be discussed.

Novel antidepressants: the pipeline running dry

Dimos Dimellis

Consultant, 424 General Military Hospital, Thessaloniki, Greece

It is beyond any doubt that the pharmacotherapy of Major Depression (MD) is far from ideal. Reviews and meta-analytic studies of antidepressants versus placebo, regarding response and remission rates produce a number needed to treat (NNT) of (about) 6. This fact, clearly, underlines the need for more efficacious treatments. Contemporary research strives to resolve this specific issue, but a number of problems emerge: the eagerness for the development of new antidepressants led industry either to perform studies of poor quality which were failed ones or to develop, actually, “me too” drugs, and at same time, financial draining, mainly exerted by generic medications along with the limited period the industry has to sell its product under (patent) protection. The “million dollar” question is: do we expect something new and revolutionary at the field of antidepressant medication? Will the promising new pharmacodynamic pathways produce more efficacious solutions? Or the pipeline of novel antidepressants will, soon, run dry?

14.00-14.30 **Plenary Lecture**

Chairpersons: **Ioannis Diakogiannis** (Greece) and **Vasilis P. Bozikas** (Greece)

Are Bipolar Mixed States more than Depression and Mania?

Giulio Perugi

Clinica Psichiatrica, Dipartimento di Medicina Sperimentale, University of Pisa, Pisa, Italy

Mixed state (MS) classically refers to an affective condition in which various admixtures of depressive and manic features occur simultaneously. In the most recent official classificatory systems, MS has not received any specific symptomatologic characterization. DSM-IV (American Psychiatric Association, 1987) basically defined MS as the combination of manic and major depressive episodes co-occurring over one or more weeks. This viewpoint, which in part reflects the recent empirical Zeitgeist of descriptive psychiatry, at the same time has shaped what kind of research can be conducted and, in the recent years, MS have generally been studied as subtypes of manic or depressive episodes. Thus, current studies on MS focus prevalently on full-fledged manic episodes co-existing with prominent depressive features. The operationalization of mixed mania conforms largely to the concept of dysphoric mania, i.e., mania plus three or more “nonmanic” depressive symptoms. Utilizing variants of this definition, some distinctive features of mixed mania compared with pure mania have been found: greater prevalence in females, more past MS episodes, higher probability of a MS at illness onset, higher rates of suicidality and neuropsychiatric comorbidity. Manic episodes with or without sub-syndromal depression also differ in treatment response, severity of anxiety and course characteristics. Attempts to liberalize the boundaries of MS has also occurred along the fronts of agitated or, more properly, excited depression, consisting of intrusions of such (hypo)manic elements as psychomotor restlessness, hypersexuality, distractibility and racing thoughts into full syndromal



depression. Certainly, in clinical practice we do encounter both of the latter forms of dysphoric or mixed mania, as well as excited-agitated depressions or depressions with flight of ideas. Nevertheless, MS defined cross-sectionally as a symptomatic mixtures of mania and depression represent an over-simplification. At least in the most severe forms, MS appears to represent more than a superposition of affective symptoms of opposite polarity. Anxiety, perplexity, psychotic experiences, motor disturbances and grossly disorganized behavior seem to arise from protracted intraepisode instability and presence of a drive state influencing the mood state and/or the emotional resonance.

The proper identification of MS has critical implications for clinical practice. When not characterized by prevalent manic or depressive features, these conditions might be confused with a number of other psychiatric disorders, including borderline personality disorder, delusional depression, schizophrenia, and organic mental disorder. Therefore, it would be important to distinguish mixed states from these conditions so that treatments (e.g., antidepressants), which might worsen their symptomatology, would be utilized with due caution and treatments that might be particularly effective (e.g., mood stabilizers and ECT) would not go underutilized.

14.30-15.00 **Plenary Lecture**

Chairpersons: **Ioanna Ierodiakonou-Benou** (Greece)
and **Athanasios Douzenis** (Greece)

Mitochondrial function and autophagy - new avenues in the research of bipolar disorder and its treatment

Haim Einat

Professor, School of Behavioral Sciences, Tel Aviv-Yaffo Academic College, Tel-Aviv, Israel

Recent theories propose that bipolar disorder (BPD) belongs to the group of neurodegenerative disorders and that BPD and its treatment have strong connections with systems related to neural plasticity and resilience. In that context, mitochondrial function is at the nexus of several pathways that regulate plasticity and resilience and recent data shows impairments in mitochondrial function are related with BPD. Recent data also demonstrates that mood stabilizers enhance autophagy, a process that helps protect cells through clearance of aggregates from the cytosol and is also an important mitochondrial quality control mechanism that eliminates damaged mitochondria.

The relationship between mitochondrial function, autophagy and BPD lead to the hypothesis that mitochondrial dysfunction could be an important pathophysiological factor underlying BPD and that enhancement of autophagy could be a novel approach for treatment of the disorder.

Support for this hypothesis comes from our recent studies demonstrating that mild inhibition of mitochondrial function results in bipolar-like behaviors in mice, that these behaviors are at least partially reversed by chronic treatment with lithium or by the autophagy enhancer trehalose and that both treatments, administered orally, also result in increased autophagy in the frontal cortex. It is therefore suggested that mechanisms related to mitochondrial function and to autophagy might be involved in the pathophysiology of bipolar disorder and that autophagy enhancement could be a novel target for the development of new mood stabilizers.

15.30-16.00 **Plenary Lecture**

Chairpersons: **Michael Sotiriou** (Greece) and **Stamatia Mageiria** (Greece)

Rhythm desynchronization and clock resetting

Yvan Touitou

Unit of Chronobiology, Rothschild Foundation, Paris, France

The internal clock is synchronized by environmental factors; the main factors in humans are the light-dark alternation, the sleep-wake cycle, and social life. A rhythm desynchronization occurs when the clock is no longer in phase (harmony) with the environment resulting in a phase shift (phase advance or phase delay) which results in fatigue, sleep disorders, mood disorders...Clock desynchronization is related to an inadequacy between the clock and the synchronizers, to a clock unable to be entrained or to a dysfunction of the clock itself. Shiftwork and nightwork, important to consider from the viewpoint of public health, transmeridian flights, depressive states and other psychiatric diseases as well, blindness, aging, some medications or drugs like alcohol are among the numerous causes of rhythm desynchronization. Melatonin and light exposure are major factors able to control and resynchronize the clock. The phase response curve (PRC) clearly demonstrates that according to the timing of light exposure or melatonin administration these two agents are able to shift the clock (advance or delay) of the patients resulting in clock resetting. They are sometimes used in combination to adjust the clock.

16.00-17.30 **Symposium**

Research Advances in Affective Temperaments

Chairpersons: **André F. Carvalho** (Brazil) and **Thomas N. Hyphantis** (Greece)

Towards an integrative model for the comprehension of psychopathology

Hudson de Carvalho

Professor of Clinical Psychology, Federal University of Pelotas, Brazil

Based on many temperament frameworks, we proposed an integration of emotional and affective temperaments (the AFFECT model), forming a common substrate for mood, behavior, personality and cognition. Temperament is conceived as a self-regulated system with eight emotional traits: volition, anger, desire, fear, caution, emotional sensitivity, coping and control. The different configurations of these emotional traits are associated with 12 affective temperament types, namely depressive, anxious, apathetic, obsessive, cyclothymic, dysphoric, irritable, volatile, disinhibited, hyperthymic and euphoric. We also developed and validated a self-report scale to evaluate this construct, the Affective and Emotional Composite Temperament Scale (AFFECTS) in a large internet sample. The results showed very good Chronbach's alphas for the emotional dimensions, along with 99% of volunteers identifying at least one adequate description of their affective temperament. All 12 types were selected, confirming this 7 new affective temperaments proposed. Thus, the AFFECT model provides an integrated framework of temperament as a self-regulated system, with implications for mental health, psychiatric disorders and their treatment.

Affective temperaments: intermediate phenotypes for affective disorders?

André F. Carvalho

Associate Professor of Psychiatry, Federal University of Ceará, Brazil

Affective temperaments are regarded as heritable subclinical manifestations of full-mood disorders. In this speech, I will first briefly revise the concepts as well as the research assessment of this construct. I will revise converging evidences from a variety of fields (e.g., psychiatric genetics and epidemiology) linking affective temperaments to mood disorders. However, I will emphasize important caveats in the literature (for example, the paucity of prospective studies). Finally, I will present data from the Brazilian Internet Study of Temperament and Psychopathology (BRAINSTEP), in which we had studied in a large sample (N=9937; 45% male) the relationships between affective temperaments, defense styles and depressive symptoms. We had found that certain temperaments (eg, hyperthymic) are associated with a mature defense profile, while others (eg, cyclothymic) have a more immature defensive profile. Noteworthy, we had observed important interactions between the euthymic and hyperthymic temperaments and the mature/immature defense styles in the formation of depressive symptoms in this large sample. We propose a theoretical matrix for the comprehension of mood psychopathology. The clinical implications of these findings will be discussed.

Affective Temperaments, Ego Defense Mechanisms and Somatization

Thomas N. Hyphantis

Associate Professor of Psychiatry, University of Ioannina, Greece

Somatization is a complex phenomenon that occurs in many forms and diverse settings. The term has been mainly used as an indicator of somatization disorder but it has been also regarded as a psychological mechanism whereby psychological distress (i.e., anxiety and depression) is expressed in the form of physical symptoms, or as a result of underlying defensive operations to ward off affect, when affective arousal triggers the psychological threat of fragmentation. The theoretical considerations and empirical findings so far indicate that several complex mechanisms may contribute to the development of numerous widespread bodily symptoms, either medically “explained” or “unexplained”. Using data from the Brazilian Internet Study of Temperament and Psychopathology (BRAINSTEP) we examine here in a large sample (N=9937) the complex associations between affective temperaments (which form a common substrate for mood, behavior, personality and cognition), measured by the Affective and Emotional Composite Temperament Scale (AFFECTS), ego defense mechanisms (which are a major means of managing instinct and affect), measured by the Defense Style Questionnaire (DSQ-40) and somatization (defined as a large number of reported widespread bodily symptoms regardless of their cause), measured by the SCL-90-R somatization subscale. The results showed that *dysphoric* and *depressive* temperaments and *displacement* defense were the variables most closely associated with symptoms of somatization after adjusting for depressive symptoms. Additionally, moderator analysis showed that the relationship of dysphoric temperament with somatization was much more powerful in people who adopted displacement as their predominant defense. The theoretical considerations and the clinical implications of these findings will be discussed.

The pathoplastic role of affective temperaments in the emergence of suicidal behaviour

Xenia Gonda

Department of Clinical and Theoretical Mental Health, Department of Pharmacodynamics, Semmelweis University, Budapest, Hungary

The majority of suicides are related to psychiatric illnesses and mostly affective disorders, however, not all mood disorder patients commit suicide, which raises the questions which features of affective lability or affective illness predispose to self-destructive behaviour. One very useful concept in understanding affective illness and affective psychopathology, and considering it from a spectrum aspect is the model of affective temperaments, which views affective temperaments as subaffective and subclinical manifestations and possibly precursor states of mood illnesses. Affective temperaments show important associations with various diverse disease features including type, course, prognosis and outcome of the illness, and have been found to be related to suicidal behaviour as well. Earlier it was demonstrated in several countries using diverse methodological approaches and different samples that presence of affective temperaments carrying a depressive component (depressive, irritable, cyclothymic and anxious) is a risk factor for suicide, while presence of hyperthymic temperament was shown to be a protective factor. However, different affective temperaments lead to the emergence of suicidal behaviour via distinct mechanisms. Understanding the nature of the relationship between affective temperaments and suicide, as well as those mechanisms and pathways through which affective temperaments lead to suicidality may help to develop a more comprehensive model for suicidal behaviour both within and outside of the framework of mental illness, as well as may pave the way to improved approaches and tools for screening and prediction, and, ultimately, towards effective prevention of suicidal behaviour.

17.30-18.00 **Plenary Lecture**

Chairpersons: **Christina Toni** (Italy) and **Athanasios Vidalis** (Greece)

Precision psychiatry: First steps towards individualized treatment of Bipolar disorder

Dina Popovic

Bipolar Disorders Program of Hospital Clinic, University of Barcelona, Spain

Due to the episodic and chronic nature of Bipolar Disorder, maintenance therapy represents a critical part of treatment. Clinical practice requires deciding upon the most appropriate treatment for each patient, which constitutes the backbone of the medical act, but is often challenging. In the present speech, clinical markers for response to first-line therapy will be examined. Another recurring issue in clinical practice is given by the difficulty in translating the results of research to therapeutic decision-making. For this reason, our group has recently developed Polarity Index, a metric retrieved by calculating Number Needed to Treat (NNT) for prevention of depression and NNT for prevention of mania ratio, as emerging from the results of randomized placebo-controlled trials, which indicates the relative prophylactic efficacy profile of existing

treatments, and its external validity was examined in a naturalistic study. The Polarity Index provides a measure of how much antidepressant versus antimanic an intervention is in bipolar disorder prophylaxis, in the attempt to predict the most effective treatment for each individual patient. This could represent one of the first steps in the creation of “precision psychiatry” for Bipolar Disorder, with an important impact on patients’ therapeutic management.

18.00-18.30 **Plenary Lecture**

Chairperson: **Haim Einat** (Israel)

Genetic factors contributing to medical comorbidity in schizophrenia

Dimitrios Dikeos

Associate Professor of Psychiatry, University of Athens, Greece

High comorbidity rates for various medical conditions have been documented in schizophrenia, being explained by factors either inherent to the disease or associated with antipsychotic treatment. The aim of this study is to review the genetic factors contributing to medical comorbidity in schizophrenia. Based on clinical genetic studies in schizophrenia, comorbid impaired glucose tolerance/type 2 diabetes mellitus, most autoimmune disorders and cardiac autonomic dysregulation have the strongest evidence for familial predisposition. Similarly, of antipsychotic-induced adverse drug reactions, tardive dyskinesia, neuroleptic malignant syndrome, and antipsychotic-induced weight gain have some evidence for familial clustering. On the molecular genetic level, schizophrenia seems to share specific genes with type 2 diabetes mellitus and with autoimmune disorders. Various genes have been proposed to account for the reduced incidence of rheumatoid arthritis and cancer in schizophrenic patients and their relatives. Many pharmacogenetic association studies have pinpointed numerous, though often contradictory or poorly replicated, genes of modest effect size for tardive dyskinesia, neuroleptic malignant syndrome, clozapine-induced agranulocytosis, hyperprolactinaemia, antipsychotic-induced weight gain, and antipsychotic-induced QT prolongation. Unravelling the genetic underpinnings of medical comorbidity associated with schizophrenia and its treatment is expected to highlight new pathogenetic pathways in both schizophrenia and comorbid medical conditions, and introduce personalized treatment strategies for schizophrenia patients.

19.00-20.30 **Symposium**

The project for the development of Greek Clinical guidance for mental illness

Chairpersons: **Venetsanos Mavreas** (Greece) and **Ioannis Nimatoudis** (Greece)

Venetsanos Mavreas

Professor of Psychiatry, Director of the Department of Psychiatry at University of Ioannina, Greece

Ioannis Nimatoudis

Professor of Psychiatry, 3rd Department of Psychiatry Aristotle University of Thessaloniki, Greece

Konstantinos N. Fountoulakis

As. Professor of Psychiatry, 3rd Department of Psychiatry, School of Medicine, Aristotle University of Thessaloniki, Greece

Lefteris Lykouras

Professor Emeritus, Kapodistrian University of Athens, Greece

Petros Skapinakis

Assistant Professor of Psychiatry, Department of Psychiatry, University of Ioannina, Greece

Antonis Politis

Assistant Professor of Psychiatry, University of Athens, Greece

This symposium will describe the project for the development of national Greek guidance for the treatment of major mental disorders in Greece. It will describe the basic principles and the detailed goals, the tools that will be used and the landscape concerning the data and usual practice concerning each of these mental disorders. It will also describe the general path and the actions that will be taken as well as the timetable and the expected outcomes

20.30-22.00 **Satellite Symposium**

Chairperson: **Ioannis Nimatoudis** (Greece)

The symposium is sponsored by Astrazeneca

Neurobiological mechanisms mediating the treatment effect in bipolar disorder

Stephen Stahl

Professor of Psychiatry, University of California San Diego, Honorary Fellow, University of Cambridge Editor-in-Chief CNS Spectrums, Director of Psychopharmacology Services, California Department of State Hospitals, USA

Antipsychotics are well known as dopamine D2 antagonists or partial agonists, with the second generation atypical antipsychotics having in general more potent 5HT2A antagonist properties than their D2 antagonist properties, potentially explaining why these agents have antipsychotic actions with a lower propensity for extrapyramidal side effects (EPS). But, do these actions explain why essential every atypical antipsychotic has antimanic actions and why some are also evolving as antidepressants for bipolar and treatment resistant depression? Do all the agents

work the same?

Hypothetically, 5HT_{2A} antagonism can have downstream effects on the release of glutamate that mitigate both positive symptoms of psychosis as well as symptoms of non-psychotic mania. All atypical antipsychotics thus appear to have these actions and most are formally approved for the treatment of acute mania. However, antidepressant actions are less clear and seem to differ widely from one agent to another, and patient responses to antidepressant actions also seem to differ widely from one patient to another. Hypothetically, it is not the D₂ or 5HT_{2A} antagonist actions that account for antidepressant actions of these agents, but rather various other actions at numerous and different neurotransmitter binding sites that account for antidepressant actions. Key actions include 5HT_{1A} partial agonist actions, 5HT_{2C} and 5HT₇ antagonist actions, noradrenergic reuptake inhibition, among others. Although all atypical antipsychotics share D₂ and 5HT_{2A} properties, no two agents share the same potential antidepressant mechanisms. Thus, quetiapine and its active metabolite norquetiapine may act via a combination of noradrenergic reuptake inhibition, 5HT_{2C} antagonism and 5HT_{1A} partial agonism, whereas aripiprazole and lurasidone may act via 5HT_{1A} partial agonist actions plus 5HT₇ antagonism. Exploring the overlap and distinctions among these agents can neurobiologically inform prescribers and help in the selection of specific treatments for individual patients, in the manic, depressed and maintenance stages of bipolar disorder.

Clinical research proof for acute and long term treatment in bipolar disorder

Konstantinos N. Fountoulakis

As. Professor of Psychiatry, 3rd Department of Psychiatry, School of Medicine, Aristotle University of Thessaloniki, Greece

The literature suggests that lithium, first and second generation antipsychotics, and valproate and carbamazepine are efficacious in the treatment of acute mania. Quetiapine and the olanzapine-fluoxetine combination are the only efficacious options for treating bipolar depression. The data concerning antidepressants are negative with the exception of fluoxetine. Data concerning venlafaxine suggest further study is needed. Antidepressants when and if used, should be used only in combination with an antimanic agent, because they can induce switching to mania/hypomania/mixed states/or rapid cycling when utilized as monotherapy. Quetiapine, olanzapine and lithium, are efficacious during the maintenance phase for the prevention of all kinds of episodes, although for lithium this has not been proven robustly. Lamotrigine is efficacious in the prevention of depression only, and remains to be clarified whether it is also for mania. In acute manic patients who are partial responders to lithium/valproate/carbamazepine adding an antipsychotic is a reasonable choice. The combination with best data in acute bipolar depression is lithium plus lamotrigine. Patients stabilized on combination treatment might do worse if shifted to monotherapy during maintenance, and patients could benefit with add on treatment with quetiapine, olanzapine, valproate, an antidepressant or lamotrigine, depending on the index acute phase.

Conclusively, a variety of treatment options for BP are available today, but still unmet needs are huge. Combination therapy may improve treatment outcome but it also carries more side-effect burden. Further research is necessary as well as the development of better guidelines and algorithms for the step-by-step rational treatment.

Saturday, June 1st 2013 - Maistros Hall

08.30-10.00 **Symposium**
Psychotherapy in Psychiatry - a German perspective
Chairperson: **Georg Juckel** (Germany)

Operationalized psychodynamic diagnostics (OPD) in patients in prodromal states of schizophrenia-implications for psychotherapy

Georg Juckel

Dept of Psychiatry Ruhr University Bochum, Germany

To obtain data and hypotheses regarding the amelioration of risk estimation and preventive psychotherapy in patients in a prodromal state of schizophrenia by using OPD. 20 participants with a prodromal condition--6 subjects far from psychosis and 14 close to psychosis--along with 10 patients with paranoid schizophrenia as reference group were examined using the first four OPD axes. Both groups differed considerably in all four axes. Compared to the schizophrenic participants, prodromal probands appear to have more favourable preconditions for therapy. Moreover, they experienced the interaction partners, including the investigator, as less aversive and induced less distanced behaviour in the investigator. Conflicts of self-esteem were prominent in both prodromal subgroups. However, patients farther from psychosis showed less conflicts of autonomy versus dependence and displayed a higher integration in structures such as «defence» and «attachment» when compared to participants closer to psychosis. Particularly the differences between the prodromal subgroups suggest that application of the OPD may positively complement previous approaches of early detection, prevention, and psychotherapy for prodromal conditions. The hypotheses obtained should be tested in longitudinal studies with larger sample sizes.

Dialectic Behavioral Therapy - The Concept of Accepting the Challenges of Exiting the System (DBT-ACES)

Oliver Hole, Elina Sakellaridou, Christos Chrysanthou

LWL-Klinik Lengerich, Germany

Recent process analyses on patients with borderline personality disorder (BPD) show that the acute symptomatology apparently is subject to considerable fluctuations, for example suicidal, self-harming or impulsive behavior. Emotional problems, like a continuing depressive mood or feelings of anger, identity disturbances, lack of skills in reaching social goals and insufficient life satisfaction as well as long-term injuries such as pain syndromes or metabolic syndromes all have a high risk to become chronic.

Today, the psychotherapeutic treatment with dialectic behavioral therapy (DBT) provides ample empiric evidence of efficacy in clinical work with BPD patients; but the manual focuses predominantly on interventions at the first stage of treatment. All following stages have not been



sufficiently researched and manualized yet. Developed by the team of K.A. Comtois in Seattle, a 2-year OBT program (DBT-ACES) is currently being tested. The first year of the program deals with acute symptoms, the second year concentrates on reaching the goal of social integration with finding paid work, establishing normative social networks and becoming independent of the health and social system. Already some data from an American research project show the efficacy of DBT-ACES. The approach of DBT-ACES, which is also tested in Germany, is outlined in the presentation.

Bridging the gap between psychological first aid and traumatherapeutic interventions: The psychotherapeutic emergency management of large scale disasters

Alexandra Dittmann-Balcar

Outpatient Department of the LWL Hospital for Adult Psychiatry, Psychotherapy and Psychosomatics, Marsberg, Germany

Stefan Bender

Medical Director of the LWL Hospitals for Adult and Child and Adolescent Psychiatry, Psychotherapy and Psychosomatics in Marsberg, Germany

Large scale disasters like school shootings, natural catastrophes or multiple-vehicle collisions not only bear the risk of severe somatic injuries, but sometimes leave hundreds of people in a state of acute shock with the risk of developing a psychological trauma.

While Germany is well equipped with emergency pastoral care provided by churches of several religious denominations and crisis intervention teams provided by the emergency rescue service, there still is a gap between these psychological first aid strategies and subsequent trauma-focused psychotherapy.

Psychological first aid is regularly applied to and needed by all of the affected persons of large scale disasters. Quite often there is close contact to the afflicted people, but usually there are no resources to maintain contact for longer than a few days.

On the other hand, traumatherapeutic interventions are only necessary for people who suffer from PTSD-symptoms after a defined interval of at least four weeks.

There is a distinct and important gap between these two kinds of interventions. If at all, it is simply by chance that people displaying beginning symptoms of PTSD are identified and introduced to psychotherapeutic treatment.

To bridge this gap the network of all LWL Psychiatric Hospitals in Westfalia (LWL-PsychiatrieV-erbund Westfalen) developed a system of psychotherapeutic emergency management under the auspices of the LWL Hospital for Psychiatry, Psychotherapy and Psychosomatics in Marsberg (LWL-Klinik Marsberg) that enables us for up to one year following the disaster to treat and screen all the affected people. We will discuss the organization of the system as well as the financial funding of this relatively new kind of psychotherapeutic care which is well outside the normal health insurance system.

10.00-11.30 **Symposium**

Treatment of bipolar disorder accorss the life span: From research into the clinical arena

Chairperson: **Martha Sajatovic** (USA)

The clinical approach to patients with bipolar disorder diagnosis

Giuseppe Tavormina

President of "Psychiatric Studies Centre" (Cen.Stu.Psi.), Brescia, Italy

Background: The disorders of the bipolar spectrum (including sub-threshold forms) are very common, more so than is normally considered: these pathologies are often underestimated, not diagnosed or badly treated. Mood in a person who is eutimic is stable; in mood disorders, the mood "swings" between depression and euphoria/irritability and therefore in mood disorders there is "unstable mood". A depressive episode is in fact only one phase of a broader "bipolar spectrum of mood", in which instability of the mood is the main component [Tavormina G, Agius M, 2007].

Clinical evaluation: It is essential at the beginning of the clinical interview to bring out the characteristic temperament of the patient from the beginning of his history of mood disorder, starting from the time that he was about 20 years of age, to put in evidence their temperaments. An observational study [Tavormina G, 2009] focused the percentages of the temperaments: the hyperthymic temperament (35%), the cyclothymic-irritable temperament (49%), the depressive temperament (16%); the cyclothymic-irritable temperament also includes the "Softly-instable temperament" (a soft cyclothymic temperament).

Concluding remarks: The chronic presence in the life of the patients with bipolar disorders of some somatizations (above all colitis, gastritis and migraine) needs to catch the attention of the psychiatrist and/or the GP as key-symptoms for an early diagnosis of bipolar spectrum mood disorder [Tavormina G, 2011]. The consequences of the lack of recognition and treatment of a mood disorder can be: higher risk of suicide, reduction in the expectation and/or the quality of life (personal, family and work), increased loss of working days, increased use of health care resources, including for concurrent diseases, and finally the mood can become chronic and the clinical picture can worsen.

Key words: bipolar spectrum disorders - temperaments - mood disorders diagnosis.

Bipolarity in adolescent: Difficulties for the diagnosis

Nicolas Zdanowicz

Medicine Faculty, Université Catholique de Louvain, Psychopathology and Psychosomatic unit Cliniques de Mont-Godinne, Belgium

Objectives: Bipolar Disorder among adolescents represents a major challenge to Psychiatry. This presentation aims to review 1.) The emergence of adolescent bipolar disorder as a psychopathological entity; 2.) Diagnostic criteria for adolescent bipolar disorder; 3.) Evolution, risk factors, and co morbidity in adolescent bipolarity, 4.) Differences from and links to ADHD; and



5.) Treatment of bipolar disorder in adolescents.

Methods: Review of the literature in Medline - Psycinfo - Psycarticles.

Results: Over the past ten years, researchers have been attempting to test, among adolescents, the knowledge that has already been validated among adults through reproducing and analyzing the effects of the adults' treatment guidelines. Moreover, others have used various brain imagery anatomic analyses in order to compare structural abnormalities among adolescents and adults. As they have found, the specific aspects of adolescent bipolar disorder become manifest in some screening modalities and difficulties. Criteria such as bipolar phenotype --or having a first degree relative with bipolar disorder—are associated with the probability of bipolar emergence. Symptoms such as grandiosity, flight of ideas, decreased need for sleep, and hyper sexuality appear to discriminate bipolar disorder from ADHD. Finally, anti-social behaviours, drug consumption, and suicidal risk often complicate the clinical presentation. Lithium, anticonvulsant and atypical antipsychotic drugs remain the molecules of choice for treatment of bipolar disorder in adolescents.

Conclusions: Although diagnostic tools are still being developed, numerous studies suggest that the adolescent form of bipolar disorder still remains insufficiently identified. However, early diagnosis is essential to improve prognosis.

How to prove that a patient has bipolar Disorder

Mark Agius

Senior Research Fellow, Bedfordshire Centre for Mental Health Research in association with the University of Cambridge, Visiting Research Associate Department of Psychiatry University of Cambridge, Associate Specialist Bedfordshire and Luton Partnership Trust, Research Associate Clare College Cambridge, UK

Background: Seventy-five percent of mental health problems are dealt with in primary care settings. Many of these problems, including unipolar depression, bipolar II and bipolar I disorder constitute the "Bipolar Spectrum". Treating such disorders is the work of primary care doctors.

Methods: Review of the literature on primary care treatment of affective disorders.

Results: There are concerns about the competencies of primary care doctors in dealing with depression. Antidepressants are often prescribed for too short a period of time or at too low a dose. It has been shown that an ongoing training program for primary care doctors is effective in improving the primary care identification and treatment of depression, and when this training program ceased, there was a return to previous levels. Recently, a series of standards for the management of common mental health problems within Europe have been developed. The most recent guidelines in the UK are issued by the National Institute for Clinical Excellence (NICE). NICE guidelines exist for Depression and also for Bipolar I Disorder. Bipolar II disorder is more prevalent in the general community than previously thought. Treatment of bipolar patients with antidepressants may lead to manic "switching", rapid cycling or mixed states, and consequent rise in suicidality.

Conclusions: It is important that General Practitioners have a high index of suspicion for identifying bipolar disorder. Proper identification of these conditions is important for appropriate choice of treatment. Primary Care requires one complete, decision- making algorithm for the identification and treatment of affective disorders.

An update on treatments of later life bipolar disorder

Martha Sajatovic

Professor of Psychiatry, Case Western Reserve University, School of Medicine, Cleveland, Ohio, USA

Until relatively recently, research on treatments for older adults with bipolar disorder has received little attention, despite the complexity of needs for this particularly vulnerable population. Older adults are especially vulnerable to adverse drug effects as a result of their multiple chronic diseases, use of multiple concomitant medications, and the pharmacokinetic and pharmacodynamic changes that accompany aging.

Lithium, anticonvulsant compounds and atypical antipsychotic medications are effective and widely utilized pharmacologic treatments in mixed age populations with bipolar disorder. However, data specific to geriatric bipolar populations is quite limited. There is considerable controversy regarding usefulness and tolerability of lithium in older adult bipolar populations, and ongoing randomized, controlled studies. A recently completed multi-site study funded by the U.S. National Institute of Mental Health (NIMH) compared use of lithium vs. divalproex sodium in geriatric Type I Bipolar mania.

Secondary analyses from controlled clinical trials data -bases have suggested a beneficial role for the novel anticonvulsant lamotrigine and the atypical antipsychotics quetiapine and olanzapine. Preliminary data is encouraging as well for the atypical antipsychotic aripiprazole. Tolerability concerns with foundational treatments for geriatric patients with bipolar differ from younger populations, and drug titration and targeted maximum doses are likely to require modification.

Lithium, atypical antipsychotics, and anticonvulsants all offer potential promise in the treatment of later-life bipolar disorder, but larger trials are needed to validate the findings from smaller sample and uncontrolled analyses.

11.30-12.00 **Plenary Lecture**
Chairperson: **Giuseppe Tavormina** (Italy)

Psychiatric genetics 2020: A roadmap approach

Thomas G. Schulze

Section on Psychiatric Genetics, Department of Psychiatry & Psychotherapy, University Medical Center, Georg-August-University, Göttingen, Germany

Department of Psychiatry & Behavioral Sciences, The Johns Hopkins University, Baltimore, MD, USA

Psychiatric genetics has reached a crucial stage. Several genome-wide association studies (GWAS) have been performed for bipolar disorder, schizophrenia, unipolar depression and other major psychiatric phenotypes. While, initially, researchers were somewhat disappointed by the - prima vista- low yield of genome-wide significant findings, it is now becoming clear that we have not fully grasped the complexity of a genetically complex phenotype such as a psychi-

atric disorder. More and more data suggest that, on the one hand, current GWAS data sets have not been exploited to the fullest extent, and that on the other hand, GWAS need to be complemented by highly differentiated phenotype definition, intelligent mathematical modeling, pathway analyses, pharmacogenetic and epigenetic studies, imaging techniques, and novel genetic tools such as whole genome or exome sequencing. Moreover, data from genetic research on other complex disorders strongly suggest that current sample sizes are still too small to comprehensively understand the impact of common genetic variation on genetic susceptibility to psychiatric disorders. This presentation aims at outlining a methodological roadmap joining the aforementioned strategies in a truly synergistic way.

12.00-12.30 **Plenary Lecture**

Chairperson: **Anna Maria Moeller-Leimkühler** (Germany)

Efficacy assessment of anti-manic agents via use of direct and indirect evidence

Ayşegül Yildiz

Professor of Psychiatry, Department of Psychiatry, Dokuz Eylül University, Izmir, Turkey and Harvard Medical School International Consortium for Bipolar Disorder Research, Boston, USA

Needs on development of decision analytic cost effectiveness models and absence of head-to-head trials prompted use of evidence synthesis methods using indirect methods of borrowing strength from conducted trials, named multiple treatment meta-analysis (MTM). In this article, we aim to explore validity of the underlying assumptions of the MTM method as well as the network structure of anti-manic agents and their potential impact on ranking of treatments.

The validity of conclusions from an initial network analysis, indicating haloperidol as the best treatment for mania, was challenged when further analyses on a more inclusive and homogeneous network structure has been conducted. The present MTM indicated greater short-term anti-manic effects of risperidone than aripiprazole, quetiapine, ziprasidone, lithium, valproate; and olanzapine than lithium, valproate. A network analyses on mixture of studies of different study and patient characteristics as shown in the particular case of mania may induce different risks of bias and may lead to inconsistent networks and questionable validity of the results. If the MTM results on efficacy are to be adopted for anti-manic treatment choice, other elements of anti-bipolar treatment such as effects on neuroprotection, cognition, metabolic profile, and suicide should also be taken into account for a considerate treatment decision.

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13.00-14.30 **Satellite Symposium**

Setting the Treatment Goals in Schizophrenia & Schizoaffective Disorder

Chairperson: **Elias Aggelopoulos** (Greece)

The symposium is sponsored by Janssen

Paliperidone & Paliperidone Palmitate: an evaluation of the present whilst awaiting the future developments

Charalampos Touloumis

NHS Director, Psychiatric Hospital of Attiki, Athens Greece

Schizophrenia still causes a lot of people to suffer despite the fact that more than half a century has passed since the first antipsychotic drugs were started to use. The disease deteriorates the patients' quality of life and functioning, by disturbing their social living and decreasing the life expectancy. Additionally, we should also take into account the burden of both the care givers and the treating physicians.

The fact that it is a chronic disease, the menace of relapse and also the fact that the new antipsychotic substances are not always efficient, especially when it comes to the negative symptoms and the cognitive dysfunction that characterizes the disorder, usually lead to the long-term use of antipsychotic drugs. Patients usually do not comply with these regimens (the mean compliance rate is a little bit higher than 50%), leading to non compliance, one of the main disease relapse factors. Relapse may lead to the development of therapeutic resistance, failure of controlling the symptoms and it is especially traumatic for the patient, neurotoxic and cost-inefficient.

Paliperidone, a new atypical antipsychotic substance, which is actually the active metabolite of risperidone, hence even better regarding the adverse events profile, gained FDA approval in 2006 for the management of schizophrenia. Recently, Schizoaffective Disorder was added in its indications. The innovative pharmaceutical form of paliperidone palmitate offers extended release formulation and unchanged excretion. This form (OROS extended release system) simplifies the often long-term regimens of schizophrenia, ensuring better compliance and acceptance.

A Debate on Treatment Therapy Approaches in Schizophrenia

Dimos Dimellis

Consultant, 424 General Military Hospital, Thessaloniki, Greece

Panagiotis Kakkavas

Psychiatrist, Athens Greece

Schizophrenia is a chronic and disabling disorder with a lifetime prevalence of 1%. We know, today, that the duration of untreated psychosis (DUP) is highly correlated not only to the severity of global (and especially negative) symptomatology but also with the response to the antipsychotic treatment and with the alterations of the gray matter. So early recognition and, also, early intervention during the first psychotic episode is crucial for the longterm course of the

disorder. It is well known that first episode patients (FEP) respond readily to the antipsychotic treatment. Unfortunately the majority of them (almost 90%) will eventually relapse, and this will be the beginning of a long-lasting vicious circle of remissions and relapses that will lead the patient to the, so-called, residual phase of the disorder where permanent cognitive and social deficits limit furthermore the functionality of the patient. By far, the strongest predictor of an upcoming relapse is treatment discontinuation, so interventions (either psychosocial or pharmacological) that will enhance adherence to the antipsychotic treatment are of high value. Long-acting antipsychotics seem to be a rational choice towards this direction. Surprisingly, the usage of this specific formulation is not considered as a first-line choice by the clinicians, almost globally, and the oral antipsychotics continue to be the preferred formulation, prescribed. Do the long-acting formulations represent not only an efficacious alternative but a, really, superior choice over oral antipsychotics? Do they, really, have a superior tolerability profile? Do they represent, really, a cost-effective solution? All these issues represent a promising land for a debate and they are going to be addressed.

14.30-16.00 **Symposium**

The meta-analytic studies in Psychiatry: Have we learned anything?

Chairpersons: **Hans-Jurgen Moeller** (Germany) and
Konstantinos N. Fountoulakis (Greece)

40000 patient network meta-analysis of 15 antipsychotic drugs in schizophrenia

Stefan Leucht

Department of Psychiatry, TU-München, Germany

Background: There is controversy about which antipsychotic drug should be preferred for the treatment of schizophrenia and conventional pairwise meta-analyses are unable to provide a hierarchy based on all available randomized evidence.

Methods: We therefore conducted a Bayesian framework multiple-treatments meta-analysis, which uses both direct and indirect comparisons, of randomized controlled trials (RCTs) comparing 15 antipsychotics and placebo in the acute treatment of schizophrenia. Data sources were the Cochrane Schizophrenia Group's specialized register, MEDLINE, EMBASE, CENTRAL, ClinicalTrials.gov and the FDA website (last search August 2012), supplemented by requests to pharmaceutical companies. Data were independently extracted by two reviewers. The outcomes were overall efficacy (primary outcome), acceptability, weight gain and extrapyramidal side-effects.

Findings: More than 200 blinded RCTs with more than 40000 participants were included. Clozapine, amisulpride and olanzapine were the three most efficacious drugs. Amisulpride, clozapine and olanzapine were the most acceptable antipsychotics. Clozapine, quetiapine and sertindole produced the fewest extrapyramidal side-effects while ziprasidone, haloperidol and lurasidone produced the least weight gain. There were also large differences between drugs in prolactin increase, QTc prolongation and sedation. The results were rather robust towards the effects of percentage dropout, degree of blinding, dose, pharmaceutical industry sponsorship, study duration, chronicity and publication year.

Interpretation: There are clinically important differences between antipsychotics in efficacy, acceptability and side-effects. The hierarchies in these domains may help clinicians to adapt antipsychotic drug choice to the needs of individual patients. Moreover, the review challenges the classification in first- and second-generation antipsychotics. These findings should be considered by mental health policymakers and in the revision of clinical practice guidelines.

Recent meta-analyses in mood disorders: An ongoing debate

Konstantinos N. Fountoulakis

As. Professor of Psychiatry, 3rd Department of Psychiatry, School of Medicine, Aristotle University of Thessaloniki, Greece

During the last decade a number of meta-analysis questioned the clinically relevant efficacy of antidepressants. Part of the debate concerned the method used in each of these meta-analysis as well as quality of the data set. The results suggest that antidepressants have a standardized effect size equal to 0.34 which is lower but comparable to the effect of antipsychotics in schizophrenia and acute mania. The raw HDRS difference from placebo varies significantly with the value of 3 included in the confidence interval. No value of initial severity was found after partially controlling for the effect of structural (mathematical) coupling. Although data are not definite, even after controlling for baseline severity, there is strong possibility that venlafaxine is superior to fluoxetine, suggesting a superiority of double-acting agents. The decrease in the difference between agent and placebo in more recent studies in comparison to older ones is attributed to baseline severity alone. The results reported here, suggest that baseline severity cannot be utilized to dictate or not treatment with medication. Suggestions like this, proposed by guidelines or institutions (e.g. the NICE) should be considered mistaken.

The pharmacological management of obsessive compulsive disorder: The evidence from published meta-analyses

Petros Skapinakis

Assistant Professor of Psychiatry, Department of Psychiatry, University of Ioannina Greece

Background: The aim of the present session will be to summarize the results of the published systematic reviews/meta-analyses of the randomized controlled trials that have investigated the effectiveness of pharmacological agents for the treatment of obsessive compulsive disorder (OCD) in children/adolescents and adults.

Methods: Medline, Cochrane database, and the register of controlled trials maintained by the Cochrane Collaboration Depression, Anxiety & Neurosis Group (CCDAN) were searched for relevant systematic reviews and/or meta-analyses. We restricted the search to the last 10 years.

Results: Four reviews/meta-analyses were identified for children/adolescents and two for adults. These reviews have included 11 randomized controlled trials (RCTs) for children/adolescents and 45 for adults. The Selective serotonin reuptake inhibitors (SSRIs) are now considered as the first-line (pharmacological) treatment option in non-resistant OCD in adults due to the combination of good efficacy and acceptability. Meta-analyses of RCTs have confirmed the ef-

efficacy of six SSRIs: fluvoxamine, fluoxetine, paroxetine, sertraline, citalopram and escitalopram. It has been suggested that the anti-obsessional effects of these medications are independent of their antidepressant properties. Clomipramine, the first drug that was marketed as an anti-obsessional drug, is a strong inhibitor of serotonin reuptake, it has been extensively studied in RCTs and is considered as the (pharmacological) treatment of reference in OCD in adults. Venlafaxine, a dual serotonin - noradrenaline reuptake inhibitor (SNRI), has recently been compared with paroxetine and clomipramine and was found to be non-inferior to these agents but further studies are needed to establish efficacy. Several other antidepressants have been tried in RCTs but according to NICE the evidence supporting their use is not convincing. Regarding children/adolescents evidence from RCTs also shows that five SSRIs (all except escitalopram for which there are no studies) and clomipramine are efficacious in pediatric OCD as well. The number of studies however is smaller compared to adults and the role of psychotherapy as a first-line treatment has been more supported from the literature.

Conclusions: Several antidepressants have established their efficacy and acceptability for the management of non-resistant OCD. The major weakness of the literature so far is that head to head comparisons between antidepressants are few and therefore it is difficult to establish a clear hierarchy of the efficacy and acceptability of the various agents. In order to fulfill this aim systematic reviews that will take into account both direct and indirect evidence are needed.

Four decades of research on psychotherapy for depression: An overview of meta-analyses

Pim Cuijpers

VU University Amsterdam, The Netherlands

In the past four decades several hundreds of randomized trials have examined the effects of psychotherapy for adult depression. In this presentation the results of a series of meta-analyses of these trials will be presented. These results are based on more than 30 published meta-analyses that have used a meta-analytic database of these trials (www.evidencebasedpsychotherapies.org). First, the results of a meta-analysis of 19 trials on prevention of the incidence of depressive disorders will be presented. This meta-analysis has shown that preventive interventions can significantly reduce the incidence of new cases of depressive disorders with 22%. Studies on psychological treatments of adult depression (N=315) have found relatively large effect sizes ($d > 0.6$) for these treatments in general. These studies also show that the effects of psychotherapy are comparable with those of pharmacotherapy and that combined treatments are more effective than psychotherapy alone or pharmacotherapy alone. There are no big differences between the different types of psychotherapy. Interpersonal psychotherapy may be somewhat more effective and non-directive supportive therapy may be somewhat less effective than other therapies, but these differences are small and not consistent. Psychotherapies are effective in several more specific target groups, including older adults, women with postpartum depression, and patients with general medical disorders. Effect sizes are smaller in chronic depression and dysthymia, and in inpatients. The effects of psychotherapy are probably overestimated because of the low quality of many studies in this research area, and because of publication bias.

16.00-16.30 Plenary Lecture

Chairperson: **Ioannis Nimatoudis** (Greece)

DSM-5 and its potential consequences for treatment

Hans-Jurgen Moeller

Department of Psychiatry, Ludwig-Maximilians-University München, Munich, Germany

The current plans for DSM-V or ICD-11, respectively, focus on different improvements. In this context also the introduction of a purely syndromatic/dimensional approach without including etiopathogenetic hypotheses is discussed. A switch to such a dimensional approach, which was discussed among others in the DSM-V task force Deconstructing Psychosis, would have been the most radical development. It could avoid many theoretical pre-assumptions about causal hypotheses, which are still associated with ICD-10 and DSM-IV. This would indeed increase the validity of psychiatric classification, but it would also reduce the information as compared to traditional diagnostic categories with all the current implications concerning aetiopathogenesis, therapy and prognosis.

Based on the different aspects that must be considered in this context, a careful revision was finally preferred by the DSM-V consortium to a radical change of classification. Does it have impact on therapy related decision making?

16.30-17.00 Satellite Lecture

Chairperson: **Philippos Kouniakis** (Greece)

The lecture is sponsored by Pfizer

What we Expect from Antipsychotic treatment? The Role of Ziprasidone

Georgios Papageorgiou

NHS Director, Department of Psychiatry, Evangelismos Hospital, Athens, Greece

From the chlorpromazine era the main question was to have a drug for schizophrenia or bipolar disorder, combining both efficacy and safety. The advent of second-generation antipsychotics (SGAs) the expectations about this have raised. Apart from the positive symptoms of schizophrenia, priority was given to negative, cognitive and affective symptoms as well. Functionality of patient has therefore a primary aim in treatment. It is known that certain SGAs are burdened by the liability to induce metabolic dysfunction. Therefore a major criterion of choice of a drug is its metabolic safety. It is postulated that not all new SGAs can be indistinctively effective in all patients. It is advisable, therefore, to switch medications to those patients not responsive or non adhering to therapy or those who manifest a high number of adverse events. Ziprasidone is an SGA with proven efficacy and metabolic safety, indicated both for schizophrenia and bipolar disorder. All new evidence in those illness domains is discussed. Additionally, we discuss all the possible switch mechanisms that involve this drug from a previous treatment, either not effective, or for other reasons (e.g. reimbursement scheme changes in Greece) not affordable.



17.00-17.30 **Plenary Lecture**

Chairperson: **Lukas Pezawas** (Austria)

Revisiting “The Self-Medication Hypothesis” in Light of Recent Neurobiology of Comorbid Addictive States in Schizophrenia

George Awad

Professor Emeritus, University of Toronto, Chief of Psychiatry, Humber River Hospital, Toronto, Canada

Comorbid substance abuse in schizophrenia has been consistently recognized as high, ranging between 10 - 70%. Though the genesis of comorbid substance abuse in schizophrenia is likely multifactorial in origin, one of the prominent and popular hypothesis in the 1980s and 1990s has been “the self-medication hypothesis”. According to such a hypothesis, patients with schizophrenia take to drug abuse as a direct consequence of dealing with various aspects of their illness experience in order to alleviate some of the inconveniencing side-effects, such as dysphoria or extrapyramidal symptoms. Indeed, in support of such a hypothesis, our early studies confirmed that patients with schizophrenia who experienced dysphoric responses to antipsychotics have a higher likelihood to develop comorbid abuse, compared with non-dysphoric patients (odds ratio 4.08 $\chi^2 = 21.8$, $P < 0.0001$). On the other hand, the self-medication hypothesis has been criticized for not being able to explain the variable picture of comorbid addictive states in schizophrenia. Recently, the most compelling new information has been the elucidation of the neurobiological basis for addictive states in schizophrenia, and which striatal dopamine functioning, is at its centre. The advent of neuroimaging techniques has clarified the role of dopamine in both schizophrenia and addictive states. Patients with schizophrenia and comorbid substance abuse have been shown to have significant blunting of striatal dopamine release, in contrast to the elevated striatal dopamine release in schizophrenia without comorbid substance abuse. Recently, we reported for the first time that low striatal dopamine functioning is implicated in the genesis of neuroleptic dysphoria. Recent experimental and clinical data has also reported the role of low striatal dopamine as a predisposing factor in the development of comorbid addictive states.

This presentation will review the role of low dopamine in the genesis of both neuroleptic dysphoria and comorbid substance abuse, as well as explain why not all persons using illicit drugs end in abusing drugs, developing dependency and an addictive state. This new finding has clinical implications, in terms of the likelihood that the patient that develops neuroleptic dysphoria in the early course of treatment is likely one and the same person who likely has vulnerability for addictive states. In that scenario the choice of the antipsychotics is crucial, in terms of the selected antipsychotic with preference for use of less potent dopamine blockers.

17.30-18.00 **Plenary Lecture**

Chairperson: **Martha Sajatovic** (USA)

Introduction into the schizophrenia guidelines of the World Federation of Societies of Biological Psychiatry

Peter Falkai and A. Hasan

Psychiatric Department of the University of Munich, Psychiatric Hospital, Munich, Germany

There are numerous national guidelines on schizophrenia, addressing important aspects of the diagnosis and treatment of schizophrenia. The guidelines of the WFSBP (World Federation of Societies of Biological Psychiatry) however try to define a framework for biologically oriented treatment options in schizophrenia. They are subdivided into three parts, comprising acute treatment, long-term treatment and special treatment conditions.

The guidelines try to form a corridor to enable practitioners to make a reliable diagnosis of schizophrenia as well as to treat this disorder successfully in the most possible cases. Centrepieces of the guidelines are the choice of the right pharmacotherapy in acute and long-term phase of the illness, the use of evidence-based combinations and as well as how to deal with treatment refractory conditions. Apart from the effectiveness of these guidelines their limitations are given consideration as well, to show that they are indeed only guiding recommendations, but at the same time enable the clinician to treat each patient according to their individual necessity.

18.00-18.30 **Plenary Lecture**

Chairperson: **Hans-Jurgen Moeller** (Germany)

Antidepressant response and subthreshold bipolarity in “unipolar” major depression - Implications for practice and drug research

Zoltán Rihmer

Department of Clinical and Theoretical Mental Health, Semmelweis University, Budapest, Hungary

It is well documented that comparing with unipolar major depression antidepressants works less frequently in the depressive episode of bipolar disorder because the vast majority of well-controlled studies failed to show a significant effect of antidepressants in bipolar I or II depression. However, most recent findings show that this high rate of antidepressant resistance is not limited only for the classical (threshold) bipolar I and II depression as major depressives with subthreshold intradepressive or extradepressive (hypo)manic symptoms respond as poorly to antidepressants as classical, (threshold) bipolar depressives. In addition to frequent nonresponse, initial antidepressant monotherapy of depressed patients with sub-threshold bipolarity may also result in higher switch rate, higher rate of worsening of the cross-sectional picture, more frequent suicidal behaviour and continuous use of antidepressants in such patients can lead to long-term destabilization, including rapid cycling course of the illness. In spite of the fact that 33-41% of DSM-IV diagnosed unipolar major depressive disorder patients have

clinically significant current or lifetime subthreshold (hypo)manic symptoms, these patients are regularly, by definition, included into Phase II/III randomized controlled trials on antidepressant monotherapy in unipolar major depression. Considering the new psychopathology of mood disorder (i.e. taking into account the subthreshold bipolarity in DSM-IV defined unipolar major depressive disorder) in the planning of the protocol of Phase II/III drug trials on antidepressant monotherapy in unipolar major depression and consequently changing the inclusion/exclusion criteria are required for resulting in more valid and not misleading results.

18.30-19.00 Plenary Lecture

Chairperson: **Hans-Jurgen Moeller** (Germany)

The challenges facing the makers of classifications of mental disorders

Norman Sartorius

Professor of Psychiatry, Geneva, Switzerland

The makers of classifications of mental disorders face a number of challenges - some of these stem from the incompleteness of our knowledge about the pathogenesis of mental disorders and others from the variety of requirements that the classification of mental disorders has to satisfy.

The presentation will give an outline of these challenges and discuss ways in which the groups working on classification have tried to meet them.

19.30-21.00 Satellite Symposium

Achieving treatment goals in depression

The symposium is sponsored by Pharmaserve-Lilly S.A.C.I.

Introduction

Georgios Garyfallos

Associate Professor of Psychiatry, director of the 2nd Department of Psychiatry Aristotle University of Thessaloniki, Greece

The importance of full remission in depression

Vasilis P. Bozikas

Assistant Professor of Psychiatry 1st Department of Psychiatry Aristotle University of Thessaloniki Greece

Major depressive disorder is a debilitating and costly condition that affects up to 17% of female and 9% of male population in their lifespan. The goal of treatment of major depression should be complete remission of symptoms and a full return to premorbid levels of functioning. However, this goal is reached with the first antidepressant treatment only for 37% of the patients. Partial remission and residual depressive symptoms are associated with increased risk

of relapse, shorter time to relapse and reduced psychosocial functioning. Moreover, non remission may have neurobiological implications, as significant greater gray matter volume decline was found in non remitted patients than in stable remitted patients with major depression. Duration of depression and number of depressive episodes have also a deleterious effect in hippocampal volume. The most common depressive residual symptoms are sleep disturbances, pain, fatigue, and concentration problems. All these symptoms are linked to inefficient activity of the monoaminergic neurotransmitter circuits (dopamine, serotonin, and noradrenaline). Consequently, aggressive treatment with antidepressant agents with multiple pharmacological mechanisms may lead to remission of all symptoms and potentially modify the course of depression.

Unmet needs: Do we have the answers?

Dimos Dimellis

Consultant, 424 General Military Hospital, Thessaloniki, Greece

Major Depressive Disorder (MDD) is a highly prevalent, chronic and disabling one, affecting 6.9 million people in European Union, annually. Moreover, epidemiological data show that only a minority of affected patients will receive proper treatment for the disorder. Almost, a third of patients will not respond to the initial antidepressant medication, and 50-75% will have a relapse, after their initial episode. Additionally, it is estimated that the majority of them will discontinue their treatment, prematurely (almost 60% after 12 weeks). On the other hand, the efficacy of antidepressants, especially against non-severe depressive states is questioned. All these matters pose questions regarding the treatment of depression, but the ultimate question should be "do we have the right answers?" Treatment guidelines propose a series of actions when the initially chosen antidepressant cannot ameliorate the underlying psychopathology. For example dose increase, augmentation, combination and switch consist the rational steps towards a non-responding disorder. All these choices will be reviewed and criticized systematically. Dose increase is not supported by the literature especially in the case of SSRIs because they do not show a linear dose-response relationship. The combination of antidepressants, although, it can be supported from a pharmacodynamic point of view didn't prove to be beneficial. Augmentation with either atypical antipsychotics or other psychoactive agents, may benefit the patient but can also increase the propensity for adverse effects which will challenge his long-term course. Finally, switching to another antidepressant within the same class is not expected to offer any advantage. On the contrary, switching to another class of antidepressants, can improve efficacy without causing severe adverse reactions. This last mentioned strategy may represent the best choice for the majority of the patients, or not? Questions will be answered.



Switching to SNRIs from other antidepressants: Why and How

Petros Fotiadis

Consultant at rank of Lieutenant Colonel, Psychiatric department, 424 General Military Hospital, Thessaloniki, Greece

Despite of the recent advances in the pharmacological treatment of major depression disorder (MDD), suboptimal response of patients with depression to antidepressant medication is a common clinical reality. It has been estimated that only 50% to 60% of patients respond to their initial antidepressant monotherapy and less than a third of them achieve full remission of their depressive symptoms. Residual depressive symptoms have prognostic implications associated with a significantly increased risk of relapse and suicide. In addition, partial responders have reduced physical and social function. Pain Physical Symptoms (PPS) are recognized as frequently associated with MDD, with more depressive symptoms and worse MDD outcomes.

Although antidepressant switching is a commonly used strategy in patients with initial selective serotonin reuptake inhibitor (SSRI) treatment failure, studies evaluating its timing are lacking, and recommended timelines in guidelines vary.

A variety of switching methods can be employed. In some cases the most appropriate switch method will clearly be dictated by the antidepressant being taken prior to switch, or the antidepressant that is to be taken following the switch.

After failure of a first-line SSRI, a switch within the class or a switch to a different class of antidepressant are two options well supported by the data, although switching from an SSRI to a double acting agent may potentially offer greater benefits.

The most recently data has demonstrated that the switching to a SNRI from another antidepressant -in case of no-responders or partial responders depress patients- has higher efficacy and good tolerability, with more patients having achieved confirmed remission when they follow early switch strategy. In addition, "immediate" or "direct" switch approach appears to be effective and well tolerated as the start-taper switch method. Improvement in PPS in patients treated with SNRIs seems to link to higher remission rates.

Sunday, June 2nd 2013 - Maistros Hall

08.30-09.00 **Plenary Lecture**
Chairperson: **Philippos Kouniakis** (Greece)

Association of GDNF gene variants with tobacco consumption in three ethnic groups from India

Arundhuti Das^{1,2}, Andrea Vereczkei¹, Eszter Kotyuk³, Anna Szekely³, Banrida Langstieh², Maria Sasvari-Szekely¹ and Csaba Barta¹

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³ Institute of Psychology, Eotvos Lorand University, Budapest, Hungary

Background: Tobacco consumption like any other drug is known to produce a sense of well being and euphoria and thus taps the reward related neurotransmitter systems. A wide range of studies have indicated that dopamine release in the nucleus accumbens is responsible for these rewarding effects. Glial cell line-derived neurotrophic factor (GDNF) is an essential growth factor for the survival and maintenance of midbrain dopaminergic neurons. Even though several studies demonstrated association between dopamine and addictions, there are hardly any association studies with GDNF and addictive behavior thus far.

Materials and Methods: This study was carried out in a sample of 700 young adults (age range 18-35) in three ethnic groups from the North-Eastern region of India: Bengali (N=200, Caucasian), Hmar (N=200, Mongoloid), Khasi (N=300, Mongoloid). Data on tobacco consumption was collected using structured questionnaire, as well as personal interview. The level of addiction was measured by self-reported methods including the modified Fagerström Test for Nicotine Dependence. DNA was extracted from buccal swabs and genotyping of GDNF polymorphism rs3812047 and rs11111 was carried out by RT-PCR using TaqMan probes.

Results: In case of rs3812047 A/G polymorphism the case-control analysis revealed significant differences between tobacco users vs. non-consumers (genotype-wise: $p=0.0021$, allele-wise: $p=0.00005$; OR=2.4) with A being the protective allele. Furthermore, we assessed the level of nicotine addiction using the Fagerström scale and found a tendency in the Bengali group in the allele-wise analysis with the A allele being the protective factor again.

The rs11111 A/T variant showed a tendency ($p=0.078$) in the allele-wise analysis in the entire sample: The A seems to be the protective allele from tobacco consumption.

Conclusion: A study done by Yoshimura et. al in 2011 (1) reported association between the GDNF rs2910704 variant and the severity of addiction to methamphetamine. Earlier this year our research group has found an association between GDNF polymorphisms and smoking behavior in young Hungarian adults (unpublished data). These and the present study indicate that GDNF - probably due to its involvement in development and survival of dopaminergic neurons - plays an important role in tobacco consumption and the level of addiction.

Acknowledgment: We thank the participants of the study and also the Hungarian Scholarship Board, Balassi Institute for supporting with scholarship.

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09.00-10.30 **Symposium**

Depression and anxiety: conceptualization and treatment

Chairpersons: **Konstantinos N. Fountoulakis** (Greece)
and **Stamatia Mageiria** (Greece)

Anxiety and depression: an overview

Stefania Moisdou

Consulting psychologist at PAOK FC, Thessaloniki, Greece

Although depression and anxiety are considered to be separate disorders, according to the classification systems, in clinical practice they often co-exist. Thus, investigating possible relationships among them constitutes a very important research task. However, to date results are controversial, possibly because of (a) the multidimensional nature of both depression and anxiety and (b) the fact that the distinction of milder mood disorders from the normal variation of mood is sometimes problematic. Additionally, very often depression and anxiety overlap at the sub-syndromal level, while also dysthymia and minor depression are very often comorbid with an anxiety disorder. In this presentation, we present an overview of the issue and explore several models that offer different conceptual structures that provide better understanding on the aforementioned relationships and several conditions/causes that lead to comorbidity. Although the co-existence of depression and anxiety is neglected up to now, this field is very interesting in terms of causality, nature and epidemiology.

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Non-biological etiopathogenesis of depression and anxiety and their comorbidity

Ioanna Koufaki

Psychologist, Thessaloniki, Greece

Research has confirmed significant co-occurrence between anxiety and depression both at the symptom and syndrome level (Maser & Cloninger, 1990). Approaches to understanding commonalities have included personality characteristics, environmental factors, cognitions, and behaviours. These theories, which are not necessarily contradictory, make distinct predictions about psychiatric comorbidity.

Within the sphere of personality theories, neuroticism, negative affect and behavioural inhibition have been examined within the context of understanding comorbidity (Clark, 2005). Alloy and colleagues (1990, 2006) further proposed a helplessness-hopelessness model that identifies certain key cognitive processes that underlie the high comorbidity between anxiety and depression. In terms of childhood environmental risk, research consistently indicates that childhood trauma and adversity have an enduring effect on the overlap between depressive and anxious symptomatology (Brown et al, 1996). Finally, predisposing factors according to the psychodynamic literature include early childhood experiences of object-loss or constant threat of abandonment, insecure attachment and pervasive dependency (Trujillo, 2006).

Undoubtedly, a stronger understanding of the origins of comorbidity has important theoretical and practical implications. Even with all the advances that have taken place in the development of conceptual models and the plethora of empirical research from different perspectives, the relation between anxiety and depression still remains a theoretical challenge.

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Non-biological treatments

Stella Miziou

Psychologist, Thessaloniki, Greece

Cognitive Behavioral Treatment (CBT) has been shown to yield clinical improvements in anxiety and depression, that are superior to no treatment and non specific control conditions, at both post therapy and follow-up. CBT is also associated with low dropout rates, maintained long-term improvements, and the largest within-group and between-group effect sizes relative to all other comparison conditions. The literature generally suggests that Mindfulness Based Cognitive Therapy (MBT) may be beneficial to reduce stress, anxiety and depression. On the other hand, Intepersonal Psychotherapy (IPT) deserves its place in treatment guidelines as one of the most empirically validated treatments for depression and anxiety. There is only one randomized clinical trial for the comorbidity of anxiety and depression suggesting that structured treatments like IPT-A may be particularly helpful as compared to supportive therapy. Although there is consensus that Short-Term Psychodynamic Psychotherapy (SPP) and Problem-Solving Therapy (PST) can be effective treatments for depression and anxiety, there are no studies for the effectiveness of PST or SPP in the co-existence of depression and anxiety.

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Neurobiological etiopathogenesis of anxiety, depression and their comorbidity - Biological treatment options

Stamatia Mageiria

Research Associate, 3rd Department of Psychiatry, Aristotle University of Thessaloniki, Greece

Depression and anxiety disorders are both common psychiatric conditions. Traditionally, they have been seen as distinct entities. However, their extensive comorbidity casts doubt on the validity of this distinction. It appears to be the norm rather than the exception in the case of anxiety disorders and depression. The study of comorbidity may have important implications for nosology, but its significance extends beyond this theoretical point of view. The interface of anxiety and depression affects the course and treatment outcome of these conditions. Patients with coexisting anxiety and depressive disorders tend to have more severe symptoms and are more impaired in their psychosocial functioning. According to some reports, they show a slower and lower response to treatment and, overall, have poorer prognosis, compared with patients who have just one condition. Therefore, exploring the relationship between the two conditions may produce important insights into the etiology, diagnosis, treatment and outcome.

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10.30-12.00 Symposium

Bipolar Disorder: The cognitive perspective

Chairpersons: **Georgios Garyfallos** (Greece), **Vasilis P. Bozikas** (Greece)

The predictive significance of neuro-cognitive factors for functional outcome in bipolar disorder

Vasilis P. Bozikas

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Poor psychosocial functioning in bipolar disorder often persists even after affective symptom remission. Cognitive deficits, which have emerged as a core feature of bipolar disorder in the past few years, are among the factors implicated in adverse psychosocial outcome of patients suffering from bipolar disorder. This review aims to overview recent literature on the association of neurocognition and psychosocial functioning in bipolar disorder. Cognitive deficits (mainly general neurocognitive functioning, attention and verbal learning and memory) are important determinants of poor psychosocial functioning in bipolar disorder, although to a lesser extent than in schizophrenia. Although affective symptoms appear to be a more important predictor of functional outcome in symptomatic patients, cognitive deficits also play a significant role, more readily recognizable in euthymic or chronic patients. Given the importance of cognitive impairments for psychosocial outcomes in bipolar disorder, the development of interventions targeting cognitive impairments is imperative for improving recovery rates and quality of life in patients, even after adequate symptom control.

Semantic priming in remitted patients with bipolar disorder

Christina Andreou

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Background and objectives: Semantic priming disturbances are increasingly recognized as a feature of schizophrenia, and increased priming has been suggested to constitute a “cognitive correlate” of positive formal thought disorder (FTD). The present study aimed to investigate semantic priming in patients with bipolar disorder (BD).

Methods: A primed lexical decision task with strongly related (STR), weakly related (WR), or unrelated (UR) prime-target pairs (SOA=250 msec) was administered to fourteen remitted patients with BD and twelve control subjects matched on key demographic variables. FTD was measured by means of the Scale for Thought, Language and Communication (TLC).

Results: Control subjects showed a robust (59,6 msec) and statistically significant priming effect for STR words, while priming for UR words was non-significant. In patients there was no evidence of priming in either condition. In patients, there were no significant correlations between priming magnitude and TLC scores. However, the only patient with a positive score on the TLC disorganization factor exhibited evidence of hyperpriming.



Limitations: The present patient sample exhibited very low TLC scores, and no direct comparison to patients with schizophrenia was possible.

Conclusions: The finding of decreased priming in patients with BD raises the possibility that semantic processing abnormalities in BD are of a different nature than those encountered in schizophrenia. Due to the small size and very low TLC scores of the present patient sample, no definite conclusions can be drawn as to the relationship of formal thought disorder and semantic processing abnormalities in BD.

Familial comorbidity of bipolar disorder and multiple sclerosis: Genetic susceptibility, coexistence or causal relationship?

Mary H. Kosmidis

Associate Professor of Psychology, Aristotle University of Thessaloniki, Greece

The frequent comorbidity of bipolar disorder and multiple sclerosis has increasingly inspired research on potential commonalities in the pathophysiology of these two disorders. One hypothesis posits that, when there is comorbidity, MS plays a causal role in psychiatric manifestations. The other states that both disorders have a common underlying physiological process that increases the likelihood of their co-occurrence. We examined these hypotheses through the neuropsychological assessment of two adult siblings with comorbidity and their relatives, including three generations of family members with psychiatric morbidity. We found an extensive multigenerational history of bipolar disorder in this family and a lack of comorbid multiple sclerosis in three of the five affected members. This history would seem to support the hypothesis of a common underlying brain process (potentially genetically-based) to explain the comorbidity of BD and MS, but cannot clarify whether this comorbidity implies a relationship between the two disorders or merely reflects parallel processes of brain deterioration. We cannot, however, rule out the possibility of a subclinical MS-related process leading to the early manifestation of BD, with MS appearing much later in time, or even a third, undetermined factor, leading to familial comorbidity. Although we have insufficient information to support either hypothesis definitively, we present the familial cases as a springboard for a discussion of dilemmas related to teasing apart MS and BD comorbidity.

Controlled shifting of attention while inhibiting spontaneous responding in schizophrenia and bipolar disorder through a dichotic listening paradigm

Stella Tsotsi

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The dichotic listening (DL) task was developed originally to examine bottom-up or “automatic” information processing. More recently, however, it has been used as a tool in the study of top-down or “controlled” information processing. This has been done by including forced-choice conditions, wherein the examinee is required to focus attention on one or the other ear. It has been widely utilized with patients with schizophrenia, who exhibit rather severe deficits in

managing their attention, but not with other patient groups, such as patients with bipolar disorder. In the present study, we examined potential performance similarities DL listening task. In total, the sample consisted of 36 patients with schizophrenia, 19 patients with psychotic bipolar disorder and 35 healthy individuals, who performed a DL task with verbal stimuli once at the beginning of their hospitalization and again on the last day before discharge. Our findings indicated that both patient groups showed similarly diminished performance when compared to healthy participants at both times of administration. Symptom improvement between the two evaluations did not significantly influence performance in the DL task. In conclusion, impaired controlled information processing appears to be a common deficit in both schizophrenia and bipolar disorder.

12.00-13.30 **Symposium**

The Phenomenology of Voluntary Control

Chairperson: **Philip V. Kargopoulos** (Greece)

Primary and secondary consciousness in voluntary control

Koralia Paspala

Department of Psychology, Aristotle University of Thessaloniki, Greece

Taking in mind the division of consciousness in Primary and Secondary, a series of questions suggest themselves with respect to voluntary control: Will we tend to characterize as more unintentional the actions and experiences that involve Primary Consciousness and as more intentional the actions that involve Secondary Consciousness? Do we tend to assign different grades of consciousness and intentionality to actions that involve different conditions, such as passivity-activity or cognitive-emotional-physical qualities? If an action or experience can be separated in sub-stages, would these sub-stages be given a different grade of consciousness and intentionality?

To answer the above questions we created a questionnaire which included a list of verbs and actions that refer to physical states and verbs that refer to actions and cognitive or emotional states. To make sure that the participants fully understand the concept of consciousness, we gave a clear definition of Primary Consciousness and Secondary Consciousness. The participants fill the questionnaire by rating in two Likert Scales from 0-6 the level of intentionality and the level of consciousness of every action or state they were given. The grade zero (0) was referring to lack of intentionality and lack of consciousness, and the grade six (6) corresponds to absolute intentionality and Secondary consciousness. Primary Consciousness was by our approach to be assigned intermediate values such as three (3) or four (4).

Our aim was to find, if possible, a point at which people's views on these two concepts tend to converge and then to check if people tend to separate their various experiences as purely conscious (or purely unconscious) and as a purely intentional (or purely unintended), or if we tend to see consciousness and intentionality, respectively, as a continuum and perform various gradations of consciousness and intentionality to our actions.

In specific we aimed to examine in what level people's judgments about intentionality and consciousness are affected by the nature of an action, such as passive/active, cognitive/emotional/



physical, and by the differentiations between the different stages of an action, such as stop moving/standing still. We also attempted to investigate if the way people rate their actions in levels of consciousness is in agreement with the separation of consciousness into Primary and Secondary. Our final aim was to investigate if there is a correlation between a) the nature of our actions, b) the level of consciousness and c) the level of intentionality which we assign to an action.

The phenomenology of volition

Manina Donikis

Department of Philosophy, Aristotle University of Thessaloniki, Greece

While trying to evaluate a control degree that individuals exercise upon their actions and its relevance to the conception of reality on a scale spanning from a +100% conscious to a -100% unconscious state of control, subjects were asked to estimate the listed states and activities on an *individual* level while performed. Duration was not specified. Verbs were given at a random order. Multiple factors that were taken into account, expanded further the range of the obtained results: it is a primarily subjective, experiential measurement research, which brings memory into play, (and thus its possible “corrections”), and a certain degree of inattention and automatization. There seems to be an essential level of the unconsciousness involved in activities resulting in negative effects or in barely noticeable quantities and qualities. Verbs implying future planning, intention or willingness involve an essential level of control. The latter seems to be highly significant regarding the formation of the identity of the subject. In addition, there appears a perpetual necessity of cross-checking with the directly perceived environment, including the identification and limits of one’s actions, from which several idiosyncratic features can be inferred.

Structure and composition of the inventory for evaluating human behavior consciousness and volition

Magda Nigritinou

Department of Psychology, Aristotle University of Thessaloniki, Greece

Questions like “what is consciousness”, “how can it be defined”, “which are its consisting parts”, and “what is its functional significance”, have been a matter of debate in philosophical thought throughout the years. A short and operational definition of consciousness can be given as follows: “consciousness is the person’s awareness about the inner- and outer-personal, cognitive, emotional, perceptual and physical events that happen in every single moment of existence”. Following the above definition, at first, becomes clear that consciousness is a dynamic process of variable character, which evolves as time passes. Secondly, one can easily accept, that consciousness constitutes the necessary condition, under which a human being can successfully interact and conform to the environment. If the prior definition becomes accepted, we can therefore think that consciousness is the threshold necessarily to be traversed, in order to pass into the sphere of voluntary behavior and action.

Referring to the close relationship between consciousness and volition (or alternatively, willingness), as basic characteristics of human action, a component which cannot be overlooked, is the one of control upon behavior and action. Under the term "control", beyond the actual sense of controlling, are summarized the personal beliefs about the locus and the source of behavioral control. But in a practical sense, how can one perceive the very beginning of consciousness process, in order the volition and the control to follow? In the field of psychology, the cornerstone for all the behaviors and actions to commence, is the attentional system. Attention is not only necessary for the focusing of our cognitive system towards a stimulus, but also, sustained attention upon stimuli, ensures the effective mobilization of cognitive sources which are important for the stimuli elaboration.

According to all the above described, our purpose is the creation and the presentation of a self-report inventory, in which the participants will be asked to evaluate various cognitive, emotional and physical/bodily behaviors in accordance with the parameters discussed. Accordingly 145 Greek verbs were chosen based on dictionary search. These verbs describe either cognitive (ex. "decide"), or emotional (ex. "I am moved"), or bodily states (ex. "I feel pain"). Analytic instructions and explanations about what each dimension/parameter counts are given. The answers must be based upon personal experience, and should regard exclusively the time that every verb action needs to be performed/completed. A 7-points Likert scale is used for each dimension under every verb present in the inventory.

Ways for assessing willingness and consciousness in human activities

Elena-Ioanna Nazlidou, Magdalini Baxevasi, Krystallia Pantiou

Department of Psychology, Aristotle University of Thessaloniki, Greece

Activity is defined as a set of actions that a person performs on one particular area. Apart from distinctions that concern the sector in which they are classified, activities can be further distinguished with regard to whether they are voluntary or involuntary, whether they are conscious or unconscious or whether they are performed under what degree of control on the part of the individual agent. The issues of the existence of free will, of the explanation of intentionality and of the nature of consciousness have occupied various sciences, such as philosophy, psychology, cognitive science, and neuroscience and still remain unsolved mysteries. In this way, the investigation of the manner in which the activities could be classified depending on whether they are voluntary or involuntary, using a questionnaire, consists a great challenge. For this reason we create three questionnaires, which are intended to find how individuals judge activities in regards with these dimensions. The main method on which these questionnaires are based is phenomenology, which attempts to examine the structure of consciousness, putting aside the problems related to this relationship with the natural world. Using three different scales, we aim to find common and non common "views" among people about the concepts 'conscious', 'unconscious', 'voluntary' and 'involuntary' based on subjective judgments. The problems that somebody will face during the construction of such questionnaires, some solutions for these problems and the structure of the scales will be discussed. We can conclude that the determination of willingness and consciousness for various activities using such methods could be workable.



13.30-15.00 **Symposium**
MicroRNAs and schizophrenia
Chairperson: **Emmanouil Rizos** (Greece)

MicroRNAs and Human Disease

Nikolaos Siafakas

Biologist PhD, Lecturer of Microbiology, National and Kapodistrian University of Athens, Medical School, Microbiology laboratory, University "ATTIKON" General Hospital, Athens, Greece

The central dogma of Biology dictates the flow of genetic information from DNA through RNA to protein. Nevertheless, it is now known that RNA molecules may perform many critical functions in the intracellular environment, expanding their role from intermediate carriers of genetic information to widespread regulators of gene expression.

Short, non-protein-coding RNA sequences, termed micro-RNAs (miRNA), have been shown to negatively regulate the timing and rate of protein translation via catalytic destruction, or translational repression of their complementary, target messenger RNA (mRNA). As a consequence, miRNAs may significantly affect all aspects of cellular growth, development, differentiation and apoptosis, with a profound influence in many human diseases. They have recently been implicated as key regulators of neuronal function and development, with their differential expression being increasingly associated with the development of human neurodegenerative and psychiatric disorders with, so far, poorly understood underlying pathophysiology.

Amongst the various genetic, epigenetic, environmental and developmental factors that have been involved as the cause of many psychiatric diseases, there is now plentiful evidence that reinforces the role of biogenesis and expression of various miRNAs in brain development and structural plasticity, contributing, therefore, to the pathophysiology of psychiatric disorders. Further elucidation of more miRNAs and their precise role of action in psychiatric disease could, thus, lead to further insight into the introduction of novel therapies based on miRNAs.

MicroRNAs in cellular physiology and psychiatric disorders

Vassilis Zoumpourlis

Researcher B, PhD, Greece

MiRNAs are short, 20-21 nucleotide-length RNA molecules which participate in gene regulation by binding to specific mRNAs and inducing their degradation or repression of their translation. miRNAs are often aberrantly expressed in a variety of cancer types, as well as in several neurodegenerative diseases, such as Parkinson's and Alzheimer's disease, implying a functional link of specific miRNAs with these pathological conditions. In detail, many studies have shown that miRNAs are implicated in cellular processes underlying cancer and neurodegenerative diseases, e.g. cell cycle arrest, apoptosis, cell-to-cell communication and cell differentiation, that have been often found deregulated in both cancer and neurodegenerative diseases. In this respect, it has been proposed that specific miRNAs could possibly be used as prognostic and diagnostic biomarkers, as well as potential targets for the molecular therapeutic management of these conditions.

MicroRNAs as biomarkers for schizophrenia cancer and other CNS disorders - The role of mir-183 as a possible molecular protective biomarker for cancer in schizophrenic subjects

Emmanouil Rizos

Assistant Professor of Psychiatry, University of Athens, Greece

Schizophrenia is a severe disabling brain disease affecting about 1% of the population. Besides, schizophrenia is also a heterogeneous syndrome of different subtypes that share clinical symptoms and features. It seems that schizophrenia as a disorder is mediated by common etiological factors, or in another words, genetic and environmental factors play a mediator role in the development of it.

MiRNAs are a class of small, non-coding RNA that play an important role in various biological processes. Bioinformatics have predicted that approximately one-third of human genes are targeted by miRNAs. MicroRNAs have also a dominant role in the regulatory mechanisms of gene expression in the central nervous system (CNS). Due to their implications in a large number of CNS pathways, they pose as appealing molecules for further investigation, with potential diagnostic, prognostic and therapeutic value.

Although there is much to be learned in this field, at this presentation will highlight the potential role of miRNA as a new class of biomarkers in several CNS disorders, including neurodegenerative diseases, such as schizophrenia or autism as well as different types of cancer and finally to the potential role of mir-183 as a possible protective biomarker for cancer in patients suffering from schizophrenia.



POSTERS

P001

Does cannabis use increase the risk of schizophrenia; a retrospective analysis of a psychiatrically ill population in Sri Lanka

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²Department of Clinical Medicine, Faculty of Medicine, University of Colombo, Sri Lanka

Background: The evidence for a positive association between cannabis use and schizophrenia spectrum disorders (SSD) was demonstrated more than 20 years ago [1]. However, the exact role in cannabis in inducing SSD is heavily debated. This phenomenon has not been studied in Sri Lanka previously.

The objectives of the study were to a) identify an association between life-time cannabis use and subsequent development of SSD in a psychiatrically ill cohort of patients and b) comparison of SSD and non SSD patients among life time cannabis users (LTC) to identify any characteristic features of the earlier subgroup.

Materials and methods: This was a retrospective analytical study of a cohort of psychiatric patients who received treatment in the Provincial General Hospital, Ratnapura (PGHR), Sri Lanka over the five years from 2000 Jan 1st to 2004 Dec 31st. The investigators examined the records of all patients treated within the specified time period in the psychiatry unit of PGHR. Data was collected regarding demography, clinical presentation, life time cannabis (LTC) use, concurrent substance use, treatment and follow up. The data were analyzed and compared in several ways to achieve the objectives cited above.

Results: Three thousand six hundred and forty four (3644) patient records (males - 2095, females - 1549) were scrutinized. Evidence of LTC use was found in 103 (2.83%) patients. All patients with a history of cannabis use were males. 15.8% (576) of the total cohort was diagnosed with SSD by 2009. Male sex [relative risk (RR): 1.22, 95% confidence interval (CI): 1.04-1.42] and LTC [RR: 3.05 (95 % CI: 2.44- 3.82)] use were significantly associated with SSD ($p < 0.01$ and 0.001 respectively). In the majority (91.5%), cannabis use preceded the illness. There were no demographic or clinical parameters that were significantly different for patients with a history of cannabis use and subsequent SSD.

Conclusions: LTC users had a significantly higher risk of subsequent SSD compared to non users. However, this evidence does not establish a definite causal link between cannabis use and SSD.

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1. Andréasson S, Allebeck, P., Engström A, Rydberg U.: Cannabis and schizophrenia. A longitudinal study of Swedish conscripts. *Lancet* 1987, 2(8574):1483-1486.

P002

Symptoms of anxiety and depression among Sri Lankan adolescents

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Background: Sri Lanka recorded an extraordinary high suicide rate for adolescents aged 15 - 19 in the early 1990s(46.5/100,000)[1]. As a remedy, the Ministry of Health in Sri Lanka recommends school programmes for adolescents by mental health units of local hospitals.

The objectives of this study were to a) screen for symptoms of anxiety and depression in a sample of adolescent students and b) identify the issues affecting the mental health of adolescents.

Materials and methods: We conducted cross sectional surveys to screen for symptoms of anxiety and depression among students aged 14 - 18 during school mental health programmes. Students were assessed with self administered (pre tested, Sinhalese translated) questionnaires [Center for epidemiologic studies depression scale (CES-D), Anxiety screening test of suicide and mental health association international][2, 3]. Contribution from participants was anonymous.

Results: A total of 445 students were assessed (male- 54.4%, female 45.6%). Thirty six per cent screened positive for depression (mild depression- 17%, severe depression- 19%) and 28% screened positive for severe anxiety. Females screened positive for depression and anxiety significantly more than the males ($p= 0.0001, 0.005$ respectively). Examination related issues (36%) were the most commonly cited problem.

Conclusions: There are two important barrier examinations for a student in Sri Lanka; the General Certificate of Education (G.C.E) - Ordinary level examination and the G.C.E- Advanced level examination which determines university entrance. The symptoms of anxiety and depression were more among students in these classes. It is recommended that school mental health development programmes in Sri Lanka concentrate more on reducing examination related stress, and in particular focus on the female students.

References:

1. Suicide rates [http://www.who.int/mental_health/prevention/suicide/suiciderates/en/]
2. Screening test for depression [<http://counsellingresource.com/quizzes/cesd/index.html>]
3. Anxiety screening test [<http://suicideandmentalhealthassociationinternational.org/anxietytest.html>]

P003

Delusional obsessive compulsive disorder presenting as life threatening self starvation; a case report

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Background: Many authors now describe an obsessive compulsive spectrum disorder (OCS)

where many specific diagnostic entities such as trichotillomania, tic disorders and body dysmorphic disorder are considered to be related disorders.

Materials and methods: We report a case of a twenty two year old Sri Lankan male who presented with life threatening self starvation due to severe obsessive compulsive disorder. The patient was treated for eczema and got constipation from his medication. With the discomfort, he became preoccupied with the idea that he will not be able to defecate and started avoiding food. At time of referral to the psychiatry unit his BMI was 11.1 kg/m² (weight 27 kg, height 1.56 m). He was initially kept in ward and gradual refeeding was started with parenteral nutrition.

Results: Though his idea of inability to defecate seemed delusional the circumstances and history were more in keeping with OCD. It was decided to treat him with behavioural therapy (exposure and response prevention) rather than with antipsychotics. Therapy was started in ward and continued at home with the mother as the co-therapist. Six months after therapy he is now functioning well and takes a normal diet. His BMI has increased to 15.8 kg/m² vindicating our diagnosis.

Conclusions: We believe that our patient falls in to a category of OCD associated delusional disorder. This case report highlights a rare life threatening form of OCD that is best described as a part of an OCSD as it does not fall within the classic description of OCD.

P004

Trazodone for the treatment of insomnia and depression

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¹Psychiatric Department, "Konstantopouleion" General Hospital of Nea Ionia, Athens, Greece

Background: Trazodone is a serotonin-reuptake inhibitor and is used for the treatment of primary and secondary insomnia, as well as mild and moderate depressive disorder. The purpose of the present study is to prove that Trazodone is a hypnagogic drug, as well as appropriate for the treatment of mild to moderate depression.

Materials and methods: 120 subjects were studied (n=120), 83 female (70%), and 37 male (30%); the subjects received HAM-D Scales, and the relevant scale for insomnia by K. Soldatos. The scale was administered at the 1st day, the 15th day and the 30th day. The sample derived solely from the Outpatient Setting of the Psychiatric Clinic of "Konstantopouleion" General Hospital, Nea Ionia, Greece. All subjects were suffering from mild to moderate depression, and various types of insomnia disorders.

Results: From 120 subjects, 97 (80%) experienced a value decrease of the HAM-D Depression Scale, and 23 subjects (20%) did not experience any change. Regarding the K. Soldatos Insomnia Scale, 95 subjects (79%) experienced an improvement, while 25 patients (21%) did not experience a value decrease of the Insomnia Scale.

Conclusions: Trazodone is effective for the treatment of mild and moderate depression, as well as a hypnagogic drug, regardless of depression.

References:

1. DeVane CL. Different pharmacology of newer antidepressants. *J Clin Psychiatry* 1998; 59(suppl.20):85-93.
2. Haria M, Fitton A, McTavish D. Trazodone: a newer of its pharmacology, therapeutic use in depression and therapeutic potential in other disorders. *Drugs Aging* 1994; 4:331-355.
3. Rotzinger S, Bairin M, Akimoto Y, Coutts RT, Baker GJ. Metabolism of some "second" and

“fourth” generation antidepressants: iprindole, viloxazine, bupropion, mianserin, maprotiline, trazodone, nefazodone and venlafaxine. *Cell Mol Neurobiol* 1999; 19:427-442.

P005

Paliperidone for bipolar disorder

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Background: Paliperidone combines the blocking of D2 receptors of dopamine and the 5HT₂ receptors of serotonin. Nevertheless, there are references only for its activity as an atypical antipsychotic. Its formulation is 9-OH risperidone. The purpose of the present study is to indicate the utility of paliperidone for the treatment of Bipolar Disorder.

Materials and methods: 20 patients were studied (n=20), 10 male and 10 female. The patients were being monitored by the outpatient setting of the Department of Psychiatry of “Konstantopouleion” General Hospital, Nea Ionia, Greece; the patients had been diagnosed with Bipolar Disorder, and were given the YMRS (Young Mania Related Scale) and PANSS (Positive and Negative Symptoms of Schizophrenia) questionnaires at the 1st, 15th and 30th day of the study. All patients 9-12 mg paliperidone either as a monotherapy or combined with emotion stabilizers.

Results: Of 20 patients, 17 (85%), 8 male and 9 female, showed improvement, both regarding mania and the relevant symptoms, as well as regarding their psychotic symptoms, resulting at a decrease both in the YMRS and in the PANSS. 3 patients (15%), 2 male and 1 female, did not adequately respond to treatment with paliperidone and emotion stabilizer, while a new antipsychotic had to be added.

Conclusions: Paliperidone is effective for the treatment of Bipolar Disorder, both in monotherapy and combined with emotion stabilizers.

References:

1. American Psychiatric Association. Practice Guideline for the Treatment of Patients with Bipolar Disorders. *Am J Psychiatry* 2002; 159:1-50.
2. Leucht S, Wahlbeck K, Hamann J, Kissling W. New generation antipsychotics vs. low-potency conventional antipsychotics: a systematic review and meta-analysis. *Lancet* 2003; 361:1581-1589.
3. Calabrese JR, Kasper S, Johnson G, Tajima O, Vieta E, Yatham LN, Young AH. International Consensus Group on Bipolar I Disorder. Treatment Guidelines. *J Clin Psychiatry* 2004; 65:571-579.

P006

Dysfunctional Inhibitory Control and Impulsivity in Internet Addiction

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Background: The purpose of this study was to develop a psychological profile of Internet addiction considering impulsivity as a key personality trait and as a key component of neuropsychological functioning.

Materials and methods: Participants were recruited from a university: 23 were classified as the Internet addiction group (Internet Addiction Test scores > 70) and 24 sex-, age-, and intelligence-matched participants were classified as the normal control group. Participants filled out a questionnaire about trait impulsivity, the Trait Characteristic Inventory, depression, and anxiety. Next, we administered traditional neuropsychological tests including Stroop, Trail Making Test, and digit span, and computerized neuropsychological tests using the Cambridge Neuropsychological Test Automated Battery.

Results: The Internet addiction group exhibited more trait impulsivity than the normal control group ($p=0.000$). They also scored higher for novelty seeking and harm avoidance ($p=0.024$ and $p=0.018$, respectively). The Internet addiction group performed more poorly than the normal control group in a computerized stop signal test ($p=0.038$ for proportion of successful stops), a test for inhibitory function and impulsivity; no group differences appeared for other neuropsychological tests. The Internet addiction group also scored higher for depression and anxiety, and lower for self-directedness and cooperativeness ($p=0.000$, $p=0.002$, $p=0.000$, and $p=0.007$, respectively).

Conclusions: Individuals with an Internet addiction tended to exhibit impulsivity as a core personality trait and in their neuropsychological functioning.

Acknowledgements: This research was supported by the clinical research grant provided by SMG-SNU Boramae Medical Center.

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4. Dong G, Zhou H, Zhao X. Male Internet addicts show impaired executive control ability: evidence from a color-word Stroop task. *Neurosci Lett*. 2011;499:114-8.

P007

A case of capgras syndrome related to methamphetamine use

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Background: Thus far, two cases of Capgras syndrome (CS) have identified immediately after methamphetamine (METH) use [1] and another case in the context of cocaine overdose [2]. To the best of our knowledge, we are presenting the first case of CS in a patient three months after discontinuation of METH use.

Materials and methods: This report is based on a single case.

Results: Our patient was a 31-year-old man claiming that his parents were not the real ones. This suspicion, which had been started twenty days prior to his admission in the psychiatric hospital, had resulted in verbal and physical aggression. He had no history of psychiatric or neurological disorders except for becoming paranoid within the month before. He used to be a multi-drug user who had been started METH since six months prior to his admission. But he had quitted any substance use since 3 months prior to his admission. Thirty-five days after receiving antipsychotic his delusion changed to over-valuated idea, and within two weeks after that all symptoms were resolved.

Conclusions: We believe that this case could be considered as a METH-induced psychosis, even though the symptoms persisted for longer than four months after drug abstinence. Our experience highlights the role of neurochemical mechanisms in the pathophysiology of CS.

References:

1. K A Josephs: Capgras Syndrome and its relationship to neurodegenerative disease. Arch Neurol. 2007;64 (12): 1762-1766
2. E N Mercurio: Síndrome de capgras asociado al consumo de sustancias psicoactivas. Rev Psiquiatr Salud Ment. 2011; 4 (2): 96-100

P008

Combination therapy of Anxiety-Depressive disorder

Zurab Beria¹

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Background: Before beginning the therapy the level of anxiety was defined with middling 47 points. Anxiety was performed with concerns, uneasiness, “worse things waiting”, various somato-vegetative disorders (neck muscle tension, acceleration of heart rate, dizziness and etc.). Middling point by depression assessment scale was 15.2. Passiveness, low mood and decrease of motivation were performed. Treatment showed the effectiveness of combination therapy with Atarax and Fevarin. The level of anxiety after 28 days was equal to 23 points which was 50% of first index. Manifestation of depression also decreased with 46 %. During the whole therapy there were no side effects shown, which could prevent patients from anything in their everyday life.

According to Clinical Global Impression Scale if in the beginning of treatment 76% were consid-

ered as easy cases and 24% as mild - heavy, after therapy indexes were performed as : 47% easy, 18% mild-heavy and 35% as "norm".

Materials and methods: 18 patients, 12- women and 6 - men with diagnosis: mixed anxiety-depressive disorder (F41.2) were treated in age variety 21-60. Patients was given "per os" with min Atarax (HYDROXYZINE) doze 0.075 and max. doze - 0.1 in 24 hours and Fevarin (FLUVOX-AMINE) was given only in evening hours "per os" with min. doze 0.025 and max. doze - 0.150 (treatment duration days 28)

Clinical Impression Scale - Clinical Global Impression Scale

Anxiety Assessment Scale - Shikhan Scale

Depression Assessment Scale- Hamilton Scale.

Results: Therefore combination of Atarax and Fevarin showed positive effect in anxiety-depressive disorder treatment. They can be prescribed not only in "active" therapy but also as preventive inspection to avoid developing more serious psychopathological disorders.

- **Conclusions:** Coincidence of depression and anxiety in 70 % of cases.
- 24 % of patients with anxiety disorder also have depression symptoms.

References:

1. Prof. G. Naneishvili

P009

Adolescents with mild health problems and their mothers

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Background: In the present paper we examine the possible relationship between the scores for anxiety and depression of mothers and the perception of illness for their sick teenage children. Also we examine the possible relationship of scores for anxiety and depression of mothers and children and the quality of relationship that they have with their doctor (pathologist or pediatrician in public or private health services in Northern Greece).

Materials and methods: We administered the State-Trait Anxiety Inventory (STAI), the Center for Epidemiological Studies-Depression Scale (CES-D), the Parental Stress Scale, the Brief Illness Perception Questionnaire and the Questionnaire for the Relationship between Doctor and Patient (Koutsosimou, Liakos, Adamidis & Mavreas, 2004) to 50 mothers (without an official diagnosis of mental health problem, aged 35-60). The same questionnaires (with the exception of the Parental Stress Scale) were administered to their teenage sick children (age 13-18, 20 boys and 30 girls).

Results: We found statistically significant negative correlations between the scores of STAI/ CES-D/Parental Stress Scale and the Brief Illness Perception Questionnaire/ Questionnaire for the relationship between doctor and patient, for both mothers and children.

Conclusions: Our data suggest that the parents (and specifically mothers) perception of their child's disease can be largely linked to mood disorders that they personally face or that even a brief illness of a child (such as a seasonal influenza) can seriously influence the mood of the caregivers. Also the quality of relationship between doctor and patient (both for parents and adolescents) is negatively associated with the scores on the previous scales. Future research must focus on psychological issues for more serious health problems (such as neurosurgical operations on children and teenagers) and the impact of these medical treatments on child and parent psychology.



P010

Pregnant women and the experience of caesarean section

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Background: The purpose of this study is the investigation of the thoughts and feelings that new mothers have after prolonged labour or a failure to progress (dystocia) and subsequent emergency (unplanned) caesarean sections. The main research question was how these young mothers face this experience and which factors influence them.

Materials and methods: Ten young mothers with pregnancies complicated by dystocia and subsequent unplanned assisted deliveries (successful caesarean sections) in public hospitals in Northern Greece, participated in the study. The mothers' mean age was 37.5 years and level of education 12 years. They had not officially asked for psychological help and did not have during or after their pregnancy formal diagnosis of psychological/psychiatric or neurological diseases. The method that was used were semi-structured interviews the first week following the birth of their child. The interviews were based on grounded theory and aimed at unveiling (without imposing false categories) the main categories that shape their everyday thoughts.

Results: Results indicated that for all the participants existed initially 15 categories that were later diminished at 3, which concern: the child's physical health, the mother's physical health and mainly the mother's psychological health in the form of negative thoughts and feelings (fear, anxiety) for future pregnancies. All the above categories were explicitly linked with and causally created from the poor existing health care system.

Conclusions: These preliminary findings suggest that even healthy young mothers after surgical operations (such as caesarean sections) may face emotional and cognitive changes. These problems may be unnoticed from their personal doctor and family due to lack of information for possible complications during or after their pregnancy or postpartum inadequate support. There should be further studies for the diagnosis of risk factors that can transform these global personal changes into severe psychological problems (ex. postpartum depression).

P011

Treatment -resistant manic episode with neuroanatomic and neuropsychological findings

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Background: First involuntary admission of a woman 28 y.o. For a period of 20 days her behavior was out of control, disturbing her neighbors, culminating in violent behavior towards her family. The patient had a history of Bipolar I disorder for 8 years and she was diagnosed with an episode of acute mania.

Materials and methods: Brain CT revealed marked atrophy at the prefrontal and temporal cortex. Neuropsychological examination showed serious attenuation of mental flexibility, control and inhibition and also regarding verbal and long term optical memory.

Results: Initial treatment included 30 mg p.d. of i.m. haloperidol, together with 6 mg p.d. of

biperiden, 300 mg p.d. of chlorpromazine, 7,5 mg p.d. of lorazepam and 1000 mg p.d. of valproate. After 10 days of mediocre response chlorpromazine was stopped, valproate increased at 1500 mg, lorazepam at 15 mg p.d. and zuclopenthixol acetate of 50 mg was added as adjunctive therapy in case of continuous agitation. After 20 days of hospitalization, mixed features of the episode emerged and quetiapine was added, titrated to effect. The patient stabilized after 56 days from admission and was discharged. Her treatment regime at discharge was 1500 mg p.d. of valproate and 800 mg p.d. of quetiapine extended release.

Conclusions: The cognitive deficiencies reflect the structural brain lesions, which could be considered as negative prognostic factors concerning the course of the disorder. The resistant manic symptomatology of the patient could be attributed to the particular neuroanatomical findings.

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P012

Treatment response of obsessive skin-picking with agomelatine

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Background: Woman 20 y.o. with mental retardation and autistic features, presenting with compulsive skin-picking after a stressful event (dental care).

Materials and methods: The patient had mild mental retardation with an IQ of 50-70 (WISC-III). There was an episode of febrile seizures at age 3 and hospitalization, after having received Hepatitis B vaccine. The patient typically avoided eye contact and had difficulty concentrating to a task and orientating in space. Low sensitivity for pain was also noted. Clinical examination upon admission confirmed the autistic features, but revealed no psychotic symptomatology, although intense anxiety was evident.

Results: Her blood examination revealed no eosinophilia and the dermatological evaluation made no remark concerning an allergic cause of the symptom. At the third day of her hospitalization the patient was given 5 mg of Levocetirizine dihydrochloride in order to investigate a possible response but the outcome of the test was negative.

Conclusions: She was initially treated with up to 200 mg daily of quetiapine extended release and 150 mg of sertraline daily. After having no effect for 25 days, 25 mg daily of agomelatine was added to augment her treatment. The skin-picking recessed, the patient appeared stable and was discharged. Remission was preserved at one-month follow-up. Routine blood testing which included liver function tests was normal. The diagnostic evaluation of the case was oriented towards the 22q13.3 Deletion Syndrome. A conduction of array CGH examination was proposed.

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P013

A low cost intervention of using non specialist staff in preventing relapses of schizophrenia

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Background: Due to the shortage of psychiatric social workers (PSW), the Sri Lankan government recruits university graduates (not trained in psychiatry related courses) as Mental Health Development Officers (MHDO) to fulfill the role of a PSW after a basic training.

Our objective was to conduct a prospective interventional study on preventing relapses and improving compliance of patients with schizophrenia by active involvement of MHDOs.

Materials and methods: This study was carried out in the Psychiatry unit of the Provincial General Hospital, Ratnapura (PGHR), Sri Lanka. The intervention group consisted of randomly selected 25 patients with schizophrenia who were followed up at PGHR. Another 25 follow up patients with schizophrenia were selected as controls (1:1 match for sex, ethnicity, age and duration of illness) from the patient registry. All patients were in remission at the time of enrollment. Follow up was for one year.

The intervention group was introduced to the MHDO for a detailed assessment and rapport building interview at the beginning and was followed up monthly by them in the hospital. They also had weekly phone calls to remind about compliance and sort out new problems.

Results: One patient in the intervention group and three patients in the control group had a relapse of schizophrenia. The relative risk for default in control group was 1.77 (95% CI: 1.08-2.90). The number needed to follow up to avert a relapse and a default was 12.5 and 5 respectively.

Conclusions: The intervention group had less relapses and less defaults. The intervention in this study did not involve any advanced psychotherapy that needed to be delivered by a trained person. This study shows that non specialist staff can be effectively utilized to prevent relapses of schizophrenia.

P014

Stressful life events and patients personality profile before first episode acute and transient psychotic disorder

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Background: Acute and transient psychotic disorder (ATPD; F23, ICD-10) have been described as acute psychosis with brief onset and polymorphous symptomatology.(1) In our study we have focused on ATPD comorbidity with personality disorder, and stressful life events before first episode.

Materials and methods: Prospective follow-up study of all first time hospitalised patients fulfilling ICD-10 criteria for ATPD (WHO, 1993) treated at the Riga Centre of Psychiatry and Addiction Disorders (RCPAD), Latvia during a 15 month period (from 09.01.10.-30.03.11.). Follow-up

period were average of 26.5 month. We used the Mini-Mult scale by Kincannon, to determine patients personality profile. (2)

Results: 102 patients were hospitalized with first-episode ATPD. 60.7% (62) were females ($p=0.003$). Over a follow-up period, 59.8% (61) of patients were not re-hospitalised. Stressful life events were found in 49.0% (50) of patients. We found that 18 (17.6%) patients had a personality profile within the norm. 10(9.8%) profiles were excluded. In total, we found that 74 (72.6%) profiles had scales which scored higher than the normal range (higher than 70 units).

Conclusions: ATPD is prevalent in Latvia with higher prevalence in females. Half of ATPD patients had stressful life events before first psychosis and a large portion (72.6 %) showed deviations from the norm in personality profiles.

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P015

The effect of SSRIs on hot flashes in women with perimenopausal depression

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Background: Menopause is characterized by a decline in ovarian function resulting in vasomotor symptoms. Vasomotor symptoms include hot flashes and night sweats. The purpose of this study was to examine the effect of SSRIs on hot flashes in perimenopausal women with depression.

Materials and methods: Sixty five women (age range: 40-58 years old) participated in this study. All women were in the perimenopausal phase, defined by the presence of irregular cycles or amenorrhea for less than 12 months. The subjects included 41 perimenopausal women with depression and 24 healthy women. The diagnosis of depression was made by a psychiatric interview and with the help of Hamilton Depression Rating Scale 17 (HAM-D 17). A woman was considered depressed if she had scored over 10 in HAM-D 17 and had fulfilled the criteria of major depression according to the classification system International Classification of Diseases 10 (ICD-10). Hot flashes were examined with the use of Menopause Rating Scale (MRS) and they were divided as absent, mild, moderate, severe and very severe.

Results: Perimenopausal women were divided in three groups. The first group consisted of normal controls, the second of depressed perimenopausal women who were taking SSRIs and the third of depressed women not taking SSRIs. Statistical analysis was made with the Kruskal-Wallis test and it showed that the control group had fewer hot flashes than the other two groups ($p<0.0001$). Moreover, it was investigated if the intake of SSRIs relieved depressed perimenopausal women of hot flashes. Mann-Whitney U test showed that two groups of depressed women did not show any statistically significant difference in the presence and severity of hot flashes in relation to the use of SSRIs ($p=0.349$).

Conclusions: It was found that depression is associated with the presence of hot flashes in perimenopausal women. On the other hand the use of SSRIs did not relieve perimenopausal women with depression of hot flashes. Therefore, it seems that hormonal replacement therapy has the first role in the treatment of vasomotor symptoms in perimenopausal women.

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P016

Interferon-alpha induced obsessive-compulsive disorder in a patient with Hepatitis-C: case report

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Background: Interferon alpha (IFN- α) is commonly used in the treatment of viral hepatitis because of their stimulating effects on immune response. While psychiatric adverse effects such as depression, mania or psychosis that arise during interferon alpha treatment have been well documented in the literature, data regarding interferon-induced obsessive-compulsive disorder is rare. This paper emphasizes the importance of regular monitoring and early treatment intervention for psychiatric symptoms and interdisciplinary collaboration during the course of interferon therapy in the early period.

Materials and methods: A case of 59 year-old woman who developed obsessive compulsive disorder and depression during interferon treatment for hepatitis C is presented here.

Results: Interferon treatment brings about anxiety symptoms approximately in 10-20 % of patients. Anxiety often tends to develop in the first stage of a high dose parenteral alpha-interferon treatment and become more frequent and severe over time. The present case indicates that obsessive-compulsive symptoms in form of obsessive thoughts and compulsive acts may occur with interferon treatment in viral hepatitis C as well as depressive symptoms.

Conclusions: In conclusion, Interferon therapy has been increasingly used for several medical conditions and interdisciplinary collaboration should be established for this kind of treatment modalities.

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P017

A Psychotic Manic Episode Case With Fregoli Syndrome

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Background: Frégoli syndrome belongs to the group of delusional misidentification syndromes and was first described in 1927 [1].

Materials and methods: The syndrome has been associated with organic cerebral dysfunction, in particular of the right hemisphere ; however, most cases occur in the setting of schizophrenia [2]. Our Case was a 33 years old male and an inpatient..

Results: Our patient was graduated from primary school, was married for 10 years. He is using cannabis beginning from 15 years old and admitted to our clinic with symptoms of reduced need for sleep, increased speech content and speed, irritability, religious occupations and grandiosity. He confused a patient with his wife and misidentified a middle aged patient with his father who died 4 years ago. He was believing that they were in the clinic unit to protect him from persecutors. Our case believed that we addressed them with wrong names.

Conclusions: It is believed that most frequently there may be an organic cause underlying the fregoli syndrome, but in our case there was no evidence for this. It is essential to conduct both descriptive and long-term follow-up studies in order to enrich existing knowledge and experiences in the etiology and treatment of these cases.

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P018

Schizophrenia and Dandy- Walker variant comorbidity: a case report

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Background: Dandy-Walker complex (DWC) is a series of neurodevelopmental anomalies in the posterior fossa, including Dandy-Walker malformation, Dandy-Walker variant (cerebellar hypoplasia and cystic dilatation of the fourth ventricle), mega-cisterna magna and posterior fossa arachnoid cyst [1]. There are some rare case reports on coincidence of schizophrenia and DWC in medical literature [2,3], but the relationship between psychiatric symptoms and the DWC is still unclear because of the lack of data. Cerebellum plays an important role in cognition and a variety of psychiatric disorders [4] including schizophrenia. Neuroimaging studies showing abnormalities in cerebellar structure and function, especially the vermis, suggest the possible role of cerebellum in the pathophysiology of schizophrenia. These abnormalities can be detected both in chronic patients and at the time of onset of the disorder.

Materials and methods: Here we report a case of schizophrenia in a 30 year-old woman with Dandy Walker variant. The documentation of this case may contribute to the understanding of the pathophysiology of schizophrenia.

Results: In this case report, Dandy Walker variant and schizophrenia may be found coincidentally together or any cerebellar dysfunction due to Dandy Walker variant may cause or contribute to the appearance of psychotic symptoms.

Conclusions: In the present case, Dandy Walker variant might contribute to the activation of cerebellum. In the light of these findings, it might be suggested that cerebellar dysfunction may interfere in the emergence of psychotic symptoms such as hallucinations and delusions.

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P019

Synaptosomal-associated protein (SNAP-25) polymorphisms and response to olanzapine

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Background: Genetic factors may influence response to antipsychotic treatment in patients with schizophrenia. The synaptosomal-associated protein of 25 kDa (SNAP-25) gene may be an interesting candidate gene regarding clinical outcome with antipsychotics. SNAP-25 is a presynaptic plasma membrane protein and an integral component of the vesicle docking and fusion machinery mediating secretion of neurotransmitters (1). Muller et al. reported that Mn1I T/G, Tail T/C polymorphisms in the SNAP-25 gene were associated with both antipsychotic drug response and drug induced weight gain (3). We aimed to evaluate the association of SNAP-25 (Mn1I T/G and Ddel T/C) polymorphisms with response to olanzapine in our study.

Materials and methods: Our study comprised 86 unrelated subjects who strictly met DSM-IV criteria for schizophrenia and all were of Turkish origin. All patients were evaluated with the Scale for the Assessment of Positive Symptoms (SAPS), the Scale for the Assessment of Negative Symptoms (SANS) and Brief Psychiatric Rating Scale (BPRS). Venous blood samples were obtained from patients and genetic analyses were performed as described in the literature. SPSS 13,0 program was used for statistical analysis.

Results: 40 of 86 patients had T/T genotype and 44 had had T/G or G/G genotype for SNAP-25 Mn1I polymorphism. When we compare the groups TT with TG+ GG patients with T/T genotype had better response to olanzapine for SANS scale in SNAP-25 Mn1I polymorphism. 30 of 86 patients had C/C+T/C genotype and 56 patients had T/T for SNAP-25 Ddel polymorphism. Patients with TC+CC genotype were responded to BPRS scale better than patients with TT genotype for SNAP-25 Ddel polymorphism.

Conclusions: Muller et al. reported that MnII and Tail polymorphisms (but not Ddel polymor-

phism) were associated with response to olanzapine (3). Spellman et al. reported an association between Ddel polymorphism and cognitive problems (4). Interestingly we found an association between SNAP-25 Ddel T/C polymorphism and response to olanzapine treatment. SNAP-25 gene polymorphisms might be related to antipsychotic response but further studies were needed.

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P020

Association of the drd2 taqia, 5-HT1B A-161T, and cnr1 1359 g/a polymorphisms with alcohol dependenc

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Background: Alcohol dependence is associated with genetic variants of alcohol-metabolizing enzymes and genes related to dopaminergic, gamma-aminobutyric acidergic, glutamatergic, opioid, cholinergic, and serotonergic systems. Genetic variations in the endogenous cannabinoid system are also involved in alcohol dependence. The present study aimed to evaluate the association between three polymorphisms, DRD2 TaqIA, 5-HT1B A-161T, and CNR1 1359 G/A (rs1049353), and alcohol dependence.

Materials and methods: One hundred twenty three patients who were admitted to the Alcohol and Substance Abuse Center of Denizli State Hospital and diagnosed with alcohol dependence according to the DSM-IV criteria and 125 healthy volunteers were included in the study.

Results: Of the three polymorphisms investigated, 5-HT1B A-161T was the only one found to be associated with alcohol dependence.

Conclusions: The 5-HT1B receptor A-161T polymorphism might be a promising marker for alcohol dependence; however, future studies are needed to clarify these findings.

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P021

Applying Risk Assessment Suicidality Scale on Serbian elderly population

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Background: Suicide is very important health related public problem, especially in some countries and in the some populations. There is necessary for being an efficient and valid method for detecting persons who is at suicidal risk. Today, researches and medical experts try to develop a new instruments and introduce them in work practice. One of them is Risk Assessment Suicidality Scale (RASS). The objective of our study has been to evaluate the RASS, as a new screening instrument for suicidal risk, in a group of elderly persons.

Materials and methods: We surveyed 263 subjects aged 65 and older. Of 263 enrolled subjects, 111 were diagnosed with a depressive disorders based on The ICD-10 Classification of Mental and Behavioral Disorders administered by two trained psychologists. Participants completed a battery of scales including the RASS, Geriatric Depression Scale- 15 (GDS-15) and Beck Depression Inventory (BDI).

Results: Mean age for the whole sample was 70.4±5.7. We found statistically significant difference ($p<0.001$) in mean total suicide score between experimental (504.8±23.6) and control group (168.6±10.4). Strong positive correlation was found between RASS and GDS-15 mean scores ($r=0,761$; $p<0,001$) and between RASS and BDI scores ($r=0,800$; $p<0,001$).

Conclusions: This study provides evidence that RASS may be suitable measure for screening a suicidal risk in elderly population.

P022

Insight into psychosis is correlated with depression in an outpatient sample

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Background: The association of insight into psychosis (awareness of illness) with clinical variables has long been studied. Most studies reveal that the level of insight is negatively correlated with psychotic symptomatology and positively correlated with depression and suicide attempts. The aim of this study was to test this finding in Greek patients.

Materials and methods: 43 psychotic outpatients (30 men and 13 women), being followed up, took part in the study after being informed and accepted to go through the investigation. Bipolar patients were excluded. Their mean age was 40.7 and the mean duration of illness was 11.2 years. All of them were under treatment. We used the PANSS scale for assessing the psychopathology, the SAI-E questionnaire to assess the insight, and the MADRS for evaluating depression. All these scales are adapted to Greek population. Statistical analysis via SPSS 15.

Results: Pearson correlation between SAI-E and MADRS yielded $r=0.654$ that was statistically

significant at 0.01 level. SAI-E and PANSS correlation estimated at $r = -0.551$, which was also significant at 0.01 level. Correlation between SAI-E and age was not significant ($r = 0.010$). T-test of SAI-E, PANSS and MADRS between gender groups proved not significant. Linear regression analysis of SAI-E as depended variable and MADRS score as independent, proved $r^2 = 0.303$. Linear Regression between SAI-E and PANSS was 0.429. Multiple regression between SAI-E, MADRS and PANSS was $R = 0.703$, which means that 70% of the total variance of SAI-E score depends on MADRS and PANSS.

Conclusions: Considering the rather small sample, our survey confirms the positive correlation of insight with depression and the negative one with psychopathology. In our sample 70% of the variance of SAI-E depended on depression and psychopathology. This contributes to the defense-mechanism hypothesis of insight into illness.

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P023

Pathophysiological Basis of Early Neuronal Loss in Cerebrum: Role of Choroid Plexus Calcification

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Background: Choroid plexus should be considered as lungs, kidneys, spleens, livers and endocrine organs of brain. Although they are responsible for maintenance of nutritive, excretory, circulatory, detoxifying, immunologic and homeostatic functions of brain (1); brain-cooling effects (3) has not been investigated thoroughly so far. Because calcified choroid plexus cannot continue cerebrospinal fluid secretion (2), then brain will get warmer with loss of other choroid dysfunctions, some degenerative neuronal changes could be expected in aging organisms. To prove this hypothesis choroid plexus and parietal cortices of aging rabbits were examined by stereological methods.

Materials and methods: Five young (1 year old) and 14 aged hybrid male rabbits (4.5 years old) were examined and compared in this study. Choroid plexus of lateral ventricles and parietal cortices were stained with H&E for estimation of choroid cell and parietal cortex neuron density; and for the estimation of apoptotic cells and neuron specimens were stained with TUNNEL method. Differences between cell density of choroid plexus and apoptotic neuron densities of parietal cortices were compared statistically.

Results: Normal cell density of choroid plexus was estimated as $42.500 \pm 5.900/\text{mm}^3$, normal neuron density of parietal cortex was $132.500 \pm 12.100/\text{mm}^3$ and apoptotic neuron density was $1.460 \pm 90/\text{mm}^3$ in young rabbits ($n=5$). Whereas, normal cells density of choroid plexus was estimated as $27.500 \pm 3.100/\text{mm}^3$, normal neuron density of parietal cortex was $89.300 \pm 8.100/\text{mm}^3$; apoptotic neuron density was $24.560 \pm 3.790/\text{mm}^3$ in aged rabbits ($n=14$). There was an important relation between the cells density of choroid plexus and neuronal apoptosis in parietal cortices ($p < 0.005$).

Conclusions: Normal cell density of choroid plexus may have important role on choroid functions and accordingly cerebral protection. The fewer cells of choroid plexus mean that choroid plexus function is decreased. Consequently, we concluded that decreased cerebral immunity and increased cerebral heat might induce neuronal apoptosis and related neuropsychiatric illnesses.

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P024

Depression and Illness Perceptions in Rheumatologic Disorders and their associations with Physical Health-Related Quality of Life

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Background: Evidence suggests that emotional and cognitive variables contribute significantly to impairment of health status in rheumatologic disorders and are important in determining Health-Related Quality of Life (HRQoL). We aimed to assess the prevalence of depressive symptoms in rheumatologic patients and to examine the relationship of depressive symptoms and patients' illness perceptions with Physical HRQoL.

Materials and methods: In 572 patients with rheumatologic disorders we assessed depressive symptoms ([Patient Health Questionnaire 9 (PHQ-9)], illness perceptions [Brief-Illness Perception Questionnaire (B-IPQ)] and HRQoL (WHOQOL-BREF). Hierarchical multiple regression models were used to assess their associations.

Results: The prevalence of clinically significant depressive symptoms (PHQ-9 \geq 10) was 14.8% in Ankylosing Spondylitis (AS), 21.7% in Psoriatic Arthritis (PsA), 24.6% in Sjogren's syndrome (SSj), 25.1% in Rheumatoid Arthritis (RA) and 29.3% in Systemic Lupus Erythematosus (SLE). Mean (SD) B-IPQ total score was 38.9 \pm 13.9 (median 40/80), with SSj patients presenting the highest and AS patients the lowest scores. The majority (39.7%) attributed their illness to psychological factors. Patients' concerns about the illness's consequences (RA, SSj, SLE), concerns about the number of bodily symptoms attributed to the illness (identity) (PsA, SLE) and illness concern (AS) were the illness perceptions associated with Physical HRQoL, independently of depressive symptoms.

Conclusions: Rheumatologic patients present remarkable levels of depressive symptoms and perceive their illness as moderately threatening. Attention to patients' causal beliefs, their concerns about the illness and its consequences and the numerous bodily symptoms attributed to the illness may help clinicians to identify and manage treatable aspects of HRQoL in rheumatologic patients.

P025

Psychiatric comorbidity in people with chronic medical conditions seeking urgent care in Accident and Emergency Department and associated factors: Preliminary report of the ABREVIATE study

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Background: To assess psychiatric comorbidity in people with chronic medical conditions seeking urgent care and to investigate psychosocial factors associated with their need for frequent use of Accident and Emergency Department (AED).

Materials and methods: We used the MINI structured interview in 140 patients with diabetes, COPD and rheumatologic disorders seeking care in our AED. We considered as frequent AED users, patients who reported that visited AED more than twice during the last year. We also assessed psychological distress symptoms (SCL-90-R), depressive (PHQ-9) and somatisation symptom severity (PHQ-15), illness perceptions (B-IPQ) and quality of life (WHOQOL-BREF).

Results: MINI diagnoses included major depression (29.3%), dysthymia (5.7%), suicidality (17.1%), agoraphobia (2.9%), and generalized anxiety disorder (12.9%). Suicidality was associated with perceived greater financial impact of the current recession ($p=0.018$). Eighty patients (57.1%) reported that they had used AED at least once during the last year. Thirty-six patients (25.7%) were categorized as frequent AED users. In multiple logistic regression analysis, obsessive-compulsive symptoms ($p=0.047$) and less personal control over the illness ($p=0.042$) were the independent correlates of AED frequent use.

Conclusions: Psychopathology is high in chronically ill patients seeking urgent help and psychosocial factors are significant correlates of the need for urgent care. These preliminary findings provide initial evidence for the importance of developing psychosocial strategies to address the needs of patients and to reduce AED workload. Additional data is currently being collected in a prospective design.

Acknowledgements: This research has been co-financed by the European Union (European Social Fund - ESF) and Greek national funds through the Operational Program "Education and Lifelong Learning" of the National Strategic Reference Framework (NSRF) - Research Funding Program: ARISTEIA. Investing in knowledge society through the European Social Fund.

.P026

The therapy of pain throughout the centuries

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Background: Pain might have been the very first symptom registered in the experience of humankind. Epicurus had written: “from the moment of their birth, all living beings enjoy pleasures (hêdoné) and defend themselves against the naturally-caused pain”.

Materials and methods: Based on a systematic review of papers in international databases such as Medline and Psychinfo, with the use of “pain and therapy” or “pain and antiquity” as keywords. The aim is the study of the therapy of pain from antiquity up to the 21st century.

Results: Homer’s Iliad reports the employment of herbal substances with narcotic effects for combating pain. In Hippocratic medicine (5th -2nd century BCE) pharmaceutical substances are administered according to the theory of the opposites.

Galen (129-199 CE) conducts studies on the antiseptic properties of tree bark extracts. Mandragora roots and hemlock are the most popular drugs during the Middle Ages.

During the period of the Renaissance, Paracelsus compounds labdanum and points out the analgesic properties of ether. The 17th century marks certain advancements towards brain’s role in the sensation of pain. The concept of countering pain enters official medical practices during the 18th century.

In the 19th century developments include the extraction of morphine from opium, the discovery of heroin, the circulation of aspirin and paracetamol.

In the 20th century, opioids and nonsteroidal anti-inflammatory are used.

Finally, the therapy of chronic pain is at the same time a problem and challenge for the 21st century scientific community.

Conclusions: Pain is universal and timeless. Its treatment has been influenced by various factors. The relief of the patient must be the most basic criterion for the treatment of pain.

P027

Coping strategies for burnout syndrome among Ukrainian and Indian doctors

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Background: Medical profession is connected with interpersonal communication and emotional stress. That is why doctors should apply different anti-stress methods to keep emotional balanced [1]. But these moments could strongly depend on a person’s behavior, national mentality

and traditions [2, 3].

Materials and methods: We examined and interviewed two groups of doctors, 1st group - Indian doctors (n=35) and the 2nd group - Ukrainian doctors (n=32). To evaluate the presence of burnout syndrome (BS) we used Maslach Burnout Inventory [4]. Responders also were asked to indicate their personal anti-stress methods.

Results: Anti-stress methods in the 1st group were mostly represented with yoga - 93% (in the 2nd group - 12%), religious practices - 91% (in the 2nd group - 64%) (p<0,05). Family approach was equally popular in both groups- 87% in the 1st group and 85% - in the 2nd group (p>0.05). Responders of the 2nd group more widely used friends - 89% (in the 1st group - 58%) (p<0.05), sport - 83% (in the 1st group - 75%), hobbies - 67% (in the 1st group - 23%) (p<0.05). Professional help (1st group - 5%, 2nd group - 8%), psychological self-education (1st group - 10%, 2nd group -11%), medications (1st group - 4%, 2nd group - 7%) (p<0.05), were less commonly used in both groups.

Conclusions: Despite BS is widely spread in both countries, it has some different features. So, BS coping strategies should be grounded not only on general principles, national peculiarities also should be considered.

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P028

The role of Asymmetric dimethylarginine ADMA) in psychiatric disorders

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Background: Asymmetric dimethylarginine (ADMA) has been a post-translational modified form of the amino acid arginine (1). As a competitive inhibitor of nitric oxide synthase (NOS) enzyme, it makes ADMA important.

Observations show that the accumulation of ADMA may have an important role for the regulation of signal transduction in nitric oxide (NO) system, and this accumulation may be a new mechanism of regulation of NO production in the brain (2). Studies have been suggested that increased ADMA levels could lead to a decrease in the level of NO production by inhibiting NOS enzyme, so ADMA may be important in the pathophysiology of various psychiatric disorders (3).

Materials and methods: In this review, so far ADMA and NO studies made on psychiatric patients were gathered and presented to debate.

Results: High levels of ADMA reduces NO production by inhibiting NOS. Under physiological conditions, intracellular level of ADMA was about 3,6 μmol/L and the effect on NO level only %10, from 3-9 fold increase of plasma ADMA levels in pathological conditions it may influence

production of NO up to 30-70%.

Conclusions: NO, which can easily diffuse into tissues, stimulates the synaptic release of neuro-modulators and monoamines by interacting with them in CNS. When NO is diffused out of the cell (which is synthesized in the cell), it stimulates the depolarization of neuronal cell membrane and enables release of various neurotransmitters. Acetylcholine, dopamine, norepinephrine, glutamate, GABA and taurine are the neurotransmitters which are released by stimulation of NO (4). These neuroactive molecules known to play a role in the pathogenesis of various psychiatric disorders. Therefore, to be the most important regulator of NO pathway, ADMA may play a role in the pathogenesis of various psychiatric disorders in similar way.

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P029

Comparison of the point prevalences of depression in Latvia assessed by PHQ-9 and MINI

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Background: Depression is the third the most frequent and the most disabling mental disorder in Europe. Prevalence estimates range widely, from 1.0% to 10.1%, across cultures, methods of definition and case identification[1]. Despite a rich epidemiological database for depressive disorders, only two investigations have assessed their prevalence in Latvia. The aim of the study was to compare estimates of depression using two different types of standardized instrumentation.

Materials and methods: A comparison was made of depression prevalence rates in the last two weeks, which were derived from two large population based cross-sectional, face-to-face surveys with total net sample more than 3000 in each one in 2011 and 2012. Prevalence rates of depression using the Patient Health Questionnaire-9 (PHQ-9) and the Mini International Neuropsychiatric Interview (MINI) were compared. Clinically significant depression for both instruments was defined basing on the literature recommended algorithms.

Results: In the study where the participants were interviewed by using the Patient Health Questionnaire-9 with a cut-off point for depressive episode ≥ 10 , the point prevalence of depression was 6.7% (95% CI 5.6-7.9%). Depression was more common for female than male, 7.8% and 5.6% ($p=0.018$) respectively. While using literature recommended algorithm for depression estimated prevalence of depression was 3.6% (95% CI 2.9 to 4.4%), female and male, respectively 4.1% and 3.2% ($p=0.209$). A study by the MINI shows the point prevalence of depression 4.9% (95% CI 4.1 to 5.7%), female and male, respectively 5.7% and 4.0% ($p = 0.03$).

Conclusions: Using two different literature recommended algorithms to determine clinical depression for PHQ-9, significant differences in the rates of prevalence of depression were ob-

served. Using the PHQ-9 algorithm prevalence of depression is similar to data that were obtained by using the MINI.

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P030

United in Purpose: The Experience of Becoming a Peer Educator for Patients with Serious Mental Illness (SMI) and Diabetes (DM)

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Background: People with SMI lose 1-2 decades of life compared to the general population due to medical conditions. A new behavioral intervention study targeting SMI and DM self-management used trained Peer Educators to enhance program effectiveness. We describe participant experience in a Peer Educator training program focused on delivery of group-based psychosocial intervention for SMI and DM self-management.

8 Peer Educators with SMI-DM participated in a 2- day of orientation followed by ongoing one-hour monthly inter-active group sessions. One-to-one telephone support was provided as needed. A training manual facilitated training on intervention topics such as SMI and DM therapies, stress management, and stigma reduction while additional activities included training in group intervention techniques, telephone skills and crisis management.

Materials and methods: We assessed participant attitudes and input after 8 months of training using a semi-structured interview guide and face-to-face interviews. Interviews were audiotaped, transcribed, coded and analyzed using NVivo, a qualitative data management and analysis program.

Results: Six relevant descriptive codes emerged from qualitative data analysis: 1) Success with learning manual content; 2) Increased knowledge about SMI and DM; 3) Improvement in their own self-management; 4) Increased self-confidence and self-efficacy in becoming a peer educator; 5) Positive group experience; and 6) A feeling of being united in purpose to help others.

Conclusions: Qualitative evidence supports the use training program for SMI-DM peer educators. Key components include written educational materials and the power of the group process to increase knowledge, self-management skills, confidence, and self-efficacy.

Learning Objectives:

1. Understand the components of a peer educator training program for individuals with SMI and DM
2. Peer educators can benefit personally from participating in a training program
3. Qualitative methodology is a useful tool for evaluating training programs from the participant's perspective



P031

Menarche, puberty, psychiatric disorders

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Background: Puberty and adolescence are important periods about mental health, particularly for women(1). Relationship between age of menarche, psychiatric complaints during adolescence and family stories of psychiatric disorders are investigated.

Materials and methods: The study is conducted with 61 patients with schizophrenia, 35 patients with bipolar affective disorder, 40 patients with depressive disorder and 60 healthy control subjects. All subjects were evaluated with SCID-1 and questionnaire fit for the aim of the study was fulfilled.

Results: Bipolar affective disorder had a stronger relationship with menarche, psychiatric problems during adolescence were related with early onset of illness in schizophrenia an bipolar groups. Family story of psychiatric illness was related with psychological problems during puberty in schizophrenia group.

Conclusions: This study underlies the puberty and adolescence period for psychiatric illness. An integrative clinical approach is suggested while examining the psychiatric illness at the basis of engaged roles of hormonal effects of menarche, social effect of puberty psychiatric complaints and genetical and psychosocial burden of family story of illness(2,3).

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P032

Assessment of limb sensation in patients with diabetic peripheral neuropathy with an electronic pressure-based pain measurement device and evaluation as a diagnostic tool

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Background: The diagnosis of Diabetic peripheral neuropathy (DPN) is based primarily on history and physical examination. Therefore any laboratory test or technique that could enhance the diagnosis of DPN, would be an important tool in the hands of clinicians.

Materials and methods: 64 diabetic patients were divided into three groups. Group A: 20 patients with diabetes mellitus but without DPN. Group B: 22 patients with diabetes mellitus and DPN for at least 3 years and, Group C: 22 patients with diabetes mellitus and DPN during the last 6 months. Sensitivity and pain threshold were measured at the hands and feet of patients with the Electronic Von Frey Model EVF3. Statistical analysis was performed with SPSS using the non-parametric Kruskal - Wallis test and significance level 0.05. The aim was to find statistical differences in pain and sensitivity threshold among the three groups to the extent that would justify the use of such electronic devices as reliable tools for diagnosing and monitoring DPN.

Results: Patients with DPN (group B and C) exhibit increased sensitivity and pain threshold compared with diabetic patients without peripheral neuropathy (group A). Patients with longer DPN (Group B) have a more increased sensitivity and pain threshold than those with a few months peripheral neuropathy (group C).

Conclusions: The use of such an examination could enhance diagnosis and assist in monitoring the progress in time of DPN.

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P033

Metabolic syndrome in psychotic patients who are in treatment with atypical neuroleptic agents

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Background: Patients suffering from major mental disorders, particularly disorders belonging to the schizophrenia spectrum, in addition to other psychotic disorders, are at high risk of displaying comorbid physical disorders often associated with the side-effects from anti-psychotic medication treatment. The aim of the current study is to investigate the prevalence of Metabolic Syndrome in a sample of psychotic patients treated with atypical neuroleptics.

Materials and methods: The study's sample consisted of 50 inpatients diagnosed with schizophrenia or any other psychotic disorder. Patients with existing organic diseases were excluded from the study. Patient demographics were recorded and measurements were taken for total cholesterol, HDL, LDL, triglycerides, fasting glucose, blood pressure and BMI in two phases, first, before the initiation of treatment with atypical neuroleptics and, second, before discharge, i.e. at about the fourth week of pharmacotherapy.

Results: 24 male and 26 female participants took part in this study with an average age of 43.16 ± 13.98. During the final evaluation, statistically significant changes were noted (Paired T-test p < 0.01) for most parameters studied (BMI / fasting glucose / total cholesterol / LDL cholesterol). Overall, 28% of our sample met the diagnostic criteria for Metabolic Syndrome at the final evaluation.

Conclusions: The high incidence of adverse metabolic symptoms should be taken seriously into account when designing treatment for psychosis, in order for appropriate measures (diet, exercise, etc.) to be taken so as to prevent such symptoms as far as possible.

P034

The impact of current financial crisis upon Mental Health and Quality of Life in people with chronic medical conditions seeking urgent care in Greek Accident and Emergency Departments

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Background: The aim of the present study was to investigate the impact of the current recession upon mental health and health-related quality of life (HRQoL) in people with chronic medical conditions seeking care in our hospital's Accident and Emergency Department (AED).

Materials and methods: We used the MINI structured interview in 140 patients with diabetes, COPD and rheumatologic disorders seeking urgent care in our AED. We also assessed psychological distress symptoms (SCL-90-R), depressive (PHQ-9) and somatisation symptom severity (PHQ-15), suicidality risk (RASS) and HRQoL (WHOQOL-BREF). Multiple linear and logistic re-

gression analyses were used.

Results: Forty-one (29.3%) patients were diagnosed with major depression and 24 (17.1%) were found suicidal according to MINI. The perceived greater financial impact of the recession was associated with both major depression (OR=1.4, CI, 1.1-1.8, p=0.002) and suicidality (OR=1.5, CI, 1.1-1.9, p=0.014) diagnoses, as well as with interpersonal sensitivity symptoms (p=0.021) and impaired Physical (p=0.014), Mental (p<0.001) and Environment HRQoL (p=0.036), after controlling for age, sex, education, marital status, previous psychiatric history and medical comorbidity other than the main physical illness. Being divorced, widowed or separated (p=0.002), lower income (p=0.05), previous psychiatric history (p=0.004) and greater perceived impact of recession (p=0.030) were the variables most closely independently associated with suicidality severity as measured by RASS.

Conclusions: In people with chronic medical conditions seeking urgent care, the perceived impact of current recession is associated with depression, suicidality, interpersonal sensitivity and impaired quality of life. These preliminary findings provide initial evidence for the importance of developing psychosocial strategies to address the needs of patients facing financial difficulties in the era of recession. Additional data is currently being collected in a prospective design.

Acknowledgements: This research has been co-financed by the European Union (European Social Fund - ESF) and Greek national funds through the Operational Program "Education and Lifelong Learning" of the National Strategic Reference Framework (NSRF) - Research Funding Program: ARISTEIA. Investing in knowledge society through the European Social Fund.

P035

Are the "ottawa rules" and the "hads" instruments helpful to predict ankle and foot fractures?

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Background: The Ottawa ankle rules are a set of guidelines for clinicians to aid them in deciding whether a patient with foot or ankle pain after trauma incident, should be offered X-rays to diagnose a possible bone fracture. However, only about 15% of X-rays were positive for fracture, other patients had sprains or other injuries. In consequence, many unnecessary X-rays were taken, which was costly, time consuming and a possible health risk. Our purpose was to validate the "Ottawa ankle rules" to predict ankle and foot fractures in sports activities as clinical setting, when used in the Emergency Department.

Materials and methods: A prospective patient survey was undertaken by emergency physicians in the Orthopaedic Emergency departments of two teaching hospitals. The study group consisted of 714 consecutive patients aged 18 years and older who presented with acute ankle or midfoot injuries during a 4-months period. Radiography was performed in each patient after clinical evaluation findings were recorded for confirmation. The instruments were the Ottawa rules out score and the HADS (Hospital Anxiety and Depression Scale).

Results: Sixty - eight ankle and nineteen midfoot fractures were diagnosed. The decision rules had a sensitivity of. 89, a specificity of. 43, and a negative predictive value of. 89 in detecting

ankle fractures, a sensitivity of .86, a specificity of .27, and a negative predictive value of .9 in detecting midfoot fractures. The rules failed to predict 9 avulsion fractures in the ankle group. The decision rules had a sensitivity of .98, and specificity of .83 if the additional HADS data were considered.

Conclusions: Use of the Ottawa ankle rules by emergency physicians resulted in 89% sensitivity and had a potential of reducing radiography requests by 24%. Since the “Ottawa ankle rules” is an instrument calibrated towards high sensitivity of 100%, in our patients were less sensitive than clinical suspicion alone. In our opinion, the sensitivity of the “Ottawa rules out score” is relatively low. The additional HADS score as a second additional instrument would allow physicians to safely reduce the number of radiographs with Ottawa ankle rules.

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P036

Verbal and visual memory in mild and moderate TBI patients 1, 3 and 6 months after the injury

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Background: Mild and moderate TBI often lead to long-lasting cognitive deficits with memory disturbances being among most frequent. We used quantitative approach to A.R. Lurian qualitative tests in an attempt to better characterize the structure of memory impairments in mild and moderate TBI.

Materials and methods: 42 adults (27 male, 15 female), 19-62 years old with mild (23 patients) and moderate (19 patients) TBI were tested within 1, 3 and 6 months after trauma. Testing included visual and verbal memory tests from scored A.R. Lurian neuropsychological battery. Changes between 1 - 3 and 3-6 months post-injury were analyzed using ANOVA. Statistically significant results ($p \leq 0.05$) are reported.

Results: In visual memory changes are mostly seen between 1 and 3 months post-injury: number of figures recalled has increased, frequency of certain errors - omissions of figures and their details, perseverations, wrong order of the recalled figures has decreased.

In verbal memory changes are mostly seen between 3 and 6 months of injury: number of words in delayed recall has increased, frequency of certain errors - intrusions of synonyms and homonyms, perseverations, wrong order of the recalled words has decreased.

Conclusions: Changes in visual memory are more pronounced in 1-3 months post-injury and almost reach ceiling at 3 months. It takes longer for verbal memory to improve - significant changes are seen 3-6 months after the injury.

P037

Vascular endothelial growth factor (VEGF): a possible novel player in the molecular background of mood disorders?

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Background: Vascular endothelial growth factor (VEGF) was discovered in 1983 on the basis of its ability to increase vascular permeability and subsequently determined to be involved in variegated processes of the cardiovascular system. Later several investigations have found that VEGF and/or its receptors are expressed by different cellular elements of the central nervous system (CNS) (i.e. neurons, glial cells, ependymal cells and neuronal progenitor cells) and, accordingly, exert various effects in the CNS.

Results: Furthermore, there are several lines of evidence from animal studies which suggest that VEGF is involved in the molecular background of mood disorders. For instance, intracerebroventricular administration of VEGF has antidepressant effects; chronic stress downregulates the synthesis of VEGF and one of its receptors (Flk-1) in the hippocampus; VEGF stimulates neurogenesis in the hippocampus (a brain area with reduced volumes in depression); the integrity of VEGF signaling through the Flk-1 receptor is essential for the behavioral effects of antidepressants; etc.

However, results from animal studies strongly and unequivocally suggest that VEGF is involved in the pathomechanism of mood disorders human studies - mainly investigated peripheral (blood) levels of VEGF - failed to find any consistent results on changes of VEGF levels in patients with mood disorders vs. controls. Similarly, results are ambiguous on changes of peripheral VEGF levels during the treatment of depression. Recently, in a preliminary study* we found that those subjects with a current episode of major depression (MDE) who were non-responders to the pharmacological treatment had higher pretreatment levels of plasma VEGF which result may raise the possibility that peripheral VEGF level is a possible biomarker for antidepressant treatment response in MDE.

Conclusions: Future human studies focusing on VEGF in the CNS - using post-mortem brain samples, CSF samples or neuroimaging techniques after development of specific radioligands for imaging VEGF signaling - are recommended to elucidate the exact role of VEGF in the molecular background of human depression.

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P038

Prospective study of PTSD's impact in rapid cycling bipolar disorder

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Background: PTSD is a common comorbidity of bipolar disorder. It is estimated that 16% of patients with bipolar disorder also have PTSD1.

Materials and methods: 100 patients diagnosed at least from two years with Bipolar Disorder I and II were assessed with the MINI 0.6 (Mini International Neuropsychiatric Interview) and ADE

(affective disorder evaluation) for comorbidity with Anxiety disorder, PTSD, and mood episodes and were followed for a period of three years. This is a naturalistic study and curing doctor decides for the therapeutic treatment. Data were collected from December 2009 to December 2012 in Community Mental Health Center 2 and Psychiatry's Service in Tirana.

Results: In 39 men and 61 women included in the study, 19 of them has a PTSD history. 31% of patients presented rapid cycling (DSM IV TR criteria) during three years of follow up. 53% of patients with rapid cycling have PTSD in history. The use of antidepressants in the treatment did not influenced in the rapid cycling. The presence of PTSD is associated with the occurring of depressive episodes with mixed features (Irritability, racing thoughts, distractibility).

Conclusions: Lifetime PTSD has an impact on the development of rapid cycling bipolar patients, despite of the use of antidepressants, as well as it affects the symptoms of depressive episodes.

P039

Investigation of dental fear and anxiety among children, adolescents and young adults

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Background: Skin conductance of patients is extensively investigated to provide a quantifiable measure of hidden, subjectively unconscious fear and anxiety in different populations among different conditions. 1,2,3,4,5,6,7,8,9,10 In the present study our aim was to study if measuring skin conductance in children in dental healthcare settings provides relevant answers and reflects the difference of consciously experienced and unexperienced fear. Here we present the study settings and preliminary observations of our experiment.

Materials and methods: Skin conductance was measured in 36 participants aged between 14-28 years with Skin Conductance System on the index or the middle finger of one hand in the Department of Pedodontics and Orthodontics of Semmelweis University, Budapest.

All participants went through or going through fixed orthodontic treatment. Their dental fear and anxiety was measured after treatment for minimum one year. Along the skin conductance measurement participants also completed a twenty plus four questionnaire about their psychosomatic status semi-individually, assisted by their clinical orthodontist.

Results: We acquired results from all participants. In the next step we analyse the pattern of changes in skin conductance and its association with the questionnaire results.

Conclusions: Our experiment reflected that children and young adults are able to differentiate between the types of fears and anxiety they experience with the help of directed questions. Measuring skin conductance will complement these results with the physiological correlates of different fear experiences. We also expect to gain deeper insight and draw better conclusions about the nature and pattern of fear responses of children and young adults in orthodontic settings, therefore improving their reactions and consequentially attitudes and compliance towards treatment.

Acknowledgements: This work was supported by OTKA grant 75782 K. We are very grateful for the help.

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P040

Effects of flooding on mental health: A case-control study

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Background: Post-disaster mental health problems may affect population in different ways.

Population exposure to a natural disaster has been associated with psychological distress, in particular, in the development of Posttraumatic Stress Disorder (PTSD).

Most people experience distress after their exposure to an extreme event.

For people with good psychosocial resilience and access to social support, mental health problems can be relatively less important since supporting relationships and inner capabilities may begin the adaptation processes. Mental disorders occur often, but less commonly than distress, and in some cases they may require intensive and long term continuing interventions and treatment(1).

Materials and methods: The aims of this study were to investigate the effects of flooding on mental health population, particularly on the general health and the symptom's emergence of PTSD.

A random sampling method was conducted in a population affected by a flood occurred in September 2012, an area of 20.000 inhabitants in the North of Almería (Spain) (N=70). The control population was a near region (30 Km) of 30.000 inhabitants non affected by the flood (N=41).The sample were screened with a socio-demographic questionnaire, 12-item General Health Questionnaire(GHQ-12) and the Questionnaire to rate Traumatic Experiences(TQ). We also counted the distribution of stress exposure among people with various kinds of exposures (physical risk or/and economical losses).

Results: The mean age of the individuals was 53, 69 years, sd 15,99. Distribution by sex was



34,62% men - 65,38% women. There were no statistical differences between age and genders between case and control population. There was statistical differences in TQ scores between case population (5,39) vs. control population (1,8).

An association between age and TQ scores was demonstrated, increasing TQ scores by age. Also, there were no statistical differences between individuals that suffered physical risk in the flood versus people that didn't suffered in TQ scores. On the other hand, a multiple regression model was adjusted by age and sex. Significant differences were found in the TQ scores mean values for individuals that suffered economical losses (9,51 TQ score) versus individuals that didn't suffered it (2,94).

Conclusions: 1. Older people were more likely to develop PTSD

2. It's necessary to consider secondary stressors, such as economical losses, in the develop of PTSD.

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P041

Modern intraoperative neuroimaging using three-dimensional ultrasound-based frameless navigation with intraoperative neuromonitoring and 5-ALA Assistance in patients with glioblastome multiforme

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Background: Accuracy of intraoperative orientation is one of the factors that significantly affect both the success of neurosurgical intervention and long-term outcome. "Brain shift" phenomena that occurs during surgery really disturbs orientation of a surgeon and can lead to serious functional complications (especially in eloquent and near-eloquent brain areas).

Materials and methods: Intraoperative three-dimensional ultrasound-based frameless navigation (SonoWand Invite) in combination with 5-ALA fluorescence imaging and intraoperative neuromonitoring was used in 46 patients with GBM between July-December, 2012. In all cases we use different types of probes according to tumor depth and size.

Results: Intraoperative 3D ultrasound has shown sufficient sensitivity in delineating tumor border from normal brain tissue before removal and during procedure. We find that ultrasound characteristics cannot be easily interpreted according to histological properties of the tissue. 5-ALA is a valuable method for additional verification of tumor tissue and in combination with ultrasound and intraoperative neuromonitoring (MEP and SSEP) it helps to perform gross-total resection in more safety and easy way.

Conclusions: Modern 3D ultrasound-based frameless intraoperative navigation combined with neuromonitoring and molecular imaging with 5-ALA can be used as a faster, cheaper and very promising method to achieve extended and safe resection in GBM patients.

P042

Intraoperative fluorescence diagnostics and laser spectroscopy in neurooncology

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Background: Intraoperative fluorescent diagnostics (FD) with 5-aminolevulinic acid (5-ALA) is an effective and rapid method of neuronavigation in neurooncology.

Materials and methods: From 2010 to 2012 we operated 169 patients with brain tumors (114 gliomas Grade I-IV WHO, 32 meningiomas and 23 metastases). Each patient received 5-ALA (25 mg/kg per os) 2 hours before surgery. Visual fluorescence effect we analyzed by Carl Zeiss Pentero microscope. Intraoperative quantitative 5-ALA accumulation was assessed by original laser spectral analyzer (BIOSPEC). The latter was used for calculating Fluorescence index (FI) which means the ratio between fluorescence values and intensity of the attenuated laser light. protoporphyrin IX (Pp IX) content measurements were made during surgery with parallel multiple biopsy analysis.

Results: Visible fluorescence and significantly improved spectrum levels were observed in 78.2% of patients with glial tumors (GRADE I-IV), 96% of patients with meningiomas and 63.6% of patients with metastases. Average FI levels for Grade I-II gliomas were 12 ± 10 , for Grades III-IV - 25 ± 15 , for Grade I-III meningiomas - 46 ± 28 , for metastases - 29 ± 21 . In a group of gliomas average FI index for Grade I was 5.3 ± 5 , Grade II - 12 ± 11 , Grade III - 23.4 ± 26 and Grade IV - 29.7 ± 24 . In a group of glioblastomas FI index for the intact brain was 2.2 ± 1.3 ; for necrosis zone - 2.1 ± 0.7 ; for tumor tissue - 15.4 ± 6 ; infiltrative zone - 31.0 ± 15.6 . We got statistically significant FI index difference between LGG and HGG gliomas and compared in pairs tumor/brain, brain/ infiltrative zone, tumor/ necrosis zone ($p < 0.05$).

Conclusions: Fluorescence diagnostics and laser spectroscopy is effective method of intraoperative neuroimaging in the surgery of the brain tumors (gliomas, meningiomas and metastasis).

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P043

Reatment effectiveness in clinically stable outpatients with bipolar diosrder in greece: the reminder study

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Background: Maintenance therapy is critical for the treatment of bipolar disorder, as the risk of recurrence is high. Data on treatment and management during the course of bipolar disorder is very limited in Greece.

Materials and methods: DSM-IV bipolar I&II outpatients from 48 sites were included. Patients were required to have symptomatic control after an acute mood episode, which had been managed with an atypical antipsychotic (monotherapy/combination) and were followed up for 9 months after this episode. Data on therapeutic management of index episode, relapse occurrence and period of normothymia were collected. YMRS and HAM-D assessed effectiveness of treatment. Ethical approval was obtained prior to study initiation (NCT01202604).

Results: 294 patients mainly with Bipolar Type I (66.3%) and in the absence of rapid cycling (91.2%) were included. There were no significant changes in treatment between index episode and maintenance phase. During acute phase most patients received atypical antipsychotic monotherapy (21.4%) or a combination of atypical antipsychotics with mood stabilizers (18.7%) or antidepressants (16.0%). In the setting of this study relapse rate was low (4.4%). Mean duration of normothymia for relapsers was 5±1.8 months. Both YMRS and HAM-D scores were significantly improved from baseline.

Conclusions: Treatments for bipolar disorder in bipolar I and II population appear to be effective, in both the acute and maintenance phases. Modifications of treatment following an acute mood episode were limited.

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P044

Neuroanatomical base of posttraumatic unconsciousness and movement disorders

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Background: Close interactions between the brainstem, subcortical structures and cortex play a crucial role in awareness, behavior, cognitive and motor functions regulation. Therefore evalu-

ation of deep brain structures damage may provide a key to outcome prediction and development a new treatment strategy in severe traumatic brain injury (TBI).

Materials and methods: This study enrolled 43 survived patients with severe TBI (GCS<8) (29 male and 14 female) (28,6±9,5 y.o.). Brain damage localization was verified by 1,5-3T MRI (T1, T2, FLAIR, T2 GRE/SWI, DWI). We analyzed the damage of Globus Pallidus interna (GPi) and externa (GPe), nucleus caudatus (NC), putamen (Put), Thalamus, Meynert nucleus and brainstem. Unconsciousness includes coma, vegetative state and akinetic mutism. Neurological state included evaluation of movement dysfunction: paresis degree, muscular hypotony/hypertony, hypokinesia/hyperkinesia.

Results: Muscular hypertonia was associated with damage of GPe and cholinergic area of pons, prolonged hypertony - with putamen and substantia nigra damage. 2. Muscular hypotony was associated with thalamus and Meynert nucleus damage. Hyperkinetic syndromes were associated with putamen, GPi, ventral tegmental area, NC damage. 5. Prolonged unconsciousness was more likely associated with concomitant damage to three subcortical structures (GPe, GPi, NC or Thalamus) (p=0,0002). 6. Coma duration correlated with substantia nigra, cholinergic pons area, GPi and GPe damage, trauma outcome negatively correlated with basal ganglia and substantia nigra damage.

Conclusions: It is well known that neurological function recovery often depends on regular choice of neurometabolic therapy. We find these data useful for choosing a specific pharmacotherapy based on neuroanatomical factors.

P045

Impact of social intervention in maintaining the autonomy of a patient with hebephrenia

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Background: Schizophrenia is a mental disorder, which is characterized by positive and negative symptoms such as glitches in the professional and social areas (American Psychiatric Association, 1994).

The impact of schizophrenia on the individual and his social environment can be managed in a multifactorial therapeutic context in which the combination of various therapeutic interventions (pharmacotherapy and psychotherapy) is in focus.

Today, the dominant trend in psychiatry is "social psychiatry." The emphasis is, if possible, outpatient treatment with psychotherapy, medication and community involvement in an effort to prevent and treat schizophrenia. In this paper we present the progress of the disorder, of a patient who suffers from schizophrenia for the last 20 years and in which psychosocial intervention was aimed towards the best possible functionality, so that the ideal form of rehabilitation was he could lead a happy and fulfilling life.

Materials and methods: Used material from the medical records of the patient in the different structures of the Psychiatric Hospital of Corfu, as well as reports from both his family and the doctors who attended the last two decades.

During the research, we studied the medical records of the patient, reports of nursing services, medications since 1999 up to today as well as the behavior of the last 3 (three) years, but especially the last two years where he lives alone and monitored at regular intervals by the medical team and his family.



Results: The patient's independent living the last two years, his participation in social activities with the medical team, the encouragement in order to deal with new things (learning computer, Internet use) resulted in preventing hospitalization and reduction of medication received.

Conclusions: Despite the pessimistic outlook that most people have in terms of their schizophrenic and "recovery", there are signs that people can improve their quality of life, A major step is the improvement of their communicative skills through which they can express themselves, interact and become independent again. It is our duty to eliminate the stigma and contribute to improving their quality of life, which will bring about an improvement in the overall social context in which we live and interact with our fellow humans.

P046

"Meleti": A cognitive rehabilitation programme for individuals with psychosis in Greece

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Background: Cognitive remediation is effective against cognitive dysfunction in psychosis and produces functional benefits when it is administered in the context of psychosocial rehabilitation programmes.

Materials and methods: We present the first Greek cognitive remediation programme named "Meleti" which has been developed at the Psychiatric Hospital of Attica.

Results: "Meleti" is a paper and pencil programme utilizing the experience of existing cognitive remediation programmes in psychosis and dementia. It consists of 40 hourly personal sessions targeting cognitive and social cognition deficits in psychosis. "Meleti" is based on the principles of errorless learning, patients' encouragement, frequent practice, importance of strategies and of metacognitive training. It is administered 2-3 times per week in individuals with psychosis starting by a psychoeducation presentation. After identifying the goals of the patient and its therapeutic team, the programme assesses patient's cognition, symptoms, functioning and medications. The first 22 sessions contain tasks of categorization, verbal learning and memory, verbal fluency and abstract reasoning. Thereafter, it includes dual task training, training in symmetry, sentence completion, letter and number coding, visuospatial memory and arithmetic tasks. The programme also uses games addressing executive functions and visuoconstructional ability. The last five sessions involve training in self and social knowledge through fostering the recognition and understanding of human affect and social cues. Finally, the programme reassesses patients' cognition, symptoms and functioning and produces a report to be used by the therapeutic team of the patient.

Conclusions: The pilot implementation of the programme supports its feasibility and safety. Its efficacy remains to be investigated through rigorous randomized clinical trials.

P047

Cognitive functions in bipolar manic and remitted episodes: a longitudinal study

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Background: Bipolar disorder is characterized by persistent cognitive impairments. However, it is not described fully that these impairments are associated with episodes of illness. We aimed to study cognitive functions in same bipolar patients at their manic and remission episodes.

Materials and methods: Nine (9) male patients were recruited in this study. Their mean ages were 23.3 years. Bipolar disorder was diagnosed with SCID-I. Cognitive functions evaluated during manic and at least 3 months after remission. Hamilton Depression Scale ≤ 8 and Young Mania Scale ≤ 6 was considered to take for the remission. Cognitive evaluation including attention, memory and learning was carried out by Serial Digit Learning Test (SDLT), Auditory Verbal Learning Test (AVLT), Cancellation Test (CT) and Stroop Test (ST).

Results: Duration scores of ST-1, 2 and 5 card and CT random figures of manic period were longer than remission.

Conclusions: These results show that there are impairments in attention, memory and learning functions during manic episode when compared with remission. Future studies should make at large sample providing drug use control.

P048

Cognitive Functions in Bipolar Manic, Depressed and Remitted Episodes

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Background: In recent researches, it has been suggested that cognitive functions seem to be impaired not only during the acute phases of bipolar disorder, but also remission. In this study, we aimed to investigate cognitive functions at the manic, depression and remission periods of bipolar disorder by comparing with healthy control group.

Materials and methods: Cognitive functions including attention and memory were examined in 20 manic, 10 depressed and 21 euthymic bipolar patients (3 months of remission, Hamilton depression scale score ≤ 8 , and Young Mania Rating Scale score ≤ 6) as compared with 22 healthy subjects. All subjects were male, and their ages were among 20-45 years. Cognitive evaluation was carried out by Serial Digit Learning Test, Auditory Verbal Learning Test, Cancellation Test and Stroop Test.

Results: The duration of illness was 6.4 ± 4.8 years. We found that attention, memory and learning functions was worse at manic and depressive patients than healthy controls and patients in remission and that the number of depressive episodes had a negative effect on attention functions. No difference was found between patients in remission and healthy controls. Some attention subtests scores were negatively related to memory test and subtests scores in manic

and depressed patients.

Conclusions: This study have shown that impairments in attention, memory, information processing and learning functions of bipolar patients are specific to the depressive and manic periods of the disorder and no effect was present in the remission period.

P049

Using combination of paracetamol and orphenadrine citrate. as a treatment for chronic low back pain in amateur athletes -preliminary study

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Background: Orphenadrine is an anticholinergic drug with prominent central nervous system and peripheral actions. Paracetamol is a widely used analgesic. Chronic low back pain is less common than acute back pain, but it is still very widespread, specially during amateur athletic activity. We can measure the chronic low back pain by duration, pain that persists for more than three months is considered chronic. It is often progressive and the cause can be difficult to determine.

Materials and methods: The aim of the study was to investigate and to evaluate the clinical effects, the safety and the efficacy, of paracetamol and orphenadrine citrate when administrated for chronic low back pain in individuals with amateur athletic activity.

Results: This retrospective study included 20 patients suffering from chronic low back pain with radiculopathy caused by lumbar disc syndrome, without any previous treatment, and who did not need surgery. 20 patients, 10 female -50% - 10 male -50%-, mean age 53years, range 45-64 years. Paracetamol and orphenadrine citrate was conducted using oral drug intake 3 times daily during 21 days.

Results-This treatment regime proved to be effective. The subjective paracetamol and orphenadrine citrate efficacy was the following: moderate- 5 cases, 25%. good-5cases, 50% very good 10 cases,50 %.

Conclusions: This study therefore demonstrates that paracetamol and orphenadrine citrate oral therapy seems to be safe, well tolerated and efficacious in the treatment of chronic low back pain. Further studies were warranted.

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P050

Treatment protocols in hospitalized bipolar patients

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Background: In the treatment of bipolar disorder, mood stabilizers (MS), antipsychotics (AP), antidepressants (AD) and anxiolytics can be used according to the type and severity of the episode.

Materials and methods: In this study the data of 180 bipolar patients who were admitted to psychiatry clinic of a university hospital between 2007-2012 were examined.

Results: The rate of the treatments of the patients admitted for manic episode was %7.8 in MS, %85.4 in MS+ AP and %6.8 in AP. The rate of the treatments of the patients admitted for depressive episode was %30.2 in MS+AD, %36.4 in MS+AP, %33.4 in MS+AD+AP. Lithium (50.4%) and valproic acid (45.4%) were the most preferred in MS drugs. Average lithium drug dose was 1220 ± 34.1 and average valproic acid drug dose was 1084 ± 23.6 mg / day. Olanzapine was the most frequently (40.4%) preferred in antipsychotics. Average olanzapine dose was 14.1 ± 0.4 mg / day. 16.1% of the patients had received electroconvulsive therapy (ECT) during their illness. Patients received an average of 8.9 ± 3.7 times in the number of ECT.

Conclusions: There is an increase in the using of the atypical antipsychotics as mood stabilizers, although valproic acid, carbamazepine or lamotrigine are other protection options. ECT may be an effective method for patients who do not respond to medications. Considering the diagnosis of patients hospitalized in our clinic, drug selection and treatment modalities were consistent with treatment guidelines.

P051

Conservative treatment of low back pain, in amateur athletes using epidural injection of steroids -preliminary study

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Background: Epidural injection of steroids is one of the most commonly used interventions in managing chronic spinal pain.

AIM-The aim of our study is to evaluate the results of the conservative treatment of diseases causing low back, with epidural injection of steroids in amateur athletes.

Materials and methods: During a 6 years period (2004-2010), 50 individuals with amateur athletic activity (40 men and 10 women) were treated conservatively with epidural injection of steroids. The average of age was 44 (with breadth 25-55 years old). All patients (50,100%) had failed previous conservative treatment. Mean follow up was 24 months (range 12-36 months).

Results: 1. Immediately after injection, 25 patients- 50% reported various degree of relief from leg and back pain. 2. At the last follow up examination 80% (40) of patients were asymptomatic, 12% (6) had no change in preinjection radicular symptoms and 8% (4) had various degree of relief.

Conclusions: This study therefore demonstrates that epidural injection of steroids seems to be safe, well tolerated and efficacious in the treatment of low back pain in amateur athletes. Further studies were warranted.

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P052

Gender, Anxiety and Depression in Patients with COPD

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Background: Chronic Obstructive Pulmonary Disease (COPD) is characterized by airway obstruction. Although several studies have focused on the presence of anxiety and depression in COPD [1, 2, 3] few have focused on gender. The purpose of this study was to assess differences regarding anxiety and depression between female and male patients with COPD.

Materials and methods: In a sample of 147 outpatients with COPD (33 women and 114 men) without known comorbidity from mental illness, we administered the BDI (Beck Depression Inventory) questionnaire [1,3,4], as well as the Spielberger Trait Anxiety Scale (STAI) [1,3,4]. We noted the subjects' demographics and their FEV1%.

Results: Women were not different vs men regarding disease duration, education and age (t-test $p > 0.05$). Men showed lower FEV1% compared to women (40.74±20.21 vs 52.22±22.43) (t-test $p < 0.05$). Compared to men, women with COPD had higher anxiety (39.8 vs 44.5, t test $p < 0.05$) and depression scores (13.7 vs 11.0, t test $p < 0.05$). Forty-eight % of men demonstrated depression compared to 65.6% of women (BDI score > 9, Chi-Square $p < 0.05$) and 28.6% of them exhibited anxiety (STAI score > 43) versus 33.7% of women (STAI > 45, Chi-Square $p < 0.05$). Age and FEV1% showed no correlation with any of the psychological scales' scores ($p > 0.05$) while a positive correlation was noted between anxiety and depression ($p > 0.05$).

Conclusions: Female patients with COPD showed higher psychopathologic symptoms regarding anxiety and depression compared to male patients.

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P053**The Role of Imidazoline-2 Receptors in Morphine Dependence: In vivo and in vitro**

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Background: The present study was designed to investigate the effects of I2 receptors in morphine dependence. In vivo studies were done by observing behavioural signs of morphine withdrawal in rats and in vitro studies in isolated guinea pig ileum after treatment with selective I2 receptor agonist 2-BFI and selective I2 receptor antagonist BU 224.

Materials and methods: Two morphine pellets, each containing 75 mg of morphine base, were implanted subcutaneously in Sprague-Dawley rats. Seventy-two hours after pellet implantation, 2-BFI (3, 5, 10 mg/kg), BU 224 (3, 5, 10 mg/kg) or saline was injected to rats intraperitoneally. Thirty minutes later, a morphine withdrawal syndrome was precipitated by naloxone (2 mg/kg). Just after the naloxone injection, morphine withdrawal signs such as jumping, wet dog shakes, teeth chattering, defecation, diarrhea, tremor and ptosis were observed and evaluated for 15 minutes. In in vitro study ilea tissues were incubated in morphine containing Tyrode solution for 4 hours before 2-BFI and BU 224 (1×10⁻⁵ M, 1×10⁻⁶ M ve 1×10⁻⁷ M) was added, then incubated 30 minutes with 2-BFI and BU 224. After 30 minutes contractile response to naloxone (1×10⁻⁶ M) was evaluated.

Results: The present study showed that both 2-BFI and BU224 attenuated the intensity of signs of the naloxone-precipitated morphine withdrawal syndrome in in vivo and in vitro models.

Conclusions: Based on these findings, it is thought that imidazoline system may play an important role in morphine dependence and withdrawal, via its receptors or/and other mechanisms.

Acknowledgements: This work has been supported by Marmara University Scientific Research Projects Unit (SAG-E-140312-0039)

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P054

Etanercept potentiates antidepressant activity of desipramine in forced swim test in mice

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Background: Recent evidence suggests the contribution of proinflammatory cytokines including tumor necrosis factor alpha (TNF-alpha) in the pathogenesis of major depression besides other psychiatric disorders [1]. TNF-alpha is one of the key targets since the plasma levels were found to be elevated in depressive patients and anti-TNF-alpha therapies showed antidepressant effect in patients with psoriasis [1,2]. Therefore considering cytokine theory associated with depression, we aimed to investigate possible antidepressant effect of desipramine and agmatine, an endogenous anti-inflammatory molecule acting through iNOS, and etanercept, anti-TNF-alpha agent, alone and in combination.

Materials and methods: Balb/c mice (20-30 g) were divided into Control; (saline), Desipramine (15 mg/kg), Agmatine (40 mg/kg), Etanercept (5 mg/kg), Etanercept +Desipramine (5 mg/kg+15 mg/kg) and Etanercept+Agmatine (5 mg/kg+40 mg/kg) groups (n=8 in each). To evaluate the antidepressant effect, all drugs were applied intraperitoneally 30 minutes before the forced swim test except etanercept (48 hours). Mice were allowed to swim for 6 minutes and time of immobility was recorded.

Results: The immobility time significantly decreased with desipramine ($p<0.001$), agmatine ($p<0.001$) and etanercept ($p<0.01$) treatment. Etanercept significantly increased immobility time when combined with desipramine ($p<0.05$) but not with agmatine.

Conclusions: Results of this study demonstrated that acute administration of etanercept has an antidepressant-like effect. Additionally etanercept potentiated the antidepressant effect of desipramine but not that of agmatine. Since etanercept directly acts through cytokine and agmatine through iNOS, further studies are required to understand the underlying proinflammatory cytokine mechanism in depression.

Acknowledgements: This work has been supported by Marmara University Scientific Research Projects Unit (SAG-E-140312-0039).

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P055

Clinical features in hospitalized bipolar patients

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Background: Bipolar disorder is characterized by recurrent episodes of mania and depression; beginning at an early age and often to need for hospitalization. In this study, we aimed to investigate the clinical characteristics of bipolar patients treated in the hospital as inpatient.

Materials and methods: In this study the data of 180 bipolar patients who were admitted to psychiatry clinic of a university hospital due to manic episode between 2007-2012 were examined.

Results: 73 of 180 bipolar patients (40.6%) episodes of mania was just across diseases. 37 of these 73 patients were diagnosed with first-episode mania. Percentage of these patients according to their diagnosis index episode, mania was 67.4%; hypomani was 17.3%; hypomani and depressive episode was 15.3%. The distribution of hospitalization rate according to the seasons was 20.6% in winter, 26.3 and 23.8% in spring and summer, 29.3% in autumn. Patients had manic episodes average of 3.7 ± 3.4 times and depressive episodes average of 1.1 ± 1.9 times during their diseases.

Conclusions: There is no consensus regarding the types of seizures in in first episode bipolar disorder. The first period of mania or depression mood likely to be close to each other. In our study, the most prominent was mania with 67.4%. Our results were appeared to be in line with the results of the studies about clinical characteristics of bipolar patients.

P056

Coping Strategies of Musical Conservatory Students: a pilot study

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Background: In today's stressful world, it is important to study the characteristics of the teenage population, because the symptoms of several psychiatric illnesses first manifest in this age group. In addition to the characteristics of coping strategies, focus must also be placed on uncovering and strengthening protective factors, which can enhance the coping strategies. One factor possibly exerting such an influence is studying music, proven to have a positive psychological effect. Former studies have showed a positive correlation between the study of music and the development of personality, achieved grades, intelligence (Hallam 2006a), various cognitive functions (Kokotsaki & Hallam, 2007), empathy, self-esteem and various social skills (Henley, 1999; Hargreaves 1999). The objective of the present study was to examine the psychological immune system and coping strategies and their association with studying music in teenagers.

Materials and methods: 45 adolescents studying or not studying music, aged 14-16 years completed two Hungarian-developed tests assessing the psychological immune system (PIK, Oláh, 2005), and coping strategies (MMPK, 2005). Subscale profiles and total combined scores of the sub-scales were compared in the two groups.



Results: No significant differences were found between the two groups in the subscale and total scores, however t-probe. However, in the group studying music, all scores reflecting positive psychological skills and processes were higher.

Conclusions: The present pilot study on small sample could not support previous findings that studying music has a significant positive effect on the psychological immune system or on coping. Nevertheless, the non-significant but noticeable difference in favour of those who study music warrants for further research with a higher number of participants and more variables involved.

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P057

Association of Vegetarianism with the Dimensions of Aggression and Emotional Intelligence

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Background: The psychological background and bearings of vegetarianism have not yet been extensively researched, even though it can be very important as the various forms of nutrition play an ever increasing role in contemporary life. The health implications of a vegetarian diet have been mainly positive (Reisinger, 2003; Kökény, 2005), and several psychological advantages have been assumed such as empathy, harmonious life, general low level of aggression and better social skills, all associated with vegetarians (Lea and Worsley, 2002). The topic of the present research focused on the health psychological dimensions associated with vegetarianism such as aggression, as well as social and emotional intelligence. In addition, the study aimed at the verification of previous contradictory findings about vegetarians showing a higher rate of nutritional malfunction and low self-esteem as compared to those on a mixed diet (Lindeman and co-workers, 2002; Túry, 2008). Another purpose of this study was to see whether these assumptions and beliefs could be supported by empirical evidence.

Materials and methods: 113 participants were mainly invited through social media platforms. Out of them, 89 volunteers qualified for the study. 33 were vegetarians, 56 were on a mixed diet. Following registration, the participants completed 4 tests including a questionnaire about demographics and nutrition; the EAT-40 (Eating Attitude Test) questionnaire assessing nutritional attitude; the BPAQ (Buss-Perry Aggression Questionnaire) questionnaire measuring aggression and hostility, and the SEMIQ questionnaire (Social and Emotional Intelligence) A Hungarian developed questionnaire measuring social and emotional intelligence. Scores on the above questionnaire were compared in the different nutritional groups.

Results: No significant differences were found between the two groups in the subscale and total scores, however t-probe.

Conclusions: Former studies and findings have revealed a correlation between vegetarianism and nutritional malfunction, as well as social and emotional intelligence. The findings of this study, though not representative, point to insignificant differences in these dimensions between vegetarians and those on a mixed diet. This also means that such preconceptions as vegetarians are less aggressive and more social than those who eat meat as well, could not be supported by empirical evidence.

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P058

Can semantic priming paradigm differentiate between neglect and hemianopia? Experimental evidences from patients with acquired brain lesion.

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Background: One of the most frequent deals in nuero-rehabilitation field is the patient's difficulty in exploring the surrounding space and neglect whatever encloses him. This phenomenon could be caused by an attentional deficit (i.e. visuo-spatial neglect) or by a reduction of visual field width (hemianopia); most of the time, this exploration impairment could be determined by an interactive effect between these two causes.

Even though there are different neuro-anatomical substrates between neglect and hemianopia, the performances of the patients may provide confounding results at the specific examinations. In particular it is not yet clear if the observation at the neuropsychological tests is a unique expression of neglect nor if the result at the visual-field exam is exclusively dependent by hemianopia.

In the last twenty years only few studies tried to disentangle neglect from hemianopia. Besides these contributions, scientific literature provides lot of results concerning an effective implicit processing of information for patients with neglect which is not present in patients with hemianopia.

Since there is a wide agreement in an implicit information processing for patients with neglect, we hypothesize that a priming word in the neglected field should determine a semantic activation effect even when it is not consciously perceived by the patient; on the contrary if the priming word occurs in a blind hemifield should not determine any activation effect. In this work we will describe the performance of three patients compaired to 15 healthy subjects in a semantic priming task.

Materials and methods: The experimental procedure consisted in a fixation point (+) which lasted in the center of the screen for 150 ms; after that a prime word occurred in six possible positions on the central horizontal line of the screen corresponding to three positions on the left and three on the right (from A=extreme left to F=extreme right). The prime lasted 300 ms and, after 150 ms blanc, by the target word. Target words may belong to living or nonliving category. Subjects and patients were required to press the space-bar only when the target word belonged to a living category. Three different conditions were present: related (the same category for prime and target), unrelated (different category for prime and target) and neutral (instead of a prime word, an "x" string appeared).

Three patients took part to the experiment: two of them presented a right hemispheric lesion and left neglect; one a bilateral lesion which determines left neglect and right homonymous hemianopia.

Results: Results

We analyzed data of healthy subject by means of a repeated measure ANOVA with two dependent variables: prime (related, unrelated, neutral) and position (A,B,C,D,E,F). The participants showed shorter reaction times activation in the condition of semantic relation between prime and target ($p < .05$); moreover this semantic activation were present in all prime positions ($p < .05$).

We compared the data of the patients with those one of healthy subjects by means of a Craw-

ford analysis: the two patients with right brain lesion and left neglect showed a significant activation effect when in the “related condition” in all portions of space, except when the prime occurred in the extreme left position (named A). On the other hand the patient with left neglect and right hemianopia showed semantic activation in left portions (neglected space) but not in right space (hemianopic field).

Conclusions: We aimed to find a task that could be inserted in the differential diagnostic procedure for neglect and hemianopia. Our experimental results seem to show significant semantic priming effect in healthy participants: all of them showed lower RTs in case of relation between prime and target for every position in which prime occurred.

In addition the data we obtained from patients confirmed our work hypothesis, that is we found a semantic activation in the space which is affected by neglect (failures to neuropsychological tasks) but not in hemianoptic field.

P059

Using diclofenac sodium as a treatment for acute low back pain in athletes -preliminary study

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Background: Background - Diclofenac sodium is a benzene-acetic acid derivative. Is available as delayed-release (enteric-coated) tablets of 75 mg for oral administration. Acute low back pain is very common during sports activity.

Aim - The aim of the study was to investigate and to evaluate the clinical effects, the safety and the efficacy, of diclofenac sodium when administrated for acute low back pain in individuals with athletic activity.

Materials and methods: Material-Methods - This retrospective study included 20 patients suffering from acute low back pain with radiculopathy caused by lumbar disc syndrome, without any previous treatment, and who did not need surgery. 20 patients, 6 female -30% - 14 male -70 %-, mean age 41 years, range 28-58 years. Diclofenac sodium was conducted using oral drug intake 2 times daily during 10 days.

Results: Results-This treatment regime proved to be effective. The subjective diclofenac sodium efficacy was the following: moderate- 4 cases, 20%, good- 1cases, 5% very good - 15 cases, 75 %.

Conclusions: Conclusion - This study therefore demonstrates that oral therapy with diclofenac sodium seems to be safe and efficacious in the treatment of acute low back pain in athletes. Further studies were warranted.

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P060

Antipsychotic treatment of anorexia nervosa: A systematic Review of randomized studies

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Background: The existing clinical trials on the effects of antipsychotics in anorexia nervosa (AN) have been contradictory. A systematic review was performed in order to shed light on the specific role of different antipsychotic agents on the management of the symptoms of the disorder.

Materials and methods: We conducted a Medline search using the following key words: “anorexia”, “nervosa”, “antipsychotic” and “randomized” on 2nd March, 2013. The search produced 33 papers. Following their inspection, 27 papers were finally selected for further study.

Results: Less than ten randomized trials exist having inadequate samples with high dropout rates. Most randomized trials have studied the effect of olanzapine on weight gain and AN psychological symptoms. In terms of the weight change, the individual clinical trials have suggested that pimozone, amisulpride and olanzapine lead to weight gain, but the effects of sulpiride, quetiapine and risperidone on weight have been disappointing. With regards to symptoms, neither amisulpride nor quetiapine or risperidone were found effective. However, olanzapine has been associated with symptoms reductions, in particular, anorexic rumination, depression, aggressiveness and temperament of persistence. Guidelines suggest that there is limited positive evidence from controlled trials for olanzapine for weight gain. Recent reviews have provided evidence that atypical antipsychotics are safe and associated with reductions in symptoms, but two recent meta-analyses failed to confirm any beneficial effect of atypical or typical antipsychotics on either weight gain or symptoms.

Conclusions: Based on the current limited data, antipsychotics are not clinically indicated in the treatment of AN.

P061

Capgras and intermetamorphosis syndromes : case report and review of the literature

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Background: Reports of the Capgras delusion co-existing with various brain lesions or with metabolic and endocrine disorders are appearing with increasing frequency. It's initial psychiatric explanation was confronted with recent studies describing these syndromes as disorders also resulting from neurobiological alterations and damages to temporal lobe, limbic structures in-

volved in memory and affective responses and bifrontal regions.

Materials and methods: We report a case of a 25 year old man who sustained a traumatic brain injury in 2003, was in a controlled coma for 8 months and displayed a florid set of delusional misidentification ideas eight years later. Informed consent was obtained from the client and his medical records reviewed. Both Capgras and intermetamorphosis syndromes were reviewed in 256 published outcome studies identified in RCPsych journals and MEDLINE.

Results: • CT brain scan in 2003 showed multiple contusions in both cerebral hemispheres., especially in the left parietal and right frontal regions. Neuropsychological assessment indicated anterograde memory deficit, reduced speed of information processing, reduced attention skills and executive dysfunction. He was diagnosed with depression NOS a year later and he was an occasional cannabis and steroids user.

• Second neuropsychological assessment in 2012 indicated intact ability to encode and store visual information but decline in visual working memory. Performance on tasks indicated special difficulty with complex information.

• Since his brain injury sporadic ideas of intermetamorphosis expressed but not assessed. Capgras syndrome displayed only eight years later under financial distress and mood instability. Low dose of Quetiapine, engagement with the EIIP, and a part time job largely improved his symptoms.

Conclusions: This case report agrees with studies commented on the importance of the affective state of patients with delusional misidentification; although the impairments of processing of faces identified are important in the genesis of the symptoms, they are probably neither necessary nor sufficient to produce the syndrome. Other factors, including powerful affective states, are likely to be involved and wider neuronal interconnectivity problems rather than specific topological problems need to be explored.

Acknowledgements: The Injury Centre, Queen Elizabeth Neuro-rehabilitation Services, QEF, the Neuropsychological Service, Horizon Centre and the North East Hants & Surrey Heath EIIP.

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P062

A Hybrid drug containing a substituted cinnamic acid and paracetamol improves functional recovery after peripheral nerve crush lesion in the rat

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Background: Hybrid drugs are becoming of increasing interest. The use of hybrid drugs compris-

es the incorporation of two drugs in a single molecule with the intention of exerting dual drug action. Thus, a new molecule KP3 was synthesized containing in the same entity a cinnamic acid with antioxidant, anti-inflammatory and lipoxygenase inhibitory activities and paracetamol. Preliminary results demonstrate that this hybrid molecule appears anti-inflammatory and analgesic effect. Despite the regenerative potential of peripheral nerves, functional recovery after injury remains poor in both humans and laboratory animals. Different strategies which aim at improving the outcome of peripheral nerve injury have been tested in animal experiments. In this study we investigated the effects of KP3 on nerve regeneration and functional recovery following peripheral nerve injury using a rat sciatic nerve crush model.

Materials and methods: Unilateral sciatic nerve crush injury was performed on 14 adult Wistar rats. Animals on the experimental group (n = 7) received KP3 (0.01mmol/ml/kg ip) eight hours postoperatively. Control group (n = 7) received no drug after crush injury. Sensory function was evaluated by observing the withdrawal reflex (pinch test). Functional motor recovery was assessed by simple locomotor tests including walking on flat platform, inclined plane and grid. All tests were carried out in both groups on day 0 (before surgery), 1st, 8th, 15th, 22nd days postoperatively.

Results: The treatment group exhibited an early recovery in sensory function on day 8th, a week earlier than the control group (day 15th). A complete sensory recovery to normal was observed on the 22nd postoperative day in rats treated with KP3. In comparison to the control group, the KP3-treated rats showed improvement in gait scores during the locomotor tests with a significantly better score on the 22nd day.

Conclusions: Our results indicate that KP3 accelerates functional recovery following sciatic nerve crush in the rat and it appears to be a promising agent for treating peripheral nerve injuries. Since these preliminary results have been derived from a small sample size and due to the absence of histological and electrophysiological analysis, further studies are in progress in order to support them.

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P063

Impact of the Economic Crisis on Psychiatric Hospitalizations among Immigrants in Greece

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Background: During the past years Greece has faced an economic crisis, a turning point of which was its bailout by the International Monetary Fund in 2010. The purpose of this study is to describe the impact of this crisis on the use of mental health services among vulnerable populations, such as immigrants.

Materials and methods: A retrospective study of the records of 140 foreign-born patients, hospitalized in a psychiatric clinic of a General Hospital in Athens between 2008 and 2012 was conducted. Demographic (gender, age and family status) and clinical data (involuntary or voluntary hospitalization, insurance and diagnosis) were analyzed.

Results: In 2008-2009, 69 immigrants were hospitalized (38 men, 31 women, mean age 35.9 years old, 10.8% of total hospitalizations), while between 2010-2011, there were 71 foreign-born inpatients (30 men, 41 women, mean age 34.1, 11.1% of total hospitalizations). Of these hospitalizations, 52.1% were involuntary prior to the financial crisis and 49.2% after. Among the immigrants, 59.4% and 57.7% were uninsured, respectively. The majority of cases were diagnosed with schizophrenia or other psychotic disorders (72.4% before and 71.8% after). No statistically significant differences were noted between the two time periods for any of the above comparisons.

Conclusions: Despite adverse economic conditions, there was no change in the use of psychiatric hospital care services by immigrants during this period. Possibly, the origin of this population from countries with a history of economic problems allowed them to adapt more readily to harsher conditions. It remains to be seen whether further economic deterioration will alter this trend.

P064

The relationship between depression, anxiety and stress with quality of life, among Science and Research Branch, Islamic Azad University, Kerman students

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Background: The purpose of this research is to explore the relationship between depression, anxiety and stress with quality of life.

Materials and methods: In this correlation study, 153 students were randomly selected. Then, they investigated using Depression, Anxiety, Stress Questionnaire.

Results: The results revealed that, there was a significant negative correlation between stress, depression, anxiety with quality of life. There was also significant positive.. correlation between depression and anxiety. Stress was the best predictor of quality of life among other variables.

Conclusions: Our results are similar to those reported previously from other countries. The findings also indicate that stress is very important and should be consider for enhance the quality of life.

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P065

A novel oral medical nutrition formula (PLP10) for the treatment of relapsing-remitting multiple sclerosis: a randomized, double-blind, placebo-controlled proof-of-concept clinical trial

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Background: For many years, the role of polyunsaturated fatty acids (PUFA) in the pathophysiology and development of neurodegenerative diseases and specifically multiple sclerosis has been a subject of considerable discussion and research but without proof of efficacy. We aimed to assess whether our novel intervention, formulated based on systems medicine concept, comprising specific fatty acids and vitamins within a specific ratio, quantity, quality, and structural form reduce disease activity in patients with relapsing remitting multiple sclerosis who were either treated with disease modifying treatment (DMT-interferon or glatiramer acetate) or untreated.

Materials and methods: We contacted a 30-month randomized, double-blind, placebo-controlled, parallel design, phase II proof of concept clinical study at the Cyprus Institute of Neurology and Genetics (CING). An experienced neurologist, a registered clinical dietitian and a medical biochemist with specialties on lipidology and immunology, were the investigators involved in the trial. Of a total of 80 patients, 20 were randomly assigned to receive intervention A (docosahexaenoic acid (DHA)/eicosapentaenoic acid (EPA) (3:1 wt/wt) omega-3, linoleic acid (LA)/gamma (γ)-linolenic acid (GLA) (2:1 wt/wt) omega-6 fatty acids, omega-3/omega-6 (1:1 wt/wt), other specific PUFA, monounsaturated fatty acids (MUFA), minor quantity of specific saturated fatty acids (SFA), vitamin A and vitamin E), 20 to receive γ-tocopherol, intervention C, 20 to receive the combination of interventions A and C, intervention B (PLP10) and 20 to receive placebo, as an oral solution, once daily. The first six months were used as normalization period and considered as pre-entry period. The primary end point was the annualized relapse rate (ARR) and the key secondary end point was the time to disability progression at two years. This study is registered as an International Standard Randomized Controlled Trial, number ISRCTN87818535.

Results: The per protocol analysis showed that PLP10 reduced the annual relapse rate (ARR) by 70% ($p=0.003$), in relation to the baseline ARR and the placebo increased by 46% ($p=0.354$). During study, for the primary end point, PLP10 reduced the ARR by 58% (95% confidence interval 0.10 to 0.79, $p=0.016$) and for the secondary end point, significantly reduced the risk of sustained progression of disability by 86% over the two-year period (hazard ratio, 0.11; 95% confidence interval 0.01-0.97, $p=0.047$) versus placebo. The cumulative probability of progression on basis of survival analysis was 10% in the PLP10 group, and 70% in the placebo group. Proportionately more patients in the PLP10 group (71%) versus placebo group (20%) were free from new or enlarging T2-weighted lesions on brain magnetic resonance image (MRI) scans over the two-year study. No adverse events were reported. Interventions A and C showed no significant efficacy.

Conclusions: PLP10 treatment significantly reduced the ARR, and the risk of sustained disability progression without any adverse or significant side effects. This is the first clinical study of systems medicine approach medical nutrient formula that holds strong promise as an effective treatment for relapsing remitting multiple sclerosis.

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P066

Effects of acetaminophen on motor and sensory functions in adult rats after sciatic nerve crush: Preliminary data

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Background: Acetaminophen, also known as paracetamol, is one of the most widely used non-opioid treatments for pain. Anti-inflammatory, remyelinating and neuroprotective effects have been documented for acetaminophen. The most accepted theory is that of paracetamol's positive effects on the serotonergic descending inhibitory pathways, as well as its interactions with opioidergic systems, eicosanoid systems, and/or nitric oxide pathways. Various injuries and diseases of the central and peripheral nervous systems induce neuropathic pain, a chronic, debilitating condition. The peripheral axons, in contrast to the central nervous system (CNS) axons, have the noticeable ability to regenerate after injury. The purpose of this study was to determine if the administration of paracetamol in a single-dose, immediately after the crush of sciatic nerve would result in earlier nerve regeneration and motor and sensory rehabilitation.

Materials and methods: We evaluated a left sciatic nerve crush injury model. Adult Wistar albino rats were divided into two groups. The control group (n=7) did not receive any drug after the surgery. The treated group (n=7) received intraperitoneally a single dose of paracetamol (0.01 mmol/ml/kg), 8 hours after the surgery. The locomotor recovery was tested by the wide flat runway, the inclined plane runway and the grid walking test. The sensory function recovery was assessed by the nerve pinch test. The performance of the rats was tested one day before the surgery and on days 1st, 8th, 15th and 22nd after the sciatic nerve crush injury.

Results: The runway measurements showed a remarkable improvement of the treated group on 22nd day, close to the preoperative level. Moreover, on days 15th and 22nd the treated group presented a better performance with a lower number of footfalls on the grid. The pinch test indicated earlier signs of sensory recovery (8th day) of the treated group.

Conclusions: The present study suggests that acetaminophen may offer new strategies for the



treatment of peripheral nerve injury. Further investigation is in progress to explore the possible effects of the single-dose treatment in a longer observation period, as well as the possible effects of repeated acetaminophen administration pre- and/or postoperatively.

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P067

Autism and hearing loss

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Background: Autism is a neurodevelopmental disorder characterized by communication deficits, deterioration of social interaction and repetitive behaviors. The diagnosis is usually made between the ages of 1-3. The most common reason for admission is delay of speech.

Materials and methods: Case: K is a 4 years old boy. His mother said that he does not talk spontaneously and reciprocally, keeps eye contact for a short time, does not play with peers and has hand-flapping movements. He was born by cesarean section at full term as the first pregnancy of his mother who was at 24 years old. He had got phototherapy due to icterus. He has kept his head up when he was one year old, he has started to crawling when he was 1.5 years old. He started walking when he was 2 years old. He started to talk with single words by repeating his mother and father when he was three years old. He was cared by a caregiver for 10 months after caring by his grandmother and aunt. He had got special education from he was 6 months to 2 years old because of his mental-motor retardation. He was diagnosed with autistic disorder when he was 2 years old and continued to special education.

Results: When he was 3.5 years old, his teacher suspected that he was not hearing. He has undergone hearing examination. It was found that he had hearing loss alongside autism.

Conclusions: It is known that autistic children could have stringently hearing loss and deafness. It is important for clinicians to keep in mind and refer patients who diagnosed with autism for evaluation of hearing and comorbid hearing loss.

P068

Application of repetitive transcranial magnetic stimulation in a patient with postpartum, ajor depressionMurat Erdem¹, Süleyman Özselek¹, Abdülvahap Gazi Ünlü¹, Taner Öznur¹, Sarper Ercan²¹Department of Psychiatry, Gulhane Military Medical Faculty, Ankara, Turkey²Department of Psychiatry, Erzurum Military Hospital, Erzurum, Turkey

Background: Repetitive Transcranial Magnetic Stimulation (rTMS) is A non-invasive, biological treatment which is widely used in the treatment of psychiatric disorders in recent years, in particular in the treatment of Major Depression. It has become an alternative treatment for patients with depression in the postpartum period. We aimed to discuss the results of rTMS application in a patient with postpartum major depression.

Materials and methods: Case: 34 years-old women. She was admitted to our hospital with depressive symptoms after 2 months of delivering a baby. She did not have a history of psychiatric diagnosis. At the mental examination her affect was depressives, speech was slowed down, she had thoughts of inadequacy and worthlessness and slowed psychomotor activity. She did not have suicidal ideation. The score of Hamilton Depression Scale was 24. Because she was in the period of breast-feeding and did not accept pharmacologic treatment, rTMS was offered. Her informed consent was received. 20 sequences of rTMS were applied during 4 weeks (10Hz, 120% motor threshold, left dorsolateral prefrontal cortex).

Results: Subjective improvement were obtained after 2 weeks of treatment. She was reexamined after 2 weeks and the mental examination findings were found to be regressed. At the end of the treatment Hamilton Depression Scale score was 7.

Conclusions: The patient benefited significantly after the application of rTMS. rTMS may be treatment of choice in patient with postpartum major depression.

P069

The use of repetitive transcranial magnetic stimulation in the treatment of major depression and comorbid OCDMurat Erdem¹, Süleyman Özselek¹, Emre Aydemir¹, Taner Öznur¹, Barbaros Özdemir¹¹Department of Psychiatry, Gulhane Military Medical Faculty, Ankara, Turkey

Background: Repetitive Transcranial Magnetic Stimulation (rTMS) is a non-invasive, biological treatment. There are many studies in the literature about beneficial effect of rTMS for Major Depression. In addition, cortical stimulation for OCD shows different results depending on the region of application. Although succesful results were reported after dorsolateral prefrontal cortex (DLPFC) applications, the negative consequences are also found. Recently, studies indicate positive results in stimulation of the supplementary motor area or orbitofrontal cortex.

Materials and methods: Four cases who were admitted with depressive symptoms to outpatient clinic of Gulhane Military Medical Faculty, Department of Psychiatry with the diagnosis of OCD and comorbid Major Depression was evaluated. rTMS was applied without modification of current pharmacological treatment of patients. It was applied a total of 20 sessions, 5 days a week (10Hz, 120% motor threshold, left dorsolateral prefrontal cortex).

Results: At the end of 20 sessions of rTMS application, all of the patients indicated that com-

plaints decreased. The average of hamilton depression scale scores (45%) were also decreased ($p < 0.05$), but no significant change was seen in yale brown scales.

Conclusions: As a result, although the application of rTMS to the left DLPFC had a reducing effect on depressive symptoms, this was not true for the symptoms of OCD. Because of the small number of patients, more extensive research with a larger sample is needed in this regard.

P070

Effects of repetitive transcranial magnetic stimulation according to the gender as adjunctive treatment in patients with treatment-resistant depression

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Background: Almost half of patients with major depression do not respond to first initiated treatment. Treatment-resistant depression (TRD) is defined as the partial response or no response to the adequate treatment. There are studies showing improving in the symptoms with application of repetitive transcranial magnetic stimulation (rTMS) in patients with TDD. The aim of this study was to evaluate to effects of rTMS as an adjunctive treatment according to the genders in patients with TRD.

Materials and methods: Files of 22 TDD patients (11 female, 11 male) and treated with rTMS between 2009-2013 in Department of Psychiatry, Gulhane Military Medical Academy, Ankara, Turkey were evaluated retrospectively. The Hamilton depression rating scale (HAM-D) scores were compared at baseline and after 4 weeks of treatment.

Results: The average age was 38.6 (min: 31, max: 44) in women and 40 (min:32, max:46) in men. One man and 1 woman were evaluated as remission at fourth week. Four male and 3 female patients did not see benefit from rTMS and HAM-D scores did not change significantly. A partial response was observed in other patients. Mean HAM-D scores were decreased 13.3 ± 9.7 points in women and 7 ± 6.2 points in men.

Conclusions: in this study we concluded that TMS application at TDD patients as an adjunctive treatment was beneficial ($p < 0.001$) but not show a significant change by gender ($p > 0.05$). The lack of placebo group and limited sample size make the generalization of the results difficult.

P071

Compulsory treatment in involuntary hospitalization

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Background: Involuntary hospitalisation is considered to be a controversial issue that raises the risk of discrimination, stigmatization and violation of human rights. It is regulated by legislation that varies from one country to another. Rather frequently, the term compulsory treatment, which is defined as the administration of a rapid tranquiliser with or without the use of coercive measures, is not separated from the one of involuntary commitment. The performance of a literature search on this subject is important since in Greece approximately 50% of psychiatric

patients are committed involuntarily.

Materials and methods: A literature search was performed in the electronic database Pubmed using the following keywords: involuntary hospitalisation/ commitment, coerced hospitalisation/ commitment, commitment of mentally ill, compulsory treatment, forced medication. The findings are presented descriptively.

Results: Compulsory treatment is the most frequently used method of dealing with psychiatric emergencies, such as patient aggression, in several European countries, Australia and the USA. The majority of patients seems to favour the use of a pharmaceutical agent in the case of a future emergency, even though their attitude is affected by previous experiences. The use of means of compulsory treatment is associated with the diagnosis of schizophrenia as well as the severity of symptoms.

Conclusions: Involuntarily committed patients retain the right to be informed of the available treatment and its side-effects and, if possible, to participate in the therapeutic plan. A change towards this attitude has the potential benefit of decreasing the feeling of exclusion and promoting the therapeutic relationship.

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P072

Depressive symptomatology, self esteem and body image in women with polycystic ovary syndrome

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Background: In the current study we aimed to determine body image, self esteem and depressive symptomatology in women with PCOS and compare with healthy controls.

Materials and methods: This study was conducted among the patients with untreated PCOS who admitted to the Outpatient Clinic of Gynecology and Obstetrics. A total 83 consecutive women with PCOS met the criteria of present study were included in the study. Age matched healthy controls (n=64) were recruited from employees at Selçuk University Hospital. After socio-demographic characteristics of the participants were recorded, Body Image Scale, Rosenberg Self-Esteem Scale and Beck Depression Inventory were completed by the participants.

Results: Patients with PCOS and healthy controls did not differ in some sociodemographic variables, including age, education and economic status ($p > 0.05$). Previous psychiatric history was more prevalent among the PCOS group ($p < 0.05$). A clinically obese subject does not exist in both groups ($BMI \leq 25 \text{ kg/m}^2$). Body mass index values of the PCOS group were significantly higher than the controls ($p < 0.05$). Beck depression inventory scores were significantly higher in the PCOS group compared to the healthy controls ($p < 0.05$). There was no significant difference between the PCOS group and healthy controls for Body Image Scale (BIS) scores and Rosenberg



Self-Esteem Scale (RSES) scores ($p > 0.05$).

Conclusions: The present study suggests that PCOS seems to be associated with depressive symptomatology. Furthermore, rising BMI values of these women may be an indicator for the onset of PCOS. However, these results should be confirmed by prospective studies.

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P073

Post traumatic stress disorder prevalence and symptomatology among adult survivors a year after the Van-Erciş earthquake

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Background: A very strong damaging earthquake occurred in the Van province in eastern part of Turkey. As it is known to exposure to earthquake has been associated with psychological distress, in particular, the development of posttraumatic stress disorder (PTSD). Our study was planned to examine traumatic experiences victims who survived the 2011 Erciş-Van earthquake. The aims of this study were to estimate the prevalence of PTSD in this disaster. We compare our findings about the Van-Erciş earthquake to other earthquake studies that revealed in the past in Turkey.

Materials and methods: Using the method of self-report instrument for PTSD symptoms. 450 adults (272 male and 178 female) were randomly selected from severely affected areas of the earthquake. These people were interviewed at the 12 th month after the earthquake. The subjects were asked about the level of exposure during disaster.

A Turkish translation of the PTSD self-test of the Anxiety Disorder Association of America and socio-demographic test) were filled out by the subjects. The PTSD self-test is a checklist consisting of 17 items to which the subject replies "yes" or "no".

Results: In our study, the rate of PTSD was found 39% (57.7% male, 42.3% female) among the 450 subjects, 61% did not show symptoms of PTSD. When our findings was compared to the other studies, after a year, the rate of PTSD was high level in our study than the others (26.9%).

Conclusions: This result may occur from the eastern anatolia's difficult environmental structure. The climate in this area is very cold and living conditions are also hard. Although social supports

of people themselves in Van_Erciş area for the hard times are enough, living without home and with fear of possibility of a new earthquake may create symptoms of PTSD.

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P074**HTR1A genotype modulates working memory-related brain activity in healthy subjects**

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Background: The serotonin (5-HT) 1A receptor acts as a presynaptic somatodendritic autoreceptor in raphe cells and as a postsynaptic heteroreceptor. The autoreceptor regulates serotonergic projections from the dorsal raphe nuclei (DRN) to cortico-limbic areas via negative feedback inhibition. The (-1019)G allele of the functional single nucleotide polymorphism rs6295 in the promoter region of the 5-HT1A receptor gene (HTR1A) derepresses autoreceptor expression in the DRN and consequences in increased negative feedback inhibition on serotonergic transmission. Previous studies demonstrated, that HTR1A genetic variation modulates cortico-limbic areas as in psychiatric disorders and healthy subjects. Thus, we initiated a cross-sectional fMRI study with the goal to investigate the influence of rs6295 on activation of working memory networks in healthy subjects, while performing a working memory task.

Materials and methods: 118 healthy subjects (18- 45 yrs) without previous or current psychiatric or somatic illnesses were recruited at the outpatient unit at the Department for Psychiatry and Psychotherapy, Medical University of Vienna, Austria. All subjects underwent functional MRI scanning while performing the classical digit variant of the n-back task comprising two complexity conditions (0-back, 2-back). C(-1019)G genotyping resulted in 29 C/C, 59 C/G and 30 G/G allele carriers. Based on previous research indicating a dominant effect of the G allele, we compared C homozygotes with G carriers. Whole-brain false discovery rate, $q = 0.05$, was applied for multiple comparison correction.

Results: During performance of the more demanding 2-back task in comparison to the 0-back control task there was a significant decrease in activation of prefrontal areas, with peaks in the dorsolateral prefrontal cortex (DLPFC) and in posterior parietal regions in the G carrier group compared to C/C genotype subjects.

Conclusions: These results provide evidence for the modulation of cortical working memory-related brain regions by rs6295 genotype in healthy subjects while performing a working memory task.

P075

Social and reproductive lives of women with bipolar disorder: A descriptive study from Turkey

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Background: The aim of this study is to investigate the characteristics of marital life, fertility, and social life of the women with Bipolar Disorder (BD).

Materials and methods: The study was conducted in 5 different centers from 3 parts of the Turkey. A total of 231 women with the diagnosis of BD have been included in the study.

Results: The mean age at onset of BD was 24.22±7.55 years of age. Mean numbers of depressive, manic, and hypomanic episodes were 3.36±3.4, 3.75±3.6, and 1.68±2.0 respectively. Mean number of hospitalization was 3.43±3.8 where 92.3% (n=213) of the participants were hospitalized at least once. History of at least one suicide attempt was proclaimed by 32.5% (n=75) of the patients. Forty-two (18.2%) patients reported at least one mood episode during their pregnancy. Additionally, a puerperal episode was defined by 20.77% (n=48) of the patients. Frequency of the patients who work in a regular job was 19.1%. Marital status of the patients were as follows; unmarried in 23.3%, married in 51.1%, living with a partner without in 2.2%, divorced in 20.3%, and widowed in 2.6%. Mean numbers of pregnancy and children were 3.02±2.02 and 2.18±1.42 respectively. Menstrual abnormalities were reported by 51.5% of the patients. Only 28.6% of the participants acknowledged that their psychiatrists have provided information about contraception.

Conclusions: When its effects on social life and relationship with reproductive life were taken into account, BD harbors many specific conditions for female patients that should be investigated and kept in mind.

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P076

Risk assessment psychometric instruments: a necessity or luxury?

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Background: Risk, whether in the legal or psychiatric dimension of the term, has always constituted a social threat, and as such every advanced society has endeavoured to predict and address it. This role was mostly taken on by mental health scientists.

Particularly the assessment of risk of psychiatric patients has caused perpetual interest and much discussion.

Materials and methods: During the '70s and '80s, mental health professionals believed that they cannot predict violent behaviour accurately. This is no longer true.

Especially during the last 20 years, considerable progress has been made in the effort to systematize the prediction of risk. This has led to the development of structured assessment instruments, which can assess risk with considerable accuracy, while at the same allowing for a more methodical approach to decision making.

Results: However, it has been observed that they are rarely used. Why is this so? What are the possible consequences for the patients?

The presentation of the conclusions from the use, in our country too, of one of the most widely used risk assessment scales (HCR-20), will endeavour to provide answers to whichever objections and theoretical questions.

Conclusions: Both the HCR-20 and PCL: SV scales and their subscales are significant predictors of readmission, suicide attempts and violent behavior. A number of other variables were statistically related with failure of reintegration in the community.

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P077

The relationship between smoking and psychopathology of schizophrenia in the greek population

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Background: The frequency of smoking behaviors among patients suffering from schizophrenia is estimated to be two- to four-fold the frequency of such behaviors among the general population. Moreover, patients with schizophrenia are usually heavy smokers, have lower smoking cessation rates and suffer from significant smoking-related morbidity and premature mortality compared to non-schizophrenic individuals. The reasons for the widespread smoking behaviour seen in schizophrenia are not completely understood. The self-medication hypothesis has been suggested. According to this hypothesis, nicotine decreases the disorder's positive and/or negative symptoms, ameliorates cognitive deficits, reduces the extrapyramidal side effects of antipsychotic medication and alleviates depression and anxiety which are associated with schizophrenia. The aim of this research is to study the potential relationship between smoking and the type and severity of schizophrenia in the Greek population.

Materials and methods: A cross-sectional study was conducted. 80 inpatients diagnosed with schizophrenia took part in this study. PANSS (Positive and Negative Syndrome Scale) and FTND (Fagerstrom Test for Nicotine Dependence) were used for the assessment of schizophrenia psychopathology and nicotine dependence, respectively.

Results: 52% of participants were smokers. The statistical analysis showed a positive correlation between nicotine dependence and (i) severity of schizophrenia psychopathology ($p=0.05$) (ii) positive symptoms of the disorder ($p=0.025$), (iii) duration of illness ($p=0.001$) and (iv) number of hospitalizations for each patient ($p=0.02$).

Conclusions: It seems that there is a significant relationship between tobacco smoking and the severity and duration of schizophrenia, especially the paranoid type of the disorder. Neurobiological mechanisms could possibly underlie some of the findings and require further investigation.

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P078

Impulsivity in Bipolar and Substance Abuse Disorders

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Background: Bipolar disorder (BD) is associated with increased impulsivity, during manic and depressed episodes also impulsivity remains elevated during euthymic phases. Impulsivity is also a factor in the initiation and maintenance of substance use disorders. Impulsivity, which is prominent in both bipolar disorder and substance abuse, may contribute to the overlap between the two disorders. So we sought to investigate if there were any difference about impulsivity between bipolar and substance use disorder.

Materials and methods: Impulsivity was evaluated by the Barratt Impulsiveness Scale (BIS-11A) in 33 bipolar interepisode disorder male patients, 40 substance use disorder male patients. The BIS-11A mean scores for two groups were compared through the independent samples t test.

Results: There were no difference among the BD and substance use disorder on total and subscale attentional, motor impulsivity measures. Groups scored similarly. However, for male patients there were difference on the nonplanning subscale. Male BD patient group scored higher than the male substance use disorder patient group for nonplanning impulsivity.

Conclusions: Interepisode BD and substance use disorder patients have similar total impulsivity. Elevated levels of impulsivity is thought to be core features of both BD and substance disorders. On the nonplanning subscale male BD patients are more impulsive than male substance use disorder patients. There is little information about impulsivity in substance abuse and BD. So this findings should be explored and replicated in larger samples.

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P079

Preeclampsia as a possible etiology in postpartum psychosis: a case report

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Background: Postpartum psychosis (PP) is characterized by a rapid development of bizarre delusions, sleeplessness, affective symptoms, and disorganized behavior that jeopardize the safety of the newborn baby and the mother. Despite the risk factors identified, the pathogenesis of PP is unclear.

Materials and methods: Case: Mrs X is a 44 year old female who was experiencing her 6th pregnancy and who was in the 33rd week. The patient diagnosed with preeclampsia. Upon the

onset of loss of consciousness, she was immediately taken to emergency caesarian section. Because of the agitation that led to disorganized behaviors, immediately after preterm delivering, psychiatry consultation was accepted in our clinic. In her mental state examination, she wasn't oriented to time and person. Cooperation was difficult and her associations were scattered. She had visual and auditory hallucinations to harm herself and child. She exhibited disorganized behaviors. There was no known previous psychiatric history and family psychiatric history.

Results: Her auditory hallucination to harm herself and child continued since the first admission. After the approval of her husband we started ECT. After the first ECT, disorganized behaviors showed a marked improvement. Following the 2nd ECT, her auditory and visual hallucinations were resolved and she begun to self-care and her affect was euthymic. A total of 5 ECTs were administered.

Conclusions: We report a case which had an emergency cesarean section due to preeclampsia and developed postpartum psychosis. This case without a history of previous psychiatric disease was presented in contributing to our understanding of the etiology of PP.

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P080

Resisting symptoms in treatment - Resistant schizophrenia

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Background: Treatment-Resistant in schizophrenia is observed that % 15 - 20 of the cases. It is known that patients have to stay in hospital and severe and high dose medicine cause complication. This study aim is to determine the resisting symptoms in treatment resistant schizophrenia just before switching to clozapine treatment.

Materials and methods: Schizophrenia patients who taking 2 or more treatment trials of at least two groups of conventional antipsychotic at least 4-6 weeks, and no response to treatment, has been evaluated. Totally 53 cases, 33 male, 20 female were accepted. The average duration of illness in the male group 18 years, in the female group 14 years. SCID, Scales for the assessment of positive symptoms (SAPS) and scales for the assessment of negative symptoms (SANS) has been used.

Results: The most common treatment resistant symptom is determined as "not keeping on school or work" related with negative symptom. After that, the second most common resistant symptom "persecution delusion" and "auditory hallucination" at the same rate. Reference delusion, decreasing interests and activities, unchanging facial expression, deterioration in relations with friends, anhedonia, avolition, reduction in gestures follow it. Seven of the top ten resistant

symptoms related with negative symptoms, three of them are related with positive symptoms. **Conclusions:** In schizophrenia, dominance of positive symptoms in the clinical interest causes the neglect of negative symptoms. This study shows clinicians should not focus on only positive symptoms and ignore other important outcomes such as apathy, social withdrawal, quality of life in resistant schizophrenia.

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P081

A case of tardive dyskinesia due to quetiapine treatment and improvement with Clozapine

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Background: Tardive dyskinesia is a treatment resistant side effect that is usually caused by conventional neuroleptic drugs and characterized by involuntary movements at the lips, face, hands, arms and legs. Cases of tardive dyskinesia due to the use of quetiapine have previously been reported in the literature. Recent literature suggests that clozapine is effective in the treatment of tardive dyskinesia.

Materials and methods: Case: 48 year-old, female patient. He was followed up with a diagnosis of bipolar disorder for nearly 10 years, and was in remission for the last 3 years with a combination of lithium and quetiapine. He was admitted to outpatient clinic due to complaints of inability to sleep, increased energy and speech and hyperactivity. He was evaluated as in a hypomanic episode. At the same time, he sometimes had circular motion at his both arms that was previously considered as conversion disorder. Lithium level was found as 0,37. Controls were followed up weekly. After two weeks, the lithium level was 0.93 and clinical findings were partially remitted. The patient was followed up for 6 months and involuntary movement was increased in time. Together with neurological evaluation, these movements were considered as tardive dyskinesia.

Results: Quetiapine was switched with clozapine. One month later involuntary movements were improved.

Conclusions: Exclusion of other medical conditions should be put before the diagnosis of conversion. In our case, being elderly, female gender and having mood disorders puts the patient under risk of tardive dyskinesia.

P082

Severe akathisia associated with paliperidon palmitate treatment

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Background: Long-acting injectable second-generation antipsychotics provide constant medication in schizophrenia. Paliperidone (9-hydroxyrisperidone) is the active metabolite of risperidone, and paliperidone palmitate is long-acting injection form of paliperidone (1). There is not enough data about adverse effect of this medication. We present a case about severe akathisia after started with paliperidone treatment.

Materials and methods: Case

21 year old male patient who had a history of paranoid schizophrenia for last two years was hospitalized to psychiatry inpatient clinic, and paliperidon palmitate was started.

Results: First and second doses were applied 100 mg each. Although it was observed to the significantly relief on psychotic symptoms, severe akathisia symptoms was started about fifteen days after second injection. According UKU, akathisia score was 3 and there was not any other extrapyramidal system symptom. Lorazepam 3mg/d, and Propranolol 60 mg/d was started. Although his third injection was applied as 75 mg, akathisia had been continued. Paliperidon treatment was stopped and olanzapine 10 mg/d was started. With new treatment regime, his akathisia were recovered and he was discharged at the fifteenth date of Olanzapine treatment was started.

Conclusions: Akathisia is one of the most important extrapyramidal side effects related with D2 blockage and commonly occurs with first generation antipsychotics (2). The main feature of this adverse effect is the psychomotor restlessness and the inability to remain motionless, and it can impair quality of life. Compare to first generation, although second generation antipsychotics relatively safe for akathisia, it should be considered by clinicians.

Acknowledgements: Our presenting author is a member of Turkish Association for Psychopharmacology.

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P083

Family burden and global functioning of Greek patients with mental disorders

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Background: The care of a patient with a mental disorder elicits a variety of emotions in caregivers, who are primarily members of the immediate family. In the case of the Greek family, a main characteristic is the existence of very close and strong relationships between the family members. Caregivers often report high levels of burden related to caring for their family members [1]. The present study examines the relationship between the family burden of caregivers of persons with a mental disorder and the social, occupational, and daily functioning of the patients.

Materials and methods: The study sample consisted of 84 participants who had been hospitalized as inpatients in a psychiatric clinic of a General Hospital of Athens and had been diagnosed with a mental disorder according to ICD-10, as well as their main caregiver. Patients' global functioning was assessed by psychiatrists and psychologists using the Global Assessment of Functioning (GAF) Scale. Family burden was measured with the use of a 22-item self-report scale completed by the caregivers of these patients (ZARIT) [2].

Results: Correlation analysis showed that the caregivers of patients diagnosed with high global functioning display lower levels of perceived burden ($r=-.53$, $p<.001$). This result confirms existing literature on the family burden of patients with mental disorders [3].

Conclusions: From the results of the study is perceived relationship between disease severity, as expressed by the GAF scale, and family burden. Further studies are needed to better defining this relationship.

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P084

Effects of methylphenidate on smoking and alcohol use

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Background: Attention-deficit/hyperactivity disorder (ADHD) has significant medical, economic, and social consequences. These include cigarette smoking and alcohol abuse. Alcohol abuse and cigarette smoking are major public health concerns. We retrospectively investigated the



effect of methylphenidate on smoking and alcohol use in patients with ADHD.

Materials and methods: Patients who were previously diagnosed with ADHD according to the DSM-IV criteria and under treatment with methylphenidate were included. For each patient, the number of cigarettes per day and the number of standard drinks per week currently and prior to medication were explored. Medication type and doses were also recorded.

Results: 18 patients consented to participate. 13 (72.2%) of them were male. Their age was between 18 and 38 (mean=22.4, SD=6.0). 1 patient was taking short acting methylphenidate (Ritalin), 16 patients were taking extended release of methylphenidate (Concerta) and 1 patient was taking both of them currently. The length of their methylphenidate use was between 2-180 months (mean=46.6, SD=54.4). All patients reported that they were taking their medication regularly. Methylphenidate doses ranged between 30-72mg (mean=54.7, SD=15.2).

The mean number of cigarettes per day was 1.3 (SD=2.8) prior to medication and 2.8 (SD=6.7) currently. The mean number of standard drinks per week was 6.7 (SD=15.9) prior to medication and 0.4 (SD=0.9) currently. There was no statistically significant difference between these amounts for both cigarette and alcohol.

Conclusions: The effect of methylphenidate on smoking and alcohol use is still controversial. Hammerness et al (1) reported that well monitored stimulant treatment may reduce the risk for alcohol and substance use in adolescents with ADHD. However, according to the reports of Vansickel et al (2) and Rush et al (3), methylphenidate may increase cigarette smoking. Our study did not support any increase in cigarette smoking and alcohol use in ADHD patients treated with methylphenidate. The slight decrease of alcohol intake was related to the avoidance of interaction between alcohol and the medication.

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P085

Familial aspect to bipolar affective disorder and obsessive compulsive disorder comorbidity

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Background: Although obsessive compulsive disorder (OCD) is the most frequently encountered anxiety disorder in bipolar disorder (BD), there are still remain unknown about the relationships between the clinical features of BD and comorbid OCD. We presented two siblings who had BD and OCD comorbidity with the same clinical course.

Materials and methods: Case 1: 21 years old male patient was hospitalized with manic episodes. His first symptoms such as somatic and contamination obsessions had been started after a reconstruction surgery when he was 16. He had been treated with Sertraline 50 mg/d and Risperidone 2 mg/d for last one year. Six month ago Risperidone was stopped by patient. Shortly after, his obsession was restarted together with manic symptoms. In the hospitalization,

Sodium Valproate 1000mg/d and Risperidon 3mg/d was administered. Manic and OCD symptoms improved.

Results: Case 2: 24 years old male patient who had been hospitalized with manic episodes in 2009. His manic symptoms had been relieved with Lithium Carbonate 1500mg/d and Risperidone 3 mg/d. One year after, Risperidone treatment was stopped by patient, and shortly after, his manic symptoms were reoccurred and he had been hospitalized in 2010 again and treated with Valproic Acid 1000 mg/d and Risperidone 3 mg/d. Courses of his OCD was similar his brother, after a stressor factor contamination and obsessions and compulsions had begun and continued episodically since he was 17.

Conclusions: Comorbid OCD and BPD was associated with an earlier onset and more severe impairment. Antidepressant medication usage for OCD may confound the course of disorders. Atypical antipsychotic medications may protect to patients from manic episodes even in relatively lower doses. Further studies focus on clinical course and treatment options in comorbidity of BD and OCD are needed.

Acknowledgements: Our presenting author is a member of Turkish Association for Psychopharmacology.

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P086

COMT Val158Met genotype and mild stress interactively modulate hippocampal and prefrontal structure

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Background: Genetic variation and environmental factors interactively determine vulnerability to psychiatric disorders. A polymorphism in the dopamine-degrading gene COMT (Val158Met) has been linked to increased stress resilience, HPA axis activity and alterations of hippocampal and cortical structure. Since stress has been equally reported to affect brain anatomy, we hypothesized that mild stress and Val158Met interact on the brain systems level.

Materials and methods: 153 healthy subjects aged between 18 and 45 years without previous or current psychiatric or somatic illnesses were recruited at the Department for Psychiatry and Psychotherapy, Medical University of Vienna and the Department of Psychology, Dresden University of Technology. All subjects underwent structural MRI scanning and were asked to complete a life events questionnaire. Genotyping of Val158Met resulted in 30 Val/Val, 85 Val/Met and 38 Met/Met allele carriers. Freesurfer was used to derive segmentations of the hippocampus, its subfields and cortical surface models for cortical thickness assessment.

Results: We found a significant gene x environment interaction between Val158Met and level of mild stress resulting in a negative correlation between hippocampal volume and life events only in Met/Met carriers, while Val homozygotes exhibited a positive correlation. Analysis of hippocampal subfields revealed this interaction to be driven by right subiculum, CA4/dentate gyrus, CA2/3 and CA1. A similar interaction effect was found to impact cortical thickness of the bilateral superior frontal gyrus.

Conclusions: Our results provide evidence for an interaction between a genotype impacting dopamine signaling and perceived mild stress that results in alterations of the anatomy of brain regions previously implicated in stress vulnerability and cortisol effects. These findings not only provide a brain correlate for clinical reports of 158Met-driven susceptibility to stress-related psychiatric disorders, but also suggest that dopamine and cortisol effects are intricately intertwined.

P087

Age dependent reversal of COMT Val158Met influence on resting state connectivity in regions relevant for executive and cognitive functioning

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Background: Prefrontal extracellular dopamine levels are predominately terminated by catechol-O-methyltransferase (COMT) that shows a remarkable increase of enzymatic activity from the neonate to the adult. While numerous fMRI studies investigated Val158Met COMT in the context of task-dependent activation and functional connectivity, little is known with regard to resting state connectivity (RSC). Recent studies reported significantly increased RSC within the executive control network (ECN) and the left ventro-lateral prefrontal cortex (vlPFC). As the prefrontal dopamine system goes through remodeling until at least young adulthood in primates, we expect an interaction between age and those RSCs. In line with behavioral and clinical data, interconnectivity of major PFC fiber bundles has been described as being affected by COMT genotypes in interaction with age. Therefore, we hypothesized an age-dependent reversal of Val158Met COMT effects with respect to prefrontal RSCs.

Materials and methods: Imaging data and available COMT genotypes of 107 healthy young adults included in an imaging genetics protocol in Vienna, Austria, have been gender-matched to 107 randomly-drawn 14 year-olds with available COMT genotypes included in the IMAGEN project. We selected a seed in the default mode and ECN hub region of the anterior-medial PFC (amPFC) to calculate functional connectivity seed-to-voxel maps. To statistically model the expected age-dependent reversed dosing effect of COMT Val158Met groups, we tested for the interaction of age and genotype with respect to the covariate gender.

Results: We observed a significant age-dependent reversal of the influence of COMT Val158-Met on RSCs between the amPFC and the left vlPFC, left parahippocampal region, right ventral striatum, left precuneus, left dlPFC. Furthermore, we detected a trend-wise involvement of the right parahippocampal region.

Conclusions: Adult Val homozygous had a dose-dependent increased and adolescent Val homozygous a decreased connectivity for all reported regions as suggested by the hypothetical inverted U-shaped curve. Our findings support an age-dependent effect of COMT RSC between DMN and regions involved in cognitive processing. The observed interaction of age and genotype underscores the significant role of COMT on prefrontal cortical development.

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P088

Age of onset as a predictor for severity and course of MDD at the brain systems level

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Background: While altered activation within the working memory (WM) network has been repeatedly found in patients suffering from symptomatic Major Depressive Disorder (MDD) [1], neuroimaging studies in patients experiencing prolonged remission are sparse [2]. It is still unknown whether these alterations reflect a state-dependent phenomenon, which may stabilize beyond full remission and antidepressant maintenance treatment, or rather constitute a vulnerability factor increasing the risk of relapse. While important individual clinical characteristics such as age of onset has been shown to have a major impact on severity and course of MDD in previous clinical studies, neural correlates of these findings are lacking so far.

Materials and methods: We initiated a cross-sectional fMRI study with the goal to investigate if the WM function and associated neural activation differ between fully remitted MDD (rMDD) patients without any antidepressant maintenance treatment, experiencing either adolescent- (n=42) or young adult-onset MDD (n=36) as compared to controls without any life-time history of psychiatric illness (n=42). The classical digit variant of the n-back task [3] has been employed in all three groups, which were age- and sex-matched according to the optimal full matching algorithm. Group comparisons were implemented with a mixed-effects meta-analysis approach based on beta-coefficients and t-values of the 2B minus 0B contrast.

Results: While no significant group differences were revealed for both accuracy ($p = 0.140$) and response latency ($p = 0.593$), a large-scaled activation of task-negative (TN) regions were detected in long-term drug-free patients experiencing adolescent-onset MDD as compared to controls in bilateral anterior and posterior cingulate areas as well as in adjacent parietal, temporal and insular regions. The punctum maximum was located in the anterior cingulate cortex ($p_{corrected} < 0.01$). Relative activation increases in TN networks were also present, albeit less pronounced, in young adult-onset rMDD patients as compared to controls.

Conclusions: The present findings point towards persisting alterations within networks, which have been related to clinical symptoms such as rumination and self-reflection [4] even after a full recovery of MDD and withdrawal of antidepressant treatment, and might further reflect a more chronic and malignant course of adolescent-onset MDD from a neurobiological perspective.

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P089

Comparing Alzheimer patients' and children's performance in Draw-a-Man Test

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Background: The present study aimed to compare Alzheimer patients' and 4-10 years old children's drawing performance in the Draw-a-Man Test. Taking into account that drawing is currently considered as a cognitive process and that Alzheimer disease manifests a severe cognitive impairment, it was hypothesized that AD patients would present a similar performance to that of younger children.

Materials and methods: The sample consisted of 10 AD patients and 10 adult controls, as well as of 40 children, divided into 4 age groups (4-, 6-, 8-, and 10-years old). Participants were asked to draw from memory and with no time limits the best picture of a man they could. Drawings were scored following manual instructions of the Goodenough-Harris test and a score for each participant was calculated based on the total number of details included in his/her drawing.

Results: Data analysis showed an improvement with age in children's drawing performance, while controls' drawing scores were similar to those obtained by older children. In contrary, Alzheimer patients' drawings differ significantly from those produced by all groups, except those created by 4-year olds. More specifically, AD patients' drawings were simplified and included few details, presenting thus similar mean scores with the youngest age group.

Conclusions: The observed regression in AD patients' drawing performance is discussed in relation to the cognitive deficits accompanying the disease.

P090

A pilot study of Arizona Battery for Communication disorders of Dementia. Validation in normal Greek population.

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Background: Present pilot study was the translation and validation of Arizona battery of Communication Disorders of Dementia (A.B.C.D.) in Greek language. The test was originally created by Bayles & Tomoeda in 1993.

Materials and methods: The commercial version of the test was translated in Greek language by a linguist, three speech language therapists/pathologists and 2 native speakers of Greek language, having proficiency in English, and two native speakers of English having proficiency in Greek. In this research 240 participants recruited (m: 30, f: 30), divided in four age subgroups. The sample was independent from origin and socio-economic situations and had no other conditions that could influence the test results.

Results: Statistical analysis of the data revealed that the results obtained are generally consistent. No statistically significant differences were found according to age or sex in all subgroups. Also reliability and validity test were contacted and showed good criterion (α - Chronbach. 766).

Conclusions: The test appears to be sensitive for Greek population and presents satisfactory criterion. Also the test showed good validity, as the participants assessed demonstrated clear patterns of responses, but further changes must be done in many subtests for the Greek version in order to be used in clinical and research settings.

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P091

Handedness and dyslexia in greek adolescents: an epidemiological study

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Background: Research results regarding the association of handedness with dyslexia are am-

ambiguous at best and indicate a need for further clarification. The present study used a reliable and well-validated instrument to evaluate handedness aiming to investigate the relationship of handedness and dyslexia in Greek adolescents.

Materials and methods: 447 secondary school students (Mean age 13.38, SD = 1.47) who attended mainstream schools participated in this study. All students completed the Edinburgh Handedness Inventory (EHI) and were divided in five groups as pure right-handers (an EHI score +90 to +100), moderate right-handers (an EHI +50 to +89), mixed-handers (an EHI -49 to +49), moderate left-handers (an EHI -50 to -89) and pure left-handers (an EHI -90 to -100). Moreover, participants had to indicate if they had received a statement of dyslexia following assessment at a public or private Centre of Diagnosis, among those included in the lists of the Ministry of Education for the assessment of specific learning difficulties.

Results: The prevalence of dyslexia in this study was estimated at 5.8%, a finding consistent with the data from other countries with “pure” orthographies. Statistical analysis did not reveal significant differences in the prevalence of dyslexia between handedness groups. 58.4% of typical readers and 50% of dyslexics were pure right-handers, 26.4% of typical readers and 38.5% of dyslexics were moderate right-handers, 7.6% of typical readers and 3.8% of dyslexics were mixed-handers, 4.3% of typical readers and 3.8% of dyslexics were moderate left-handers, and pure left-handers were the 3.3% of typical readers and 3.8% of dyslexics.

Conclusions: Our findings are not in accordance with studies that reported a relationship between hand-preference and dyslexia, and do not support studies that indicated that mixed-handers have significantly higher prevalence of dyslexia, than individuals who have clear left or right hand preferences. The results of this study lead us to the conclusion that the typical dyslexic adolescent is mainly right-handed.

P092

Effect of untreated psychotic period on cognitive functions in schizophrenia

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Background: In early detection studies, the period of untreated psychosis (DUP) in first episode psychosis is emerging as an important parameter. According to results of two recent meta analysis, long-term untreated psychosis is a risk factor for poor response to treatment and prognosis of the disease [1,2].

The purpose of this study is to identify duration of untreated psychosis in patients with first episode schizophrenia and to determine the effects of this process on the cognitive functions and the course of schizophrenia.

Materials and methods: Thirty-six patients with the diagnosis of psychotic disorder according to DSM-IV criteria were included in the present study. Patient group were divided into two groups according to having longer untreated psychotic periods longer than 12 weeks and the shorter ones. 20 schizophrenic patients having a treatment -which are similar in terms of duration of disease- were included in this study as control group. At baseline, 2nd and 6th week all the participants were performed Positive and Negative Symptom Scale (PANSS), Brief Psychiatric Rating Scale (BPRS), Clinical Global Impression (CGI) and Global Assessment of Functioning (GAF) to assess the clinical status and they were performed Brief Assessment of Cognition in Schizophrenia (BACS) to assess cognitive functions.

Results: All three groups were similar in ages, educational level, gender and marital status. BACS scores of those with duration of untreated psychotic periods longer than 12 weeks were significantly lower than the other groups.

Conclusions: Cognitive deterioration in schizophrenia determines the patient's social adequacy [3]. Therefore, treatments for the correction of cognitive impairment is of great importance. Although psychotic symptoms are variable over the course of the disease, cognitive impairments shows continuity[4]. The delay in initiation of treatment leads to further losses in cognitive functions.

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P093

Does olfactory system mediate depressive like behaviors and memory deficits via Dentate Gyrus Degeneration?

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Background: The olfactory bulbectomy (OBX) is an animal model of depression, characterized by the bilateral destruction of the olfactory bulbs (OBs), produce behavioral, neurochemical, and neuroendocrinological changes that resemble some of the symptoms observed in depressed patients (1). However, there is still remain unknown the affected brain regions, and mechanisms of depression created by OBX and the way of olfactory lesions leads to memory loss and depressive like behaviors (2). Hippocampus and dentate gyrus have afferents connections from olfactory system. Dentate gyrus has an important role in spatial memory, object recognition and neurogenesis. Also, data about antidepressant treatments increase neurogenesis in the dentate gyrus (DG) of humans (3) makes stronger to the relationship between dentate gyrus and MDD. We questioned that whether the OBX induces neurodegenerative changes in dentate gyrus and mediates the depressive like behaviors.

Materials and methods: We used a sample of 32 rats (16 female and 16 male) for this study. 5 male and 5 female rats were taken as the control group. The remaining 22 rats constituted the study group, and frontal burr holes were performed of these rats. Crushing olfactory bulb lesion was applied to 6 male and 6 female rats and no procedure was performed on the remaining 10 rats. Histopathological examination of Olfactory bulbs and dentate gyrus was performed by using stereological methods.

Results: All of the animals in the study groups demonstrated eating disorders, weight loss, motor retardation, sexual regression, reduced social interaction. In histopathological examination, abundant neuronal degeneration and apoptosis were detected in the dentate gyrus in the study groups. Normal neuron density of dentate gyrus was estimated as $134.500 \pm 10.350/\text{mm}^3$ and apoptotic neuron density was estimated as $120 \pm 21/\text{mm}^3$ in normal animals ($p > 0.05$). The degenerated/apoptotic neuron density was $12.3200 \pm 2250/\text{mm}^3$ in crushed ($p < 0.005$) and $43.450 \pm 9250/\text{mm}^3$ in cauterized animals ($p < 0.0001$). We detected a relationship between olfactory bulb lesion and apoptotic neuron density of the dentate gyrus in rats with olfactory ablation.

Conclusions: Olfactory system might cause neuropsychiatric disorders and memory deficits by affecting neuronal degeneration in various regions of central nervous system. Our findings suggest that the OBX mediates neurodegeneration in dentate gyrus which is most probably responsible hippocampal structure for memory deficits in depression.

Acknowledgements: The presenting author is a member of Turkish Association for Psychopharmacology.

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P094

Predictors of antipsychotic polypharmacy in chronic schizophrenia

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Background: Antipsychotic polypharmacy (administration of two or more antipsychotics) is a common, albeit not supported by existing evidence, practice in schizophrenia, while its use has been related to several demographic and clinical factors.

Materials and methods: Based on the current literature, we investigated the predictive role of age, gender, symptoms (Positive and Negative Syndrome Scale-PANSS total score) and antiparkinsonian use on antipsychotic polypharmacy receipt in patients with schizophrenia from one Psychiatric Department of the Psychiatric Hospital of Attica which included one acute ward and other residential facilities. We conducted logistic regression analysis in order to investigate how well the above factors explained the odds of receiving antipsychotic polypharmacy.

Results: 120 patients (76 males and 44 females) with chronic schizophrenia with a mean age of 42.48 years ($SD=9.93$) and a PANSS total score of 76.85 ($SD=20.44$) were recruited. 61 patients were receiving antipsychotic polypharmacy and 59 were on monotherapy. 70 patients were administered antiparkinsonian medication and 50 were not. The regression model was highly significant ($\text{chi-square}=22.811$, $df=4$, $p < 0.001$) and explained 17.7% of the variance of antip-

psychotic polypharmacy receipt. Antiparkinsonian use and male gender were significantly and positively associated with antipsychotic polypharmacy ($B=1.861$, $SE=0.463$, $Wald=16.175$, $df=1$, $p<0.001$ and $B=1.058$, $SE=0.457$, $Wald=5.35$, $df=1$, $p=0.021$, respectively). However, age and symptoms were not significant predictors of antipsychotic polypharmacy.

Conclusions: The use of antiparkinsonian medications and male gender were associated with increased odds of receiving antipsychotic polypharmacy in chronic schizophrenia. In contrast with previous studies, age and symptoms' levels failed to predict the use of polypharmacy.

P095

Decreased ejaculate related to reboxetine usage

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Background: Sexual function disorders can be seen in both depression and as a result of the antidepressants used for the treatment of depression. We present a case regarding a patient who had a decrease in ejaculate volume possibly due to Reboxetine use.

Materials and methods: A twenty-seven year-old, single male employed as a clerk received a diagnosis for depression 6 months ago and was started Reboxetine 4mg per day and the dosage was gradually increased to 8 mg per day. On admission, patient did not report any sexual dysfunction. He indicated experiencing ejaculation regularly via masturbation or with his sexual partner 2-3 times a week.

Results: After the Reboxetine dosage was increased to 8 mg per day, patient declared no decrease in sexual desire but the volume of his ejaculate had severely decreased. Patient was referred to the Urology clinic for testing. Hormone analysis, semen analysis, semen leukocyte count and testicular ultrasonography were run. Low-volume ejaculate (<1.5 ml) were detected. Approximately 3 weeks after the cessation of Reboxetine, patient said that his ejaculate volume had increased. Repeated semen analysis results were found to be 3 ml (normal range 2-6 ml).

Conclusions: Decrease in sexual desire, inhibition of orgasm, erectile dysfunction possibly related to antidepressant drugs, may lead to disruption in treatment compliance. Dysfunctions of ejaculation are defined as premature ejaculation, retrograde ejaculation, painful ejaculation, ejaculatory anhedonia, and ejaculatory duct obstruction. According to literature, Reboxetine is known as a drug rarely causing sexual side effects. However, there is some literature on case reports of patients reporting erectile dysfunction, spontaneous ejaculation and painful ejaculation probably due to known Reboxetine usage (7,8). As a result, the possibility of decreased ejaculate volume should be kept in mind during Reboxetine use.

Acknowledgements: Our presenting author is a member of Turkish Association for Psychopharmacology

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P096

Young patient with delirium after myocardial infarction

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Background: Delirium, which remains etiologically unexplained, is significantly related with neuropsychiatric morbidity, current treatments and medical conditions of hospitalized patients in hospitals, especially among geriatric patients. Delirium, reported frequently in general hospitals may be fatal if not diagnosed and treated properly and may lead to prolonged hospitalization. Delirium after myocard infarction (MI) has been reported more frequently in the elderly. Generally MI is not frequent in young ages.

Materials and methods: In our case, we present a young patient with delirium after myocardial infarction. A 25 year-old-woman was brought to emergency department due to MI. Coronary artery angiography revealed no pathology. Patient was observed in the intensive care unit. In her history, she had mitral valve replacement surgery for severe mitral regurgitation when she was 20. At fifteenth day of hospitalization, confusion, disorientation, introversion, speech scarcity, lethargy, attention and memory deficits, depressive symptoms were observed. Then she was diagnosed as hypoactive delirium according to DSM IV-TR.

Results: In cell blood count, anemia was detected (9.8 g/dL). Other laboratory test including serum electrolytes levels, kidney and liver function tests revealed no pathology. Her treatment was designed as haloperidol 2.5 mg/day and a unit of erythrocyte suspension were given. After five day treatment with haloperidol her symptoms improved.

Conclusions: Depressive symptoms, apathy and mutism might be more remarkable in some patients. Literature indicates that the most common causes of consultation requests for delirium patients are; changes in the level of consciousness, impairment of memory, attention and perception, sleeplessness, and agitation. Higher number of consultations is requested for hyperactive delirium patients engaging in disturbing behavior in the clinic. Generally no sufficient number of consultations is requested for cases with hypoactive delirium characterized by quiet, depressive symptoms. In conclusion, in younger patients, delirium may be seen. Hypoactive delirium cases may be missed easily. In our patient, the young age of the patient might be a confusing factor for delirium pathology.

Acknowledgements: Our presenting author is a member of Turkish Association for Psychopharmacology.

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P097

The Affective and Emotional Composite Temperament model and scale: Psychometric analysis including Anxiety and Instability subscales

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Background: The Affective and Emotional Composite Temperament model (AFECT) integrates specific temperament dimensions - emotional traits - and synthetic constructs - affective types - in a single model, with clinical, neurobiological, and treatment implications for psychiatric disorders. Originally, the AFECT model designed seven traits (Inhibition, Volition, Anger, Desire, Sensitivity, Control and Coping), validated using the Affective and Emotional Composite Temperament Scale (AFECTS). We have included two further traits of Anxiety and Instability. The current study aimed to validate psychometrically this expanded version of the AFECT model.

Materials and methods: Exploratory structural equation modeling and internal consistency analyses were used to assess the factor structure and reliability of AFECTS in a sample of 2947 participants (32.3% males, 29.2 ± 9.33 years old) that responded online the AFECTS. Factor solutions ranging from 8 to 10 factors were examined and loadings were considered interpretable if they exceeded the value of 0.32 (10% of common variance accounted for).

Results: Based on multiple goodness of fit indicators (SRMR = 0.018; CFI = 0.95; TLI = 0.92; RMSEA = 0.038, 90% CI = 0.037-0.039), the purported 9-factor structure was corroborated for AFECTS item set. High internal consistency coefficients was encountered for Volition, Anger, Sensitivity, Coping, Control, Anxiety and Instability showed high ($0.86 \leq \alpha \leq 0.9$) and moderate ones for Inhibition (0.76) and Desire (0.79).

Conclusions: This expanded version of the AFECT scale shows appropriate psychometric indicators of construct validity and provides an integrated and comprehensive framework of temperament as a self-regulated system with conceptual and practical implications for mental health, psychiatric disorders and their treatment.

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P098

A model for comprehensive geropsychiatric diagnosis and treatment

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Background: Elder geropsychiatric assessment is complex and requires a comprehensive approach to diagnosis that can reveal active current pathologies. A comprehensive evaluation requires a multidisciplinary neuropsychiatric approach. This includes detailed behavioral neuro-



logical and geropsychiatric analysis. This presentation will illustrate a schematic model of comprehensive neuropsychiatric evaluation and care.

Materials and methods: The team model formulation is lead by a neurogeropsychiatrist. Team constituents and components include neuropsychology, occupational therapy cognitive dementia evaluation, geropsychiatric nursing, medical internist consultation, imaging technologies, activity therapists, social work and physicians and medical students trainees. The physician team leads the process with the initial assessment and oversees further assessment as indicated. Psychiatric acute disorders are ascertained and stabilized. This is followed by neuropsychiatric assessment of residual symptomatology indicative of limitations of independent functioning and/ or refractory features which may be reflective of an underlying neurodegeneration. At this point occupational therapy neuropsychiatric screening, neuropsychological assessment, nursing neuropsychiatric assessment and further serial neuropsychiatric examinations are performed. These are integrated with diagnostic brain MRI/CT studies whenever possible. When these studies are relatively inconclusive or ambiguous further studies with brain PET are done. EEG analysis may also be performed to clarify diagnosis and identify encephalopathy. The physician team in addition to considering the radiological or neurological official readings directly interprets these studies. There are serial team meetings to bring a multidisciplinary thought process to the diagnostic and treatment formulation. Integrated with this process is family or support system work as an essential component to the comprehensive evaluation as well as the formulation of the optimal feasible treatment care management. Family work is conducted through all phases of the evaluation. Integration of the community care system is also woven into the evaluation and formulation of the optimal feasible care system. Family and community care system are necessary to the historic functional psychiatric assessment, current state and feasible systems of management going forward. The neuropsychiatric analysis is fundamental to the proper evaluation and final design of the community family care system formulation. At all times the patient is the centerpiece of this evaluation.

Results: Using this integrated model results in a care approach that is evidence- based and personalized for patient and family unique circumstances. Neuropsychopharmacological treatment is based on the optimal evidence base, leverages a best compromise of benefit versus risk, and is implemented with full transparency to patient and support systems.

P099

Clinical (psychopathological) predictors of indirect self-destructiveness in patients with schizophrenia

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Background: Behaviours yielding harm to the individual are generally being called self-destructive behaviours. From some time are being distinguished direct/acute and indirect/chronic self-destructiveness. Indirect self-destructive behaviours occur not only among healthy people (by most of the researches covered), but also in the case of mentally ill persons, in the scope of what researches lack.

The aim of this study is to explore the clinical (psychopathological) predictors of indirect self-

destructiveness in patients with schizophrenia.

Materials and methods: Research was conducted among 135 patients suffering from paranoid schizophrenia (according to ICD-10), average age: 38.29 (19-59). To assess indirect self-destructiveness the Polish version of "Chronic Self-Destructiveness Scale" (CS-DS) was applied, and to examine the psychopathological characteristics the Polish version of "Minnesota Multiphasic Personality Inventory" (MMPI) was used. Correlation and regression analyses were performed.

Results: There are many statistically significant correlations, from among the strongest association is between indirect self-destructiveness (CS-DS) and schizophrenia (Sc) and paranoia (Pa) scales (0.518 and 0.434, respectively). Significant predictors were found to be Schizophrenia (Sc; R: 0.533; b: 0.409), Lack of Ego Mastery, Conative (Sc2b; R: 0.629; b: 0.629) and Persecutory Ideas (Pa1; R: 0.504; b: 0.332).

Conclusions: The schizophrenic disorders are a predictor explaining the indirect self-destructiveness syndrome in these patients. In therapeutic work should be included and this aspect of the psycho(patho)logical functioning, i.e. indirect self-destructiveness, which is strongly associated with the schizophrenic and paranoid symptoms/disorders.

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P100

Inductive effects of Anti-Epileptic drug on gingival fibroblasts of child and adult

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Background: It is estimated that about 30 to 50% of patients taking Phenytoin develop significant gingival alternations especially in buccal anterior part of oral cavity. Due to lack of enough information regarding the background mechanism of Phenytoin effect especially in synthesis of inflammatory mediators, this study was done to compare it in different ages.

Materials and methods: Samples were collected from biopsy of a healthy gingival of four adults in 35-42 years old through crown lengthening surgery and four children in 4-11 years old through impact tooth surgery, after local anesthesia and from the keratinized soft tissues around the teeth. Gingival biopsies were transferred to a medium which containing DMEM and cultured on specific plates 25 cm² and put on incubator containing CO₂ with temperature of 37°C. Supernatant of culture medium of test and control sinks were collected by sampler and concentration of IL1 β , PGE₂, IL6, TGF β , TNF-alpha and IL8 were analyzed by ELISA.

Results: Different proliferation rate of Phenytoin induced gingival fibroblasts in adults (0.073 \pm 0.177) as compared to children (0.056 \pm 0.028) was not significant. Production of PGE₂, TGF β and IL6 by Phenytoin induced gingival fibroblasts in children was increased as compared to adults ($p < 0.05$). Production of IL8 by Phenytoin induced gingival fibroblasts in children was decreased compared to adults, this difference was statistically significant ($P = 0.02$).

Conclusions: Phenytoin induced gingival fibroblasts of children produce more amounts of IL1 β , PGE₂, IL6, TGF β and IL8 as compared to adults' fibroblasts. More Comprehensive studies with well-documented designs using other methods are recommended to verify these results.

Acknowledgements: We should thank to research council of SBMU.

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P101

Common mental disorders and use of mental health services in the general population in Greece

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Background: General population surveys of the prevalence of common mental disorders are necessary for the organization of effective mental health services. Epidemiological studies are useful for the more objective assessment of the mental health needs of the population.

Materials and methods: Aim of this study is to present data on the pattern and correlates of 12-month use of services by persons with common mental disorders from the recently completed general population survey of psychiatric morbidity in Greece. The sample (n=4894; multistage stratified random sample) was representative for the Greek population aged 18-70. Common mental disorders were assessed according to the ICD-10 criteria with the revised Clinical Interview Schedule (CIS-R), conducted by trained lay interviewers.

Results: 73,9% of participants with at least one common mental disorder (CMD) do not receive any treatment for their psychological health, 52% have never spoken to the family physician and 73.3% has not spoken to a mental health professional in the past year. The disorder associated with the most frequent use of general health services for any reason (>4 visits to any physician in the past year) was depression (43.7%). Overall, 46.5% of all participants who meet the criteria for a CMD had not spoken to a doctor or mental health professional, with men showing significantly higher rates of no use compared to women (54.6% vs 41.5%).

Conclusions: These findings can help in the better organization of services with the aim to improve prevention and treatment of common mental disorders in Greece, especially in a time of economic hardship.

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P102

Auditory Processing Disorder, ADHD & Phonological disorder in a clinical case

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Background: ADHD and phonological disorder should be differentiated from Auditory Processing Disorder (APD). Attention may interfere with diagnosis of APD. Deficits in phonological acquisition have been linked with auditory processing deficits with a marked effect on temporal processing. This is a study showing the auditory processing abilities of a child diagnosed originally with a phonological disorder and comorbid ADHD. Aim: Case presentation of a child diagnosed with a phonological disorder and comorbid ADHD with elements rising suspicion for Auditory Processing Disorder (APD).

Materials and methods: Detailed medical and developmental history of the case is presented together with aspects from his response to speech pathology management that point towards APD. Auditory processing abilities are compared with visual perception in general and visual memory.

Results: Deficits of auditory processing are described and compared to visual processing abilities. All elements of visual perception were better than expected given his age. Visual discrimination, visual memory, visual spatial relationships, visual form constancy, visual sequential memory, visual figure ground and visual closure were all better in performance than his chronological age. Phonological awareness was a real issue and speech pathology management provided slow improvement following hard work and showed difficulty in consolidating.

Conclusions: This case illustrates the need for clinicians to be aware of referring for auditory processing evaluation when faced with a child diagnosed with a phonological disorder and/or ADHD.

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P103

Enhanced visual perceptual skills in males diagnosed with Central Auditory Processing Disorder

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Background: There is a gender difference documented in children diagnosed with Central Auditory Processing Disorder (CAPD), as is the case in most developmental disorders. Boys are more often showing signs of auditory processing deficits and more often diagnosed with the disorder. Debate exists as to the effectiveness of the diagnostic approach for CAPD concerning the existence of global deficits not purely focusing on the auditory modality.

Materials and methods: Four male cases of Central Auditory Processing Disorder are presented. They have been diagnosed based on a vastly non-verbal psychoacoustic battery with the addition of a dichotic digits test and a speech in babble one. Their chronological ages range between 7 years & 6 months to 12 years & 8 months. All of them were found to be having deficits in one or more elements of auditory processing. They were examined using the Test of Visual Perceptual Skills to test for the global deficits hypothesis.

Results: All children were showing visual perceptual skills better than expected based on their chronological age. Better visual skills in these children with CAPD were ranging from 3 months to 3 years & 3 months. These children were showing improved visual perceptual skills pointing to a higher developmental age.

Conclusions: The enhanced visual perceptual skills found in male subjects with CAPD do not correspond with the global deficits hypothesis and may be interpreted as a compensation of their reduced auditory processing skills.

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P104

In vitro genotoxicity of agomelatine

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Background: Agomelatine, a melatonergic agonist and 5-HT_{2C} antagonist is a prescription drug approved for the treatment of major depressive disorder. Furthermore, it increases noradrenaline and dopamine release specifically in the frontal cortex and has no influence on the extracellular levels of serotonin. Agomelatine appears to improve sleep quality, with no reported daytime drowsiness.

The present study aimed to investigate the in vitro effect of agomelatine on human genetic material, by estimating sensitive cytogenetic indices because the cytogenetic behavior of agomelatine has not been studied.

Materials and methods: SCEs (Sister Chromatid Exchanges) are considered as one of the most sensitive markers of genotoxicity, whereas PRI (Proliferation Rate Index) is one of the most reliable markers of cytostatic activity and MI (Mitotic Index) shows precisely the ability of the cell to proliferate. Five agomelatine solutions of the following concentrations were prepared: A=2,5µg/ml, B=5µg/ml, C=10µg/ml, D=15µg/ml and E=20µg/ml. The concentrations ranging from B to C are the ones more commonly used in clinical practice. The solutions were added to cultures of peripheral blood lymphocytes taken from three young healthy donors. After 72 hours of incubation with the appropriate technique the cultured lymphocytes were plated on glass slides, stained with the Fluorescence plus Giemsa method and the above indices were estimated with the optical microscope.

Results: The analysis of the results revealed the following statistically significant ($p < 0.05$) effects of agomelatine: a) a dose-dependent increase of SCEs was induced by concentrations B and E, though concentration A diminished (not statistically significant) them. b) a significant reduction of PRI and of MI was caused by concentrations A, B and E while concentrations C and D brought an upward trend in to those two markers. Furthermore, a correlation was observed between a) the magnitude of the SCE induction and the PRI alterations, b) the magnitude of the MI alterations and the SCE induction and c) the magnitude of PRI alterations and MI alterations.

Conclusions: Therapeutic doses of agomelatine exhibited dose-dependent cytogenetic activity in vitro, increasing SCE frequencies. Interestingly, PRI and MI levels at low therapeutic doses were diminished and increased in high therapeutic doses in normal human lymphocyte cultures. In addition, the variation of the magnitude of MI alterations seems to be directly related to both the variation of PRI values and the increase of SCE frequencies, which needs further investigation. This may demonstrate additional information about the mechanism of action of the drug. Considering that the use of agomelatine is rapidly increased as it tested for fibromyalgia and for generalized anxiety disorder, further studies in other cell lines and in vivo experimental settings are needed in order to evaluate its effect on genetic material.

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P105

Fine brain structures alterations in patients suffering from major depressive disorder

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Background: Advanced Magnetic Resonance Imaging (MRI) techniques as diffusion tensor imaging (DTI) is an imaging method that provides information regarding the microstructure of white matter tracts. The purpose of our still ongoing study is to evaluate the role of DTI in identification of white matter microstructural abnormality through the course of a depressive illness [1].

Materials and methods: Fifteen depressive patients and twenty-two aged and sex matched controls were included in our study. Region of interest analysis was performed and measurements were taken at the cingular cortex, the corpus callosum, the posterior limb of the internal capsule, the parahippocampal gyrus and the frontal white matter. Fractional anisotropy and mean diffusivity were recorded. Statistical analysis was performed.

Results: Fractional Anisotropy (FA) measurements were lower in patients compared to controls, showing statistical intention at the anterior part of the cingulum and the corpus callosum. Statistical significance will be estimated when larger number of patients will be included.

Conclusions: DTI is an imaging modality that may provide alterations of white matter microstructure and therefore contribute in the identification of such patients. Decreased FA measurements at the anterior cingulum may be suggestive of major depressive disorder. Our imaging findings will be correlated with clinical subtypes (cognitive, somatic, physical, psychotic symptoms), psychosocial factors as well as disease progression.

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P106

The relationship between cultural intelligence and cognitive intelligence with coping styles (problem-centered and emotion-centered) among high school teachers

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Background: Stress is still regarded as a major psychological phenomenon, especially among teachers. To deal with the stress, each one uses particular styles. Special personality factors

influence on the choice of coping strategies, causing people use different strategies to cope with stress. The aim of this study is to determine the relationship between cultural intelligence and cognitive intelligence with coping styles (problem-centered and emotion-centered) among high school teachers.

Materials and methods: The subjects were 91 teachers, who randomly selected. These teachers underwent cognitive intelligence Cattell questionnaire form A scale 3, cultural intelligence questionnaire, Billings&Mous coping styles test. Data were analyzed by multiple regression to find possible relations between variables.

Results: Results showed that there is a negative and significant relationship between cognitive intelligence and problem-centered coping style with stress. Between four dimensions of Cultural intelligence and emotion-centered coping style with stress, there is a positive and significant relationship. But cultural and cognitive intelligence, can not simultaneously predict coping styles with stress.

Conclusions: Our Findings indicate that cultural intelligence is considered as an acquired intelligence, in order to be an effective stress management.

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P107

Disorder of consciousness and N400 ERP measures in response to a semantic task

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Background: Disorders of consciousness (DOC) were amply studied in the recent years. In the present research electrophysiological measures (ERPs) were used to verify the preservation of semantic linguistic processes in vegetative states (VS) and minimal consciousness state (MCS).

Materials and methods: Eighteen patients classified as VS or MCS and twenty controls were submitted to a semantic associative task congruous or incongruous word sequences (auditory stimuli). Each auditory sequence was composed of four words that were presented to the subjects, and it had a congruous (semantic related words) or an incongruous (semantic unrelated words) final word based on its semantic content.

Results: Two sets of analysis were conducted: the first was finalized to compare the general patient category with the control group. The second was aimed to compare VS with MCS sub-category each other. Two dependent measures were used, respectively the peak amplitude and the peak latency. The ERPs were entered into a four-way repeated measure ANOVA.

Three main results were found in the present research. A first main result was that a morphologically similar N400, peaking at about 410 msec. post-stimulus, more frontally distributed

and higher for incongruous condition, was found for patients and controls. However, the comparison between patients' and controls' performance revealed a significant difference for N400 latency. In fact it was found a delayed peak for patients in incongruous condition in comparison with control subjects. Specifically this temporal delay was observed within the frontal sites. Third MCS and mainly VS diagnosis was not accompanied by the abolition or reduction of ERP N400 component.

Conclusions: Thus, the current diagnostic criteria for DOC, mainly based only on observing patient behavior, may have prevented to deeply comprehend the real cognitive potentialities of this patient group and to correctly classify different consciousness profiles. In some cases misdiagnosis occurs for patients who are considered in VS and that instead could be more correctly classified as minimally conscious, by adopting ERP measures (and specifically N400 index). This marker highlights the ability to evaluate intent, semantic associations, and meaning which are critical components of awareness.

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P108

Validation of the Greek version of the hypomania checklist HCL-32

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Background: Bipolar Disorder, which is a severe and relapsing mental illness associated with the deregulation of mood and thought, is often diagnosed and treated, incorrectly, as Unipolar Depression, with negative effects on quality of life of patients suffering from this and in their clinical course, as well. Simultaneously, the presence of hypomanic symptoms in people suffering from depression is an important predictive variable for the development of bipolar disorder and for this reason, a tool for self-assessment of patients for the identification of hypomanic symptoms is very useful for clinical diagnosis of under-diagnosed cases of this disease.

Materials and methods: HCL-32 (Hypomania Checklist-32), has been developed in recent years and widely used. Our purpose was the weighting of this instrument in Greek population, in order to investigate the effectiveness and its validity in identifying hypomanic symptoms and, consequently, bipolarity. The study population consisted of 246 patients diagnosed with Bipolar I, Bipolar II or M. Depression (unipolar). Diagnosis was confirmed using the Greek version on the M.I.N.I. structured interview and the patients that fulfilled the predetermined inclusion criteria completed the respective questionnaire.

Results: According to statistical findings and after weighting in bipolar (N = 107) and unipolar (N = 81) patients the HCL-32 showed a high degree of internal consistency, sensitivity of 84.0% and specificity at a rate of 69.0 % at cut-off point of 14 affirmative responses, and revealed a dual factor structure, which fits perfectly with the nature of bipolarity.

Conclusions: HCL-32 seems a promising and useful tool for the recognition of bipolarity especially in the case of recurrent or treatment resistant M. Depression. However, the weighting of this clinical tool requires further investigation because of its questionable discriminatory ability to distinguish different types of Bipolar Disorder among them.

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P109

Denial of pregnancy - 3 case reports and follow - up

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Background: Negation or atiphiornosia is a complication of pregnancy, more common than realized [1].

Materials and methods: 3 cases of denied pregnancy in women with different psychiatric pathology are described.

Results: L, 26.y.o, in civil partnership, first pregnancy caused no changes in general condition, terminated by legal abortion; unexpectedly, two years later, she gave an unassisted birth into a lavatory pan, the newborn did not survive; next year she delivered a healthy baby (pregnancy recognised at the 20th week). After 2 years - no signs of psychiatric disease.

M, 24.y.o., single, primigravida, previously healthy, on 30th gestation week, gave an outright denial of being pregnant. Stood in a psychiatric clinic until delivery - exhausted, detached, tangential. Did not take care of the newborn, was apathetic or hostile. She revealed she hears voices in her head, feels herself controlled and persecuted. The custody of child was lost.

J, 34.y.o., married, with cyclothimic mood swings. Unexpectedly the 31th week of pregnancy was discovered. A healthy newborn was delivered slightly before time. Despite the mood swings the patient was managing well. In three years second pregnancy was happened, but terminated with miscarriage.

Conclusions: Deniers had obvious signs of pregnancy, but ignored it or connected to different reasons. In non - psychotic deniers menstrual - like bleedings were persistent. They were nursing a baby shortly before they conceived. Psychotic mother tried to get rid of fetus and transferred hostility to the newborn.

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P110

Relationship between personality types and perfectionism dimensions with severity of migraine headache

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Background: It has been shown significant correlation between headache and A personality type, however, few studies have investigated the relationship between these variables and perfectionism among headache patients. Thus, the aim of this study was to investigate the relation

between personality types and perfectionism dimensions with severity of migraine headache among patients referred to clinical centers in city of Kerman.

Materials and methods: 65 Patients suffering from migraine headache were recruited for the study. The assessment tools used were Migraine Headache Intensity Scale, Personality Type and Dimensions of Perfectionism questionnaires.

Results: Results showed that, A personality type and perfectionism dimensions can predict the severity of migraine. There was significant relationship between A personality type and community-based, aspects of perfectionism with migraine headaches. But there was no significant relationship between community-based with migraine headaches.

Conclusions: In conclusion, it seems that A personality Type and perfectionism play an important role in migraine headache. This study hopes to help migraine headache patients.

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P111

Coexistence of capgras and fregoli syndrome in the same patient, neuropsychological findings

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Background: Syndromes of delusional misidentification are traditionally referred as rare syndromes. In many cases such phenomena can coexist or appear one after the other in the course of the disease, indicating potential common pathophysiological mechanisms.

Materials and methods: Mr G., 57 years old, with a personal history of schizoaffective disorder was involuntarily admitted for treatment in the psychiatric unit. He had stopped taking his medication since months, and showed social withdrawal and aggressiveness towards his mother. His main delusional idea was that his mother was replaced by an identical looking alien. During the second week of hospitalization he expressed the belief that his doctor was, in fact, his second wife that left him. During the third week of hospitalization symptoms remitted significantly and the patient was discharged from the hospital.

Results: There were no findings in his physical and neurological evaluation, brain MRI and laboratory tests. A neuropsychological testing implementing CAMCOG showed deterioration in Language/Apprehension, Short-term Memory and Abstract Thinking subscales, the Working Memory subscale was at the lower range of normal limits and the rest functions values were found to be normal. His aggregated score was 79/107 indicating asymmetrical deterioration of cognitive functions regarding memory and learning.

Conclusions: It is under consideration whether these symptoms are due to brain impairment or they are symptoms of a pre-existing mental disorder. The coexistence of temporolimbic and frontal lobe dysfunction could enable the development of delusions of unfamiliar.

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P112

The use of essential oils as a complementary treatment for anxiety

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Background: Aromatherapy is defined as the controlled use of essential oils to maintain and promote physical and mental wellbeing. It's commonly used and has long been regarded as a popular means of treatment for anxiety.

Materials and methods: The material of study consists of recent articles concerning the subject that were found mainly in the Medline electronic database, the Hellenic Academic Libraries Link (HEAL-Link) and in the Google Scholar search engine. The search was conducted using the key words: essential oils, anxiety, treatment.

Results: Various kinds of essential oils such as true lavender, rose, mandarin, sweet orange, sandalwood, and geranium have anxiolytic activities. Aromatherapy massage also acts on the central nervous system, relieving depression and anxiety, reducing stress, relaxing, sedating or stimulating, and restoring both physical and emotional wellbeing. Wilkinson et al. studied aromatherapy massage in a large multicenter trial of cancer patients that experienced anxiety and depression. The result of this study showed significant improvement in anxiety and depression, compared with those receiving usual care alone. Lee YL et al reviewed sixteen randomized control trials of aromatherapy studies for anxiety symptoms most of them indicated positive effects to quell anxiety.

Conclusions: Aromatherapy caused various actions favorable for patients such as relaxation, reductions in anxiety, depression and fatigue, and improvements in quality of life via nervous, endocrine, immune, and circulatory systems, there for could be applied as a complementary therapy for people with anxiety symptoms.

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P113

Melancholia: The conception of depression in ancient Greece

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Background: Depression as a disease accompanies man from the beginning of history, ancient Greek dramatists and poets have written several times in their works about melancholic feelings of their heroes and sometimes even attempts or suicidal actions of them (Homer the suicide of Aias in the epic poem Iliad). Melancholia is also a major topic for philosophical discussions and medical healing attempts.

Materials and methods: The material of study consists of articles concerning the subject that were found mainly in the Medline electronic database, the Hellenic Academic Libraries Link (HEAL-Link) and in the Google Scholar search engine. The search was conducted using the key words: melancholia, ancient, Greece.

Results: Hippocrates at 400 b.c, made a separation of disease and god. Now diseases have real causes and there aren't a punishment from gods. In his philosophical teaching about the nature of human was the first that mention the term melancholia. The main theory of Hippocrates for human health is based that the body contains four biles and the equilibrium of them preserves health and any disturbance can causes disease. The excess of black bile in the body according to Hippocrates is what causes of melancholia, and it also ascribed it to such natural causes as adverse life events. Aristotle on the other hand that believes in the harmony of elements, claims that a minus excess of black bile is necessary and great men in philosophy or politics or poetry or the arts had this excess and few of them in did suffered by melancholy.

Conclusions: Melancholia is some primal facet of what today we call depression and has its roots in ancient Greece, there it was first identified, recorded and there were the firsts efforts for her treatment.

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Successful treatment of a selective mutistic schizophrenic patient with paliperidone palmitate injection: a case report

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Background: Paliperidone Palmitate is a new long-acting intramuscular atypical antipsychotic

drug indicated for the acute maintenance treatment of schizophrenia in adults. Intramuscular paliperidone palmitate effectively reduced symptoms of schizophrenia in most short-term (9-13 weeks) placebo-controlled trials (1). Its mechanism of action is attributed to the antagonism of brain dopamine D2 and serotonin 5-HT_{2A} receptors (2). Mutism, as a symptom can be seen in many psychiatric and neurological disorders, subject to the state of being unwilling to act or speech. Mutism might be seen in schizophrenic disorders especially in catatonic schizophrenia. In this case we report a patient having selective mutism for 5 years and negativism but not presenting other catatonic symptoms. She also hadn't had treatment compliance before, after paliperidone palmitate usage she was treated successfully and selective mutism disappeared.

Materials and methods: A 35-year-old female patient diagnosed with undifferentiated schizophrenia admitted to our clinic with psychotic exacerbation. Her relatives declared that she had partial improvement under antipsychotic treatment before. Because of non-compliance of oral treatment, in 2009 nearly one year along she had been under zuclopenthixol decanoate 200 mg/15 days treatment. In 2010 three months after stopping treatment by herself her psychotic symptoms recurred. She was incharged with the symptoms of refusal to eat, drink and take medications. She was successfully treated with 13 sessions of ECT and risperidone long acting 50 mg/15 days than discharged with recommendation of using risperidone long acting 50 mg/15 days. It was learned that during these 6 years with treatments her psychotic symptoms decreased but selective mutism persisted. It was learned that since 2012 July, she had refused to have injections and after 5 months and she was taken to our clinic with absence of eye contact, reference ideas, persecution delusions, mutism, negativism, social isolation, loss of functionality, insomnia, aggressive behaviors. At admission, scores of SANS: 88, 26 SAPS, BPRS: 65 were found. Due to positive history of treatment non-compliance, paliperidone palmitate was initiated. The first dose of 150 mg was administered in the deltoid muscle. After 2 weeks, her functionality, social isolation, negativistic attitudes and insomnia improved partially. At 21. day scores of SANS: 28 SAPS: 11 BPRS: 39 were found. However, in the twenty-fifth day of paliperidone palmitate, sleep problems and negativistic attitudes recurred. In 26. day after the second dose administration of 100 mg, complaints of the patient almost completely recovered but selective mutism continued. In thirty-sixth day of hospitalization, first she started to talk to the other patients and after a few days she started to talk to clinic staff. In 40. day of hospitalization, she was discharged with almost complete recovery with recommendation of paliperidone palmitate 100 mg/month. Because of occurring problems after 25. days of Paliperidone palmitate injection, risperidone 3 mg/d added to his current to medication until the next injection of paliperidone palmitate.

Results: Non-compliance for Antipsychotic medication is a common problem in patients with schizophrenia. According to some studies, up to 80% of patients stop their drug regimen byself. (3) Non-compliance to treatment leads increase in psychotic symptoms, worsening prognosis, increase in hospitalization. There are significant advantages of using depot antipsychotics such as getting constant drug blood level, prevention of psychotic relapses etc... However, some patients do not prefer using depot antipsychotics because of fear of injections, pain in injection site, and feeling of being kept under control of others (4).

Conclusions: Appliance of paliperidone palmitate depot form monthly might be a good choice for medication compliance in non-compliant patients. In addition, mutism the resisting symptom of our patient dissolved with paliperidone palmitate treatment. Paliperidone palmitate might be a good and appropriate alternative in non-compliant and mutistic patients with schizophrenia.

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Use of Long-Acting Antipsychotic Injection in Bipolar Disorder

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Background: Bipolar disorder (BD) is a chronic psychiatric illness in which there are difficulties about its diagnosis and treatment. Maintenance treatment of BD is important because after the acute phase relapses causes increased risk of suicide, psychosocial deterioration and comorbid situations. One of the major problems of maintenance therapy is non-adherence to drugs. It is recommended to use long acting injections (LAI) of antipsychotics besides education of the patient and the family (1). LAI antipsychotics have important advantages because they provide steady blood drug levels and decrease the risk of drop outs from treatment and relapse rates. In this study we aimed to show the effectiveness of LAI antipsychotics which added or switched to maintenance treatment of BD by comparing the clinical situation and hospitalization at pre-treatment and posttreatment periods of 12 months.

Materials and methods: Pretreatment and posttreatment YMRS scores and hospitalization rates were evaluated retrospectively in 23 BD patients who were compliant to usage of LAI for at least 12 months in Mood Disorders Unit of Psychiatry Clinic of Gaziantep University. Data obtained before and after 6th and 12th months of treatment compared with Wilcoxon and Friedman test using SPSS 15.0 version.

Results: 18 of 23 patients (78%) were using atypical antipsychotics (LAI risperidone) and 5 patients were using typical antipsychotics (4 zuclopenthixole and 1 flupenthixole). There were significant changes in YMRS scores, KGI scores, and hospitalization rates between pre and post-treatment 6th and 12th months, and LAI initiation (Figure 1-3). There were significant differences between baseline and posttreatment 12th month YMRS, HAM-D, and CGI scores ($p < 0.001$, $p = 0.005$, and $p < 0.001$ respectively). Hospitalization rates decreased at 12th month (-3,987; $p < 0.001$).

Conclusions: It was shown that LAI antipsychotics were safe and effective in the treatment of BD in a retrospective study (2). We also found a significant decrease in YMRS scores and hospitalization rates after initiation of LAI antipsychotics. In a similar study there were significant change at KGI but no significant change at YMRS scores (3). There is a need for further larger and controlled studies.

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P116

Physiology of Dreams: Is there a “common ground” between neurobiology and psychoanalysis?

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Background: Dream physiology has become a rapidly growing field of research, especially after the discovery of REM sleep. At the same time, attempts are being made at finding a relation between relative neurobiological theories and the psychoanalytic concept of the unconscious.

Materials and methods: Review of relevant bibliography.

Results: Dream activity is most likely to present during REM sleep, when dream images appear more vivid and memory consolidation possibly occurs. On the other hand, dreams described by research subjects during NREM sleep appear to be more “thought-like” and fragmentary. According to the activation-synthesis model, the brainstem provides the forebrain with random stimuli (oculomotor, vestibular, kinetic) which are then composed into a dream. It was considered that recording brain activity changes during dream activity using polysomnography could indicate possible relationships between dream content and cerebral activity, hence the relationship between mind and brain. However, subjective reports on dream content do not seem to coincide with physiological recordings. The relationship between dreams and memory has also been considered. Evidence has supported the existence of a neural network that organizes memories on the basis of emotion, suggesting it is emotion that strengthens memory. This neural network has recently been described as a possible “other unconscious”, related to behaviour, as an analogy to Freud’s unconscious.

Conclusions: Despite the progress of such research, many questions remain unanswered. Furthermore, the use of neurobiological models to underpin the psychoanalytical concept of the unconscious, of which dream constitute its primary manifestation, seems to disregard the function of language in the construction of the unconscious.

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Folie a deux : When insanity wants to be accompanied

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Background: Folie a deux is the term that used at 1873 by Laseque and Farlet to describe the transfer of delusional ideas from person to another, what is called today shared psychotic disorder in Diagnostic and statistical Manual of mental disorders IV or Induced delusional disorder International classification of diseases -10.

Materials and methods: The material of study consists of articles concerning the subject that were found mainly in the Medline electronic database, the Hellenic Academic Libraries Link (HEAL-Link) and in the Google Scholar search engine. The search was conducted using the key words: Folie a deux, shared, psychotic induced, disorder.

Results: Folie a deux can be found not only between family members like mother and child, brothers and sisters and husband and wife, it can also appear in persons not related but social associated and usually are both socially isolated. It can appear in more than two people maybe and in groups, like religious cults. The primal patient transfers the delusional and psychotic symptoms to the other person and then are both suffered from the same beliefs that makes their condition sustainable and hard to handle.

Conclusions: Folie a deux is a unique psychiatric disorder due the contagion that characterize her. Is not a common mental disorder and its very interesting how psychiatric patients who are social isolated can affect each other and how medication differentiates both symptoms and the course of the disease.

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Guideline development for telepsychiatry followup

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Background: Since 2000 telepsychiatry has been used primarily for followup in our pioneering center in India. Patients hailing from 300 Kms to 3000 Kms are seen regularly as out patients.

Materials and methods: A minimum number of 500 patients are followed up telepsychiatrically every year by our department of psychiatry.

They are followed up through interactive real time two-way video audio teleconferencing by a

ISD or IP or VSAT connection. The APA Telepsychiatry Guidelines were followed.

Results: Our situation forced us to modify and suit our reality with regard to patient revisit duration and face to face contact duration besides metabolic toxicity monitoring. A maximum number of one hundred days between telepsychiatry followup, fifteen to eighteen months between direct face to face followup and nine months between metabolic toxicity monitoring tests are considered in view of the telepsychiatric followup seekers pattern of behaviour.

Conclusions: Geographical, socioeconomic and infrastructural facilities of health care seekers determine the appropriate guideline in our use of bio medical and information technology in telepsychiatry.

Acknowledgements: Apollo Telemedicine Networking Foundation.

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P119

Significant raise of new cases at mental health center of kavala, Greece in the years 2011 and 2012

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Background: It has been reported before in the press that since the beginning of the economical crisis in Greece (2009) there is a raise of request for public health system services. We tried to verify this observation by examining the cases of the mental health center of kavala.

Materials and methods: We examined the new adult psychiatric cases of every year from 1997 to 2012 through the data from our archives. We also checked for age and gender. 1997 was our first operational year. We compared the years 1997 to 2010 as a whole with 2011 and 2012 separately.

Results: The mean number of new cases from 1997 to 2010 was 126,45 with maximum 164 in 2006 and minimum 95 in 1997, while in 2011 there were 215 and in 2012 313 new cases. the mean age has not changed significantly (46,87 in 1997 to 2010, 47,45 in 2011 and 50,13 in 2012), and the male to female ratio was grossly stable (from 32/68 to 45/55 in the years 1997 to 2010, 34/66 in 2011 and 35/65 in 2012).

Conclusions: trying to interpret the results we assume that this significant raise of new cases is attributed to the economical crisis and unemployment via three factors: 1. the increase of stress-related disorders 2. the unaffordability of private therapists and 3. the pension seeking behavior via the national health system certificates.

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Basic Dimension of Personality, Temperament and character of Executive Profile

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Background: In this study, personal characteristics of managers have been investigated in terms of temperament and character. It is obvious that individual personal features cannot be ignored in management as in every environment where humans exist. Showing different behaviors in the same situation depends on personal characteristics. Personality is the key point of essentials of the structure formed towards a common aim and the management activating this structure in terms of manager and managed.

Materials and methods: This investigation consists of two sections. In the first section, the essential concepts of management, manager and personality and the personality theories are explained. In the second section, demographic data and data for the personal features are evaluated. In this research, work was conducted with public and private sector managers. Cloninger's Personality Inventory TCI was used as a tool for evaluating personality traits of managers. In this inventory, inherent personality disposition acquired properties were assessed under four headings: personality characteristics and value were also examined under three main headings. It is certain that carrying out personal inventories will positively contribute in employing managers due to the features that the job requires. It is certain that carrying out personal inventories will positively contribute in employing managers due to the features that the job requires.

Results: Most of the views of native or foreign scientist in the past about Turkish managers' personality were based on observation. They often expressed negative opinions because they criticized the managers according to accepted western management techniques and methods without taking into account the social and cultural structure.

Conclusions: What is interesting here is that Turkish scientists expressed views similar to those of foreign scientists. Those managers constitute a part of our community.

When the suitable management for social structure isn't exhibited, despite of the most ideal social management techniques, successful results cannot be expected. It is certain that the data obtained with the help of this inventory has a more concrete quality. Knowing personality traits contribute to development of management techniques. In order to adapt those techniques to our cultural structure, personality characteristics of managers should not be ignored.

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P121

Melatonin hormone microinjection to amygdala relieves the anxiety but impairs the spatial memory performance

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Background: Pineal gland is located in the epithalamia of the brain and the main hormone of this gland is melatonin that informs the body about the environmental light and dark regimen [1]. In addition to its physiological functions, melatonin seems to produce some psychotropic effects in rodents, such as sedative, anticonvulsant, antidepressant, and anxiolytic effects [2]. There is also the research evidence that demonstrate the effect of melatonin implementations on learning performance [3]. There are some studies demonstrating that amygdala located in the temporal lobe of the mid brain plays a regulatory role for behaviors related to anxiety and depression [4]. In addition to the regulatory role of amygdala in anxiety, amygdala is of great importance in regulating memory and learning functions. With regard to behavioural processes, melatonin binding sites have been found in the regions implicated in cognition and memory in the brain. In the present study, the effects of intraamygdalar administrations of melatonin, saline and diazepam on the anxiety-like behaviour and spatial memory performance in pinealectomized and sham-pinealectomized Wistar rats were investigated.

Materials and methods: The procedures in this study were carried out in accordance with the Animal Scientific procedure and approved by the Institutional Animal Care and Use Committee. In the present study, the forty seven male adult rats were used and were randomly divided into two groups as control (sham -pinealectomy) and pinealectomy. In the control group animals were exposed to the same surgical procedure with the experimental group except for the removal of the pineal gland. Under the groups, the four subgroups were performed as Melatonin (1 and 100 µg/kg) (n:14), Saline (0.9%NaCl) (n:5) and Diazepam (2mg/kg) (n:5). All pinealectomies and cannulation surgeries were applied before starting the experiment. We started the experiment after a week of the pinealectomies and implantations, when surgery wounds healed up completely. The animals were tested by open field and elevated plus maze tests for anxiety-like behaviour, and Morris water maze test for spatial memory (Noldus Ethovision, Version 6, Netherland; Commat LTD.ŞTi. Ankara/Turkey). All animals were exposed to these behavioural testings after 30 minutes of melatonin, saline, and diazepam administrations. Data were analyzed using SPSS (SPSS Statistical Software, SPSS Inc., Los Angeles, CA, USA, Ver. 15.0).

Results: In open field, (a) diazepam was more effective in reducing the anxiety, (b) control subjects were more mobile than pinealectomized subjects and c) 100 µg/kg melatonin administrations reduced the velocity of the animals. In elevated plus maze, (a) 100 µg/kg melatonin administrations increased the distance totally travelled and (b) enhanced the time spent in open arms, however, after the pinealectomy, 1 µg/kg melatonin administrations decreased it and c) control animals were less mobile than pinealectomized ones. In Morris water maze, a) diazepam group travelled more distance than the others in control condition whereas, in pinealectomy condition high dose of melatonin and saline groups travelled more distance than the others, b) in pinealectomy condition subjects who received 100 µg/kg melatonin also travelled more distance than those who received 1 µg/kg melatonin and diazepam, c) the subjects who received 1 µg/kg spent less time than those who received other other treatments, and d) in control condition subjects who received 100 µg/kg melatonin were slower than those who received the other treatments.

Conclusions: Melatonin administration to amygdala decreased the anxiety; however, spatial memory performance of the rats was impaired by the pinealectomy and melatonin administrations.

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Influence of daylength, pineal gland and sex on anxiety like behaviour, depression and memory in Syrian hamsters

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Background: In mammals, some seasonal rhythms such as testicle development, sexual behavior and mating, color change and production of winter coat are synchronized by photoperiod, light/dark cycle, temperature, food availability, and hormones [1,2]. However, the effect of different photoperiods (short, normal and long photoperiods) on behavioural processes is not well known despite of recent developments [3]. There has been a great interest of whether or not there is a photoperiodic effect on anxiety like behavior, depression and memory of the mammals. In the present study, the effects of daylength (short, normal, long) pineal gland (intact and pinealectomized) and sex on the anxiety-like behavior, depression and spatial memory performance in Syrian hamsters were investigated.

Materials and methods: The procedures in this study were carried out in accordance with the Animal Scientific procedure and approved by the Institutional Animal Care and Use Committee. All pinealectomies were applied before starting the experiment. 90 (45 male and 45 female) animals used for control and 82 (41 male and 41 female) animals used for pinealectomy group. Under control and pinealectomy groups, 3 subgroups [short photoperiod (6L); normal photoperiod (12L) and long photoperiod (18L)] were performed for both males and females. Animals were exposed to these daylengths for 6 months. After this period, animals were tested by open field and elevated plus maze tests for anxiety-like behavior, forced swim test for depression and T-maze test for spatial memory. (Noldus Ethovision, Version 6, Netherland; Commat LTD.ŞTi. Ankara/Turkey). Data were analyzed using SPSS (SPSS Statistical Software, SPSS Inc., Los Angeles, CA, USA, Ver. 15.0).

Results: In open field and elevated plus maze tests, long photoperiod and pinealectomy reduced the anxiety especially in females. In T-maze test, in a similar fashion, long photoperiod and pinealectomy enhanced the spatial memory in females. On the other hand, depression was reduced by short photoperiod in forced swim test.

Conclusions: The results of the present study indicate the importance of daylength and pineal gland on the behaviors such as anxiety, depression and memory.

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Electroconvulsive therapy in pregnant patients

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Background: The gestational period is an important period that occurs with many physiological, psychological, and social changes in lives of women¹. In this study, the aim was to evaluate the clinical characteristics of patients that received electroconvulsive therapy (ECT) during pregnancy, evaluate the safety and efficacy of ECT, and evaluate the overall status of mothers and babies during the postpartum period.

Materials and methods: The study included 33 patients who were admitted as inpatient with the indication of ECT due to pregnancy and concurrent psychiatric disorders. Sociodemographic and clinical characteristics of the patients were recorded. In this study the data of 33 patients who were admitted as inpatient for ECT treatment were evaluated.

Results: Upon ECT administration, a complete response to treatment was seen in 84.21% of patients with major depression (n=16), a partial response to treatment in 15.78% of patients (n=3), a complete response to treatment in 91.66% of patients with bipolar disorder (n=11), a partial response to treatment in 8.33% of the patients (n=1), and a full response to treatment in 100% of patients with schizophrenia (n=2) were obtained.

Conclusions: Whereas the reported case of ECT application during the trimesters are safe, there were also reported cases of ECT application at the second and third trimesters which may have caused premature birth². Any information regarding preterm birth was not been determined in the 27 patients from our study. ECT administration during pregnancy to treat psychiatric disorders was found to be an effective treatment method. Key words: Pregnancy, psychiatric disease, electroconvulsive therapy.

Acknowledgements: Presentation of this study has been supported by Turkish Association for Psychopharmacology.

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P124

The Risk Factors Associated with Depression in Obsessive Compulsive Disorder

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Background: Major depressive disorder is the most frequent psychiatric condition in obsessive compulsive disorder(OCD), however, there were a few studies that evaluate a risk factors associated with development of depression in OCD. The aim of this study was to estimate to risk factors of facilitate to depression in OCD.

Materials and methods: Sixty-three patients with both OCD and MDD(OCD+MDD) and seventy-seven patients without depression(OCD-MDD) were included to study. One hundred-fourty patients were diagnosed with OCD and comorbid conditions using the Structured Clinical Interview for DSM-IV. OCD symptoms presence and severity were measured by the Yale Brown Obsessive- Compulsive Scale. Beck Anxiety Inventory and Beck Depression Inventory were used for to measure of anxiety and depression severity. Univariate analysis were followed by logistic regression.

Results: There were no significant differences in age, gender, marital status, the period without treatment, profession, medical and family history, social support between two groups. Anxiety, depression, obsession and compulsion scores were significantly in OCD+MDD groups. The OCD+MDD group scored was also significantly higher on measures of avoidance, insight, instability, retardation than OCD-MDD group. After logistic regression, the following variables associated with depression in OCD: hoarding compulsion, anxiety severity, obsession and compulsion severity, stressfull life events in the last six months and poor insight.

Conclusions: Our findings suggest that many risk factors are strongly associated with depression in OCD.

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P125

Antipsychotic treatment beyond antipsychotics: Individualized Metacognitive Therapy Program for Patients with Psychosis (MCT+)

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Background: To achieve comprehensive treatment success in schizophrenia, new approaches are needed to complement psychopharmacotherapy. Metacognitive training for schizophrenia patients (MCT) is a manualized group intervention which conveys cognitive strategies to alter cognitive biases (e.g. jumping to conclusions) that appear to underlie delusion formation and maintenance in schizophrenia. The present trial combined group MCT with an individualized cognitive-behavioural oriented approach entitled Individualized Metacognitive Therapy Program for Patients with Psychosis (MCT+) and compared it against an active control: CogPack training (computerized neuropsychological therapy).

Materials and methods: A randomized controlled trial was conducted in a single psychiatric hospital. A total of 48 patients fulfilling criteria of schizophrenia were randomly allocated to MCT/MCT+ or CogPack. Both groups were assessed blindly to intervention at baseline and four weeks later. Psychopathology was assessed using the Positive and Negative Syndrome Scale (PANSS) and the Psychotic Symptom Rating Scales (PSYRATS). Furthermore we explored whether MCT and MCT+ improved jumping to conclusions.

Results: In line with prior studies, treatment adherence and subjective efficacy was excellent in the MCT/MCT+ group relative to the control condition. Delusional symptomatology, as assessed with the PANSS, declined significantly more in the MCT/MCT+ group compared to the CogPack group. Delusion conviction showed significantly greater improvement in the MCT/MCT+ group. Jumping to conclusions was ameliorated to a significantly greater extent under MCT than CogPack.

Conclusions: The present findings suggest that the combination of a bias-oriented training and symptom-oriented therapy shows effects above standard treatment, and represents a promising complementary approach to psychiatric therapy in schizophrenia.

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P126

Neuropsychological functioning and biased information processing in posttraumatic stress disorder (PTSD) following displacement after World War II

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Background: Many studies have reported deficits in learning and memory as well as biased information processing in individuals with PTSD. Consequences of trauma might not be limited to the people directly affected, but also concern close relatives, especially their children. The aim of the present study was to investigate transgenerational effects of PTSD on the cognitive performance and attentional bias in the respective offspring.

Materials and methods: Individuals displaced as children from the former German Eastern territories during World War II (20 with PTSD, 24 without PTSD), 11 nondisplaced healthy controls and one of their adult children were compared as to their cognitive performance with a battery of neuropsychological tasks as well as to their processing of trauma-related stimuli (Stroop task).

Results: Evidence for impaired cognitive functioning or biased information processing was neither found in individuals with PTSD nor their offspring.

Conclusions: Sample characteristics (e.g., highly resilient population, low symptom severity) and methodological aspects might explain our results. The null findings in the second generation might result from the fact that no neuropsychological deficits could be found in the parental generation or that parental PTSD does not affect the offspring's neuropsychological profile.

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Psychiatric Comorbidity and Stressful Life Events in Chronic Daily Headache with and without Medication Overuse

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Background: The estimated prevalence of chronic daily headache (CDH) is 3% of the population. The stressful life events and psychiatric comorbidity may be a risk factor for migraine chronification. The aim of this study was to evaluate the relation between psychiatric conditions, stressful life events with CDH with or without MOU.

Materials and methods: Seventy-nine consequently patients included to our study. After all patients were examined and classification according to headache type by the specialist neurolog, psychiatric interview was made by psychiatrist. A detailed sociodemographic variable was collected from each patient. Fifty-seven (59) of these patients met ICD-II criteria for chronic migraine with medication overuse (CHO+MOU group) and twenty-two (22) patients met criteria for chronic migraine without medication overuse (CHO-MOU). Axis I mental disorder was assessed with the Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition. Stressful Life Events Screening Test were applied in two groups for the evaluation of life events or changes which have occurred during the past 6 months.

Results: There were no significant differences in sociodemographic features between two groups. Only analgesic use was significantly higher in CHO+MOU groups. Sleep pattern and eating habits changes, moderate conflict with partner and menopause were the most common stressful life events in all groups. Menopause was high proportion in CHO+MOU groups. Depression, anxiety and somatoform disorder were the most common psychiatric comorbidity in two groups. Generalized anxiety disorder and obsessive compulsive disorder were higher proportion in CM+MOU group.

Conclusions: The result of our study showed that stressful life events and psychiatric conditions frequently accompanied to the patient with CDH.

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P128

“See m.e. feel m.e. touch m.e.” are there physical signs of cfs/me?

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Background: Although it has been established that the central nervous system (CNS) does not have a true lymphatic system, there is considerable evidence and more recently visible proof of a robust fluid drainage system. Contrary to the old established concept that lymph has no pump of its own, the main lymphatic vessels are now known to be under sympathetic control. The author argues that Chronic Fatigue Syndrome (CFS/ME) is caused by a breakdown in the neuro-lymphatic system which leaves specific signs that can be identified and aid clinicians in the diagnosis of CFS/ME.

Materials and methods: Digital photography to record physical signs in CFS/ME and a dual photon laser scanner by other researchers in Rochester New York (Iliff J et al 2012) on the ventricular and perivascular pathway of brains of mice.

Results: This claim is supported by new dual photon emission tomography demonstrating the existence of the neuro-lymphatic drainage and with photographic evidence of some of the physical signs.

Conclusions: The evidence points to physical signs of CFS/ME. New research at an NHS hospital in the UK is planned to begin later this year to determine the accuracy of the physical findings.

Acknowledgements: The FORME Trust.

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Genetic, psychological and societal interplays in the background of cross-cultural differences in depression treatment response

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Background: Unipolar major depression shows cross-country differences in prevalence, mean depression scores, symptomatology and treatment response. For a better and more culture-sensitive understanding of this disorder, a common multicausal framework is needed encompassing possible causative factors and interplays: a framework in which depression in any country or culture can be understood. Such a framework must involve societal, psychological, genetic and biochemical factors; this latter are especially important in understanding the etiopathologic processes. Pharmacological studies are an essential part in discovering the biochemical nature and behaviour of depressive illness, thus, incorporating findings concerning treatment response and pharmacogenetics may be fruitful conceiving framework.

Materials and methods: We performed a literature search about putative background factors of cross-cultural diversity in depression focusing on societal, psychological, genetic and pharmacogenetic results.

Results: At the societal level, cross-country differences in GDP and Gini coefficient of income inequality may be important. Psychological background factors include cross-country differences in coping, social support and external health locus of control orientation. Binding psychological and societal levels together, gender and SES also influence depression. Among genetic factors, cross-cultural differences must be considered for polymorphisms of the serotonin transporter and HTR2A and BDNF genes. Important differences in response to antidepressive treatment in different countries have also been reported.

Conclusions: Differences in allele frequencies do not give a satisfactory explanation for cross-cultural differences in depression treatment response, but may be a promising starting point in building a complex explanatory framework for cross-cultural differences in the etiopathology and treatment perspectives of unipolar depression.

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Children with learning disorders in the school

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Background: The learning disorders are specific developmental disorders that manifest kids to

school at the process of learning school skills. Children are unable to develop a certain skills or abilities at the appropriate age.

Materials and methods: The material of study consists of recent articles concerning the subject that were found mainly in the Medline electronic database, the Hellenic Academic Libraries Link (HEAL-Link) and in the Google Scholar search engine. The search was conducted using the key words: learning disorders, developmental disorders, children and school.

Results: The learning disorders attributed to impairment of cognitive processes, which are intrinsic to the child, especially neurological disorder. Describe the following types of learning disorders:

- Reading & Spell Dyslexia
- Writing
- Mathematics skills or dyscalculia
- Mixed disorder school skills
- Developmental disorder of school abilities unspecified.

Problems in oral speech of the child can affect the ability to read and this can be the beginning of future difficulties. Mathematical difficulties of children associated with impaired memory, perception and failure in solving problems. As a result all these can drive children to experience low self-esteem and exhibit behavioral problems. Regarding the interventions, there are various forms, from simple remedial teaching to very specialized programs. But progress of these children is slow and require more time and effort to achieve a satisfactory performance.

Conclusions: Early recognition of children with learning disorders is paramount to the future, because we have a chance for early intervention for both children and their families. Children that having support at home and school have better outcome.

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Children with asperger's syndrome in school

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Background: Asperger's syndrome belongs to the category of developmental disorders. Often characterized as high-functioning autism, with difficulties in social and emotional interaction and in communication and stereotypes. Occurs more in boys with probable ratio of four boys to every girl.

Materials and methods: The material of study consists of recent articles concerning the subject that were found mainly in the Medline electronic database, the Hellenic Academic Libraries Link (HEAL-Link) and in the Google Scholar search engine. The search was conducted using the key words: Asperger's syndrome, pervasive developmental disorders, children and school.

Results: Children with Asperger's syndrome are a special challenge to the educational environ-

ment. Usually the child with Asperger's Syndrome has intelligence above average and shows no delay in language or cognitive development. They experience big difficulties in elementary social behaviors, as in the creation of friendly relations with others. Their inflexibility and inability to cope with changes can make these individuals easily stressed and emotionally vulnerable. Most children with Asperger syndrome want friends but do not know how to behave. Thus tend to be isolated from other children. In elementary school, moreover, the teacher and the child spend enough time together, so the elementary school can have a supporting and character, which can accept and the child with Asperger syndrom. The teacher must therefore encourage the socialization of the child with others and limit the time of isolation. We also monitor and guide the interactions of the child to ensure peace and security.

Conclusions: Children with Asperger's syndrome have a significant need to be supported in school so they can be social adapted and have the chance to develop and demonstrate their special abilities.

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P132

Valproic acid induced hyperammonemic encephalopathy: report of one case

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Background: Valproate (VPA) is widely used for acute and maintenance therapy of bipolar disease and it is the most prescribed drug for epilepsy treatment worldwide. Valproate-induced hyperammonemia is a serious and unusual adverse effect of VPA treatment.

Materials and methods: We aimed to describe the 20 year-old-woman bipolar case of valproate induced hyperammonemic encephalopathy with therapeutic VPA levels and normal liver functions.

Results: The patient complained of confusion, disorientation, somnolence, agitation and slurred speech at the end of the first week of VPA treatment. VPA blood level was 116.5 µg/mL (N:50-125) and ammonia level was 237 µmol/L (N:10-50). Other laboratory tests including serum transaminases (both ALT and AST) and coagulation profile (PT, PTT and INR) were normal. After discontinuation of valproic acid treatment and hydration, these symptoms have disappeared dramatically. After 24 hours, blood ammonia level was 80 µmol/L and patient returned the baseline mental status.

Conclusions: Hyperammonemia occurs due to inhibition of mitochondrial enzymes in the urea cycle by valproate. Hyperammonemia and encephalopathy can develop even at therapeutic concentrations without elevated liver function enzymes. Clinicians should be aware that VPA-induced hyperammonemia and encephalopathy is still one of the most feared side effects of valproate which may require emergent management.

Acknowledgements: Presentation of this study has been supported by Turkish Association for Psychopharmacology.

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P133

Bath Salts: A new way of reaching legal high that needs urgent psychiatric attention

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Background: Synthetic cathinones are synthetic derivatives of natural cathinons which are psychoactive compounds present in khat plant, named *Catha Edulis* [1]. Abuse of these psychoactive compounds has been associated with a number of dramatic cases with agitation which resulted in serious harm to self or others. Use of such substances is prohibited by regulatory agencies in most countries. However, manufacturers of synthetic cathinones have succeeded to evade legal control by introducing them as "bath salts" or "plant food" with a warning statement as "not for human consumption" enabling uncontrolled access to these compounds via online shops, gas stations, markets, and head shops [1, 2]. As such increasing media reports of violence under the influence of such synthetic cathinones as a "designer drug" or "legal high" called all psychiatric associations and channels into action for increased alertness and precautions.

Materials and methods: We reviewed available literature on development, use and psychotropic effects of natural as well as synthetic cathinones. We used "cathinone", "synthetic cathinone", "bath salts", "mephedrone" and "methylenedioksyprovalerone" as search terms.

Results: We identified 39 case reports or case series published until March 2013 in PubMed involving at least 12 different types of synthetic cathinones, with mephedrone and 3,4-methylenedioxyprovalerone (MDPV) being most commonly used [1]. Synthetic cathinones are phenethylamine derivatives or in other words chemical analogues of amphetamines [1, 3]. As such they are also named as new designer amphetamines and their mechanism of action involve increased discharge of dopamine, serotonin and norepinephrine into synaptic clefts [1, 2]. Synthetic cathinones are being introduced in the market as "bath salts" and their use via inhalation or per oral route in low doses reduce euphoria and increased alertness. Chronic exposure or consumptions in high doses can provoke hallucinations, delirium, hyperthermia and tachycardia leading to psychotic agitation in 82% and combative violent behavior in 52% of cases [4, 5]. The United States Poison Control Center received 6,138 and 2,655 calls about adverse reactions resulting from exposure to "bath salts" in 2011 and 2012, respectively. The calls received seem to decline with 254 calls received during the first two months of 2013 yet to achieve negligible number of cases and/or associated adverse events involving violence [6].

Conclusions: Given the unnegligible prevalence rates of abuse and associated psychotic agitation and combative violent behavior resulting in harm to self or others higher vigilance on accessibility and use of synthetic cathinones as "bath salts" are needed. While restrictions on marketing of such psychoactive compounds under a variety of names or packages are being

processed legally, public awareness on risks of reaching so called 'legal high' via use of so called "bath salts" or "plant food" should be mediated via Psychiatry Channels and Associations.

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Risk factors for violent behavior in schizophrenia as recognized in the Forensic Department of Psychiatric Hospital in Thessaloniki

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Background: Research findings suggest that schizophrenia is associated with an increased risk for violence. However, the majority of individuals with schizophrenia do not engage in violent behavior. Rather, only during symptomatic periods, and in certain subgroups, does the individual with schizophrenia pose an elevated risk for violence. The purpose of this study is to recognize the risk factors that need to be considered when assessing psychiatric patients.

Materials and methods: We studied the files of 54 patients who committed homicide or attempted homicide and were hospitalized in the Forensic Department from 2007 until 2013.

Results: In our clinical sample gender is important, with males being more than females (46 males, 8 females). Among men 41 (89%) were diagnosed with paranoid schizophrenia, while among women 5 (62%). 60% of our male patients committed the crime until the age of 35 (mean age at the crime 39.8 years). Women in our department tended to peak in violent behavior at a larger age, around the mid-40s. Only 28% of our patients had no psychiatric history before the crime, with the rest being in relapse with delusions mostly caused by noncompliance with treatment. The victims of our female patients were their children (in 3 cases) or other women (mother, sister or relative). The victims of our male patients were mostly women (57%) and only in 5 cases the victim was a stranger.

Conclusions: It becomes the clinician's task to recognize the symptoms in schizophrenia that distinguish the violent-prone patient from all others in treatment. Maybe the factor that determines the final outcome is the education of patients and their families about the factors that suggest an elevated risk for violence. Finally, psychiatrists should provide them information about available psychiatric services in emergencies.

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Risperidone-induced acute eosinophilic pneumonia

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Background: Acute Eosinophilic Pneumonia (AEP) is severe syndrome which can be potentially induced by many reasons, including drugs. It is characterized by pulmonary infiltrates, peripheral blood eosinophilia and respiratory failure. AEP has never been associated with risperidone treatment.

Materials and methods: We report a case of a 59-year-old man who presented with fever, lung infiltrates, peripheral blood eosinophilia and acute respiratory failure. All evidence charge risperidone as the only possible causal factor. The syndrome rapidly resolved after discontinuation of the drug. The patient had a past medical history of alcoholism and paranoid schizophrenia.

Results: Pathophysiological mechanisms implicated in the development of AEP in our patient seems to be associated with eotaxin and serotonin eosinophilic-specific chemoattracting action, through the serotonergic action of risperidone.

Conclusions: This is a case report with clinical adverse reaction of AEP in one antipsychotic agent (risperidone) with a neurochemical mechanism of action via the serotonergic system.

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P136

Stigma and children with schizophrenia in school

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Background: The term stigma has been used in ancient Greece indicating something negative associated with either health condition or the moral status of the individual. Without doubt the most stigmatized among all diseases is mental illness, both for the children themselves and for their families.

Materials and methods: The material of study consists of recent articles concerning the subject that were found mainly in the Medline electronic database, the Hellenic Academic Libraries Link (HEAL-Link) and in the Google Scholar search engine. The search was conducted using the key words: stigma, schizophrenia, children and school.

Results: Schizophrenia and insanity are identical as concepts and related to unpredictable, bizarre and violent behavior. Most children with mental illness have to deal two things : the struggle with the symptoms of the disease and the daily discrimination that is related to mental illness. Factors that prospers stigma are:



- Children with schizophrenia, have a bizarre, unpredictable and often aggressive behavior, that seems strange to other children, neighbors and even relatives, because they do not know how to explain and understand that kind of behavior.
- The social environment due to the inability to understand the thoughts and behavior of schizophrenic children, combined with the stress of thinking of this mental illness.
- The media, that are the key players renovation of society, shape the development of social stigma.

So the ways of reducing the incidence of stigma and discrimination that caused include:

- Cooperation between the organizations of mental health with the local social agencies to adequately inform society.
- Campaigns for public awareness, to improve attitudes towards children.
- Informing and educating students for a world of open, without prejudice to the different.
- Changing the way the media presenting schizophrenia will play key role in changing public attitudes.

Conclusions: The alienation of children with schizophrenia by society becomes an obstacle to the contact and collaboration with children on the same age. With the appropriate education and personal contact with mentally ill children can remove the stigma of such children.

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Beta-blockers and incidental learning in coronary artery disease patients

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Background: The impact of treatment with beta-blockers on risk for dementia remains controversial [1][2][3]. Moreover, specific cognitive functions affected by beta-blockers use have been less studied. The aim of the study was to investigate the effect of beta-blockers on cognitive functions in non-demented coronary artery disease (CAD) patients admitted for cardiac rehabilitation program.

Materials and methods: A 3 year study included 539 CAD patients two weeks after acute myocardial infarction or unstable angina; 386 (72%) men and 153 (28%) women; mean age of 59 years (SD=9). Patients were evaluated for socio-demographic characteristics, medication plan, left ventricular ejection fraction (LVEF), for New York Heart Association (NYHA) class. Digit Span Test, Digit Symbol Test, Trail Making Test A and B were used to assess auditory attention, mental flexibility, psychomotor performance, incidental learning, perceptual speed and task switching. Participants were considered impaired in the specific cognitive performance if their scores fell below the 25th percentile of the study population. Multiple logistic regression models were used to evaluate effects of treatment with beta-blockers on impairment in each of the cognitive tests.

Results: Controlling for potential confounders such as age, gender, education, NYHA class and LVEF, treatment with beta-blockers was associated with a 3.56-fold increase (95% confidence, 1.360 to 9.335) in risk for impairment in incidental learning as measured by Digit Symbol Test. There was no significant effect of beta-blockers to other measured cognitive functions.

Conclusions: In CAD patients two weeks after acute cardiac events treatment with beta-blockers is associated with a selective impairment in incidental learning.

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P138

Women refused to terminate pregnancy for mental health reason: Clinical outcomes

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Background: In Latvia termination of pregnancy can be performed until 25th week for mother's health, fetal abnormalities, social reasons. There were 22 consultations specially about pregnancy management from 2002 till 2012 in Riga Centre of Psychiatry and Addiction Disorders' outpatient department; abortion for mental health reason was recommended in 21 of them; medical records of 19 cases are available.

Materials and methods: Medical records of 9 women refused to undergo medical abortion are examined for signs of negative mental health outcome during 6 months after delivery or misscarriage (e.g. excessive complaints, increased pharmacological treatment, hospitalization, suicide, etc).

Results: There were 8 full-term pregnancies and 1 miscarriage; none of 9 newborns had any major structural abnormalities. 4 women aged 30 - 33 had schizophrenia; all of them used polypharmacy treatment during their pregnancy; 3 of their newborns were given up for adoption; 1 woman was hospitalized a month after delivery because of irritability and tearfulness; other 3 had no documented signs of mental state deterioration. 1 woman with schizoaffective disorder, 34.y.o., had no therapy during pregnancy and no postpartum relapse. 2 women were mentally retarded (30 y.o. and 32 y.o.) and had neither treatment, nor postpartum deterioration. 1 woman with epilepsy (21.y.o.) had no signs of exacerbation. 1 woman with depression (28 y.o.) had no relapse after twins delivery.

Conclusions: At least in 8 of 19 cases the recommended abortion was a mistake - women had no signs of postpartum mental health deterioration. The tradition of recommending medical abortion for mentally ill pregnant must be reviewed.

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P139

The mental health status of South Asian women in Britain

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Background: According to the UK national 2001 census, 2, 5 million people in Britain assign themselves to a South Asian ethnic group. A large number of studies have considered the relationship of migration and mental illness, but there are few comparative studies of morbidity among African, West Indian and Asian immigrants to Europe and America.

Materials and methods: 121 papers including a PhD thesis identified in Medline and RCPsych Journals by using the key words “Asian+ women/woman + depression”. Among them we found 31 papers relevant to this topic including three reviews, two national surveys and one cohort study.

Results: 1. In all studies ethnicity is included as a variety, but the majority of the surveys comes from centers in Manchester, Birmingham, and London where the proportion of this population is higher than in other parts of the country. We found only two studies focused on long term psychological interventions in the community.

2. Positive results in mental health problems (i.e. decreased risk in self harm and suicide in young Asian females comparing to those in previous decades) are associated to socioeconomic and demographic changes rather to improved pathways to mental health.

3. Primary care research in the UK continues to show difficulties in accessing mental health care both at the level of under-recognition and at the level of relative under-referral from primary to secondary care.

4. Furthermore South Asian women have shown poor compliance with medications and nonattendance in follow up appointments, associated to the attractiveness and cultural appropriateness of services, the attitudes towards services, and the previous experiences.

5. On the other side recent studies shown increased prevalence in disorders traditionally associated to Western societies (i.e. eating disorders) which may indicate that behaviors, attitudes and stereotypes that existed about Asian women’s roles are gradually changing.

Conclusions: One of the main criticisms of the papers is that, although majority of the surveys have used qualitative analysis, the analysis is often lacking in depth and further exploration of the findings. In terms of interventions it is important to understand that individuals from minority groups are characterized by a range of diversities. We feel further research into this topic is needed.

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P140

Traditional and religious helpseeking behavior among schizophrenia patients

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Background: Traditional and religious help seeking behavior protects its important role among schizophrenia patients help seeking behaviors(1). Here current data is investigated for patients from Kocaeli-Turkey.

Materials and methods: A survey asking sociodemographical data and traditional help seeking behavior is prepared. 42 patients with chronic schizophrenia are included to the study. Surveys are conducted with the first degree caregivers of the patients.

Results: Rate of admission to a traditional or religious 'help giver' (TRH) was %83.3 (n: 35). 45.7% (n:16) of them admitted at the onset of illness. 40% (n:14) of patients who admitted to TRH announced that TRH built morale for them and %17.1 (n: 6) still packs a tool of TRH. 70.6% of admitters made a payment to TRH.

Conclusions: It seems that psychiatrists are (without awareness) working with traditional and religious help givers simultaneously. Severe numbers and amounts of payments are one by schizophrenics which are usually live with limited economical conditions. Here an awareness of psychiatrists are needed to make protecting patients from probable moral and economical abuse as a routine part of treatment.

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P141

Use of herbal products among schizophrenic patients: a preliminary study

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Background: There is some evidence that links the increase of mental disorders' prevalence with a deterioration of Western countries' nutritional habits and it is found that the use of herbal and "natural" food supplements to treat different disorders is increasing. Herbal cures, herbal teas and capsules are currently presented as good alternatives to support medical treatments in daily media- televisions (1). Limited beneficial effects are claimed such products but for schizophrenia herbal products are unknown and risky areas. We investigated how do schizophrenia patients are effected from the surrounding herbal suggestions.

Materials and methods: A survey asking sociodemographical data use of herbal product with the aim of supporting treatment of schizophrenia is prepared. 42 patients with chronic schizophrenia are included to the study. Surveys are conducted with the first degree caregivers of the patients.

Results: 4 of 42 patients (9.5 %) declared that they use a herbal product actively. One of them ceased all antipsychotics and used a duration of three months herbal cure for schizophrenia and had an attack. 3 (75%) of them declared that they had beneficial effects from herbal drugs



and will use them in the future.

Conclusions: It seems that patients with schizophrenia do not tend to use herbal drugs yet. But the ones who used herbal drugs are decisive at ongoing use. This a preliminary study so presents results of a small sample size with chronic schizophrenia. A larger sample size including patients of acute schizophrenia additionally to chronic ones may present a more reliable data.

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P142

Affective temperaments in pregnancy: a preliminary study

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Background: Pregnancy is one of the probable risky periods for spectrum of mood disorders with its nature of hormonal fluctuations. It is reported that more than two-thirds of all diagnostic groups reported at least 1 lifetime episode of illness during pregnancy or the postpartum period(1). But evidence for tendency for mood disorders during pregnancy period is not enough. Affective temperaments are accepted as antecedents of mood disorders. the tight relationship between affective disorders and affective temperaments and their importance in different health conditions are shown in various studies previously (2). In this study, our objective was to investigate whether different affective temperament characteristics occur in pregnancy.

Materials and methods: 60 healthy pregnant women and 32 healthy controls were included to this study. The participants were evaluated using the Turkish version of the Temperament Evaluation of Memphis, Pisa, Paris, and San Diego Auto questionnaire (TEMPS-A) and the Structured Clinical Interview of DSM Disorders (SCID-I).

Results: All temperament scores were lower in pregnant women but the difference was not significant ($p>0.05$). Pregnant woman had lower hyperthimic temperament scores with low significance ($p: 0.061$).

Conclusions: This was a surprising result thus a difference due to hormonal fluctuations during pregnancy was expected. Two reasons among various reasons which may explain why there is no difference between pregnant and normal healthy woman may to be high-lightened. 1. Pregnancy is not such a strong risk for fluctuations in mood and so for mood disorders. 2. Our sample size is very small so different results would be available with a larger sample size. These are the preliminary reports of an ongoing study which aims to determine effects of pregnancy on affective temperaments.

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Attitudes of psychiatrists during pregnancy and lactation periods of psychiatric patients in Turkey

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Background: Pregnancy and lactation are risky periods that make women susceptible for psychiatric illnesses(1). They usually ask mental health professionals what to do in such periods. Attitudes of mental health professionals is very important as well as attitudes of patients at determining treatment route(2).

Materials and methods: An internet survey asking questions about tendency of using pharmacotherapy, ECT or psychotherapy, cessation or lowering the dosage of medicine and personal principles of psychiatrists during pregnancy and lactation is designed. 246 psychiatrists answered the mails and 213 surveys are completed.

Results: Psychiatrists were more deliberate during pregnancy than lactation and they were significantly avoiding from admitting medicine during pregnancy. They preferred ECT, psychotherapy instead of medicine more in pregnancy than in lactation. Low dosage-safe medicine use is preferred in both terms and attitudes of psychiatrist did not change by the level of feeling their self well-learned. Psychiatrists did not prefer termination of pregnancy with a 'never' answer of %61.1.

Conclusions: Being more avoidant and deliberate during pregnancy than lactation was not surprising result for us. But lack of correlation between feel of well-educated level and attitudes calls a lack of awareness in mind. Negative look for termination of pregnancy suggest effect of a cultural dimension as well as the effects of medical literature.

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Childhood and Adolescent Eating Disorders

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Background: Anorexia and bulimia are the two most common child and adolescent eating disorders. These are serious, life-threatening disorders with a wide range of physical and psychiatric

components.

Materials and methods: The material of study consists of recent articles concerning the subject that were found mainly in the Medline electronic database, the Hellenic Academic Libraries Link (HEAL-Link) and in the Google Scholar search engine. The search was conducted using the key words: Childhood, Adolescent, Eating Disorder.

Results: Anorexia is basically the deliberate and excessive limiting of one's food intake. One becomes obsessed with not eating or only eating very small non-fattening portions. Bulimia is also an obsession with food however the Bulimic will usually not starve themselves as much as the anorexic.

Obliviously, eating disorders are characterized by severe disturbances in eating behavior, they can lead to sickness, delays in physical and mental growth, problems with ones teeth, and can eventually lead to setbacks in many other important areas of life. These are serious, life-threatening disorders that typically have a psychological cause.

Conclusions: Most problems can be resolved in a short period of time with the help of a professional therapist who specializes in working with childhood and adolescent eating disorders to get an assessment. Parenting can also play a possible role in many of these situations.

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Disorder of Child and Adolescent

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Background: Many disorders seen in adults can occur in children. Children and adolescents often have fear, emotions, stress and all sorts of problems that most adults remember dimly or do not understand at all. A child's body, mind, emotions, coping skills, way of viewing the world, and way of viewing themselves change at a very rapid pace. It is no wonder parents find it sometimes impossible to understand the unique challenges their children face.

Materials and methods: The material of study consists of recent articles concerning the subject that were found mainly in the Medline electronic database, the Hellenic Academic Libraries Link (HEAL-Link) and in the Google Scholar search engine. The search was conducted using the key words: child, adolescence, disorder.

Results: Child psychiatric assessment requires attention to details of a child's stage of development, family structure and dynamics, and normative age-appropriate behavior

At certain ages children seem to have more problems than others that interfere with their normal development and daily life activities. Sometimes these problems are not much to worry about and go away quickly. However, sometimes these problems are the beginning of a much larger issue and a parent would be wise to seek professional help in the same way they would

if a child's rash became rather severe or looked concerning. Most times when serious problems occur they could have been prevented if appropriate treatment had been provided early on to the child.

Conclusions: Most problems can be resolved in a short period of time with the help of a trained professional. Consulting with parents and obtaining information from schools, teachers, and other involved parties are essential to proper assessment. There are many other tests and objective rating scales designed to measure behavior.

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P146

Evaluation of the social environment of the therapeutic community of day center "estia"

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Background: Day Center "Estia is a Mental Health Unit aiming at the psychosocial rehabilitation of patients with schizophrenia and other psychoses. It is based on therapeutic community principles and it aims at reinforcement of personal abilities, change in dysfunctional behaviours, encouragement of healthy interpersonal relationships. In this study we assessed the perception of the therapeutic community's social environment by both patients and staff.

Materials and methods: For this purpose Community Oriented Programs Environment Scale (C.O.P.E.S.)² was given to participants.

Results: Scores were analyzed according to the guidelines of the C.O.P.E.S. manual. Raw scores were modified to standard scores and a diagram was produced that represented participants' evaluation.

Conclusions: Results showed that the social environment of the therapeutic community of the Day Center "Estia" enables involvement, support, spontaneity and personal growth while maintaining order, organization and clarity of the program¹. Anger and aggression are moderately expressed while staff control is kept at relatively low levels. Moreover, it seems that staff's expectations of patients' ability for autonomy are higher than those displayed by the patients. Staff seems to consider practical orientation (vocational training, daily living training) as a dimension that needs to be more emphasized, although patients do not recognize it as a serious limitation of the program. Results may lead us to a better understanding of patients own needs and expectations of treatment and guide us to a more need-adapted treatment plan.

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P147

Acute and maintenance electroconvulsive therapy for treatment of bipolar disorder mixed episode during pregnancy from first trimester to delivery: A case report

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Background: When the women diagnosed with bipolar disorder have been followed during the pregnancy it has been observed that most of them have experience a new mood attack. The treatment of mental disorders in pregnancy is an important clinical decision, because it affects both the mothers and the infants. It has been reported that electro-convulsive therapy (ECT) during the pregnancy is an effective treatment method for many serious mental diseases and also has low risks and side effects for the mothers and the infants.

Materials and methods: We report a successful and safe administration of acute and continuation ECT in a 38 year old pregnant patient with bipolar disorder mixed episode.

Results: A total of 30 bilateral-bifrontal ECT were administered in the first, second and third trimesters of pregnancy. Following an elective cesarean delivery at 39th weeks, a healthy male infant was born.

Conclusions: In conclusion this case shows that ECT is an effective treatment method for bipolar disorder mixed episode patients, besides it is safe for both mother and infant during pregnancy.

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P148

The importance of some environmental harmful factors in the etiology of mental retardation

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Background: Mental retardation is an idea, a condition, a syndrome, a symptom, and a source of pain and bewilderment to many families.

Materials and methods: We investigated 792 children hospitalized on period of 2004-2010 in Neuropsychiatry Infantile Section of Neurology and Psychiatry Clinical Hospital from Oradea. The investigation consisted of analysis of several elements involved in the etiology of mental retardation: smoking, alcohol consumption, tuberculosis, noxe, precarious social and economic living conditions and/or malnutrition and other infections and parasitosis (rubella, toxoplasmosis, syphilis).

Results: In 9,41% of the studied cases we observed the alcohol consumption by mother, at least, as a harmful factor in the etiology of mental retardation. In the total of cases which had harmful factors in their history, this factor is 27,21%. In 3,82% (respectively, 11,03%) is smoking, in 6,36% (respectively, 10,38%) is different noxe, in 11,70% (respectively, 33,82%) is precarious social and economic living conditions and/or malnutrition, in 2,80% (respectively, 8,09%) is the other infections and parasitosis and in 1,78% (respectively, 5,50%) is the tuberculosis.

Conclusions: Results are very important and they show the importance of precarious social and economic living conditions in the etiology of mental retardation. The studied factors are the most important harmful environmental factors which determine different degrees of mental retardation. Many of children who proceeded from orphanages or other shelter institutions or even rural area, have parents without jobs. We observed the importance of the studied factors in the etiology of mild mental retardation.

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Alcohol modulates the response to visual stimuli: evidence from time-frequency analysis

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Background: The neurophysiological mechanisms by which alcohol acts on the brain modifying behavior are still poorly understood. It has been recently reported that the event-related theta following verbal stimuli was selectively attenuated following acute intoxication (1). Here, using



non-verbal stimuli (images) we attempt to examine if this effect is specific to linguistic impairments cause by alcohol intake, or it reflects a more general disruption of brain function.

Materials and methods: Twelve healthy volunteers served as their own controls participating twice (alcohol and placebo) in a passive viewing experimental paradigm. Whole-head magnetoencephalography (MEG) data were collected. Data were averaged from -500 to 1500 ms relative to the stimulus onset and a dipole was fitted at the first peak of the evoked response (~100 ms) for each subject for both placebo and alcohol sessions. The dipole locations (all on the primary occipital cortex) did not differ significantly between the two sessions ($p > 0.05$). Those of the placebo sessions were used to extract the induced and evoked activity of the occipital cortex that was further used in the time-frequency analysis with Morelet wavelets in Fieldtrip (2). Results were corrected with the cluster-based Monte-Carlo method.

Results: Alcohol intoxication caused a significant decrease on the event-related theta power (4 - 8 Hz) with respect to placebo session only in the induced responses. The decrease was significant only post-stimulus confirming the fact that it is not originated on a systematic effect of alcohol.

Conclusions: The observed decrease on the event-related theta confirms on one hand previous findings (1). However, in the cited study it was reported that this effect was present on the fronto-temporal left areas following words and not non-words. Our finding suggests that the decrease event-related theta power is a more general phenomenon observed also on the occipital cortex and not specific to verbal stimuli. Moreover, the absence of significant effects on evoked responses adds evidence to the theory of the distinct structural origin of induced oscillations (3).

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P150

Major depressive disorder in breast cancer: a critical systematic review of pharmacological and psychotherapeutic clinical trials

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Background: Breast Cancer (BrCa) is the most frequent type of cancer in women and it's com-

mon the presence of depressive symptoms/disorders, what influences survival and quality of life. This study summarizes the available evidence that supports psychotherapy and drug therapy for Major Depressive Disorder (MDD) among women with BrCa.

Materials and methods: A systematic review was performed to search for Randomized Clinical Trials (RCTs) through February 01, 2013. A Search Algorithm was developed to search on major databases (MEDLINE, EMBASE, Cochrane Clinical Trials). The pool of articles was augmented with hand-searches for relevant reviews/ongoing trials at ClinicalTrials.gov. An abstract-screening excluded studies that didn't evaluate MDD in participants with BrCA. A Risk of Bias Assessment (RoB) was performed on the eligible studies, according to the Cochrane guidelines.

Results: A total of n=1826 abstracts were obtained. 44 were considered eligible at the initial screening. 22 were acquired from relevant-reviews/hand-searches. The major reasons for exclusion were "lack of diagnostic instrument with validated threshold for diagnosis of MDD" (n=42) and "sample with several types of cancer/psychiatric diagnoses" (n=8). Only 2 RCTs for pharmacological treatment were assessed for RoB and no trials for psychotherapy were considered eligible. Both eligible trials were considered to have significant RoB [1, 2].

Conclusions: Despite the important comorbidity of MDD among women with BrCa, there's a paucity of evidence to guide clinicians in the management of depression in this population. This systematic review underscores the need for the design of large-scale and methodologically sound antidepressant and psychotherapeutic trials targeting MDD among women with BrCa.

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P151

The incidence of mental retardation in a population of Bihor county, Romania

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Background: The history of mental retardation dates back to the beginning of man's time on earth. The idea of mental retardation can be found as far back in history as the therapeutic papyri of Thebes (Luxor), Egypt, around 1500 B.C. In general, approximately 20% of the population with mental deficiency presents moderate mental retardation and about 75% have mild mental retardation and about 5% have severe mental retardation.

Materials and methods: We investigated 792 children hospitalized on period of 2004-2010 in Neuropsychiatry Infantile Section of Neurology and Psychiatry Clinical Hospital of Oradea. It were realized family investigations for each case. Also, each case was clinical analyzed. There were analyzed, too, the heredity, environmental factors involved, origin area and sexes.

Results: The results obtained are important because we observed an other rates of each degree of mental retardation than those reported in general. In 792 investigated children, 522 have mental retardation. Among them, 54,96% have mild mental retardation, 22,14% have moderate mental retardation and 22,90% have severe mental retardation. For each degree of mental retardation, the rate is increased in the masculine group and in rural.

Conclusions: Heredity, age of parents, harmful and genetic factors are together or separately involved in the obtained rates. The increased rate of severe mental retardation is because of the hereditary antecedents and consanguinity. Also, many of children who proceeded from orphanages or other shelter institutions or even rural area, have parents without jobs, or they are a result of unwished pregnancies of women with a subcultural level.

P152

Foster Parenting and Stress

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Background: Foster children experience a lot of stress because of their life histories and changes in their family circumstances, such as foster care placement. Children who have been neglected or abused may have difficulty coping with stress and develop behavioural problems, and young children in particular can develop passive avoidance behaviour as a way of adapting to their new situation.

Materials and methods: The material of study consists of recent articles concerning the subject that were found mainly in the Medline electronic database, the Hellenic Academic Libraries Link (HEAL-Link) and in the Google Scholar search engine. The search was conducted using the key words: Foster care, Parenting, Stress.

Results: Many children adapt satisfactorily to being placed in a foster family but, in some cases, their response is deceptive. Some, especially young children, while undoubtedly stressed do not develop behavioural problems but instead adopt avoidance behaviour as a way of coping with problems generated by their change of living situation. Foster carers might not recognise that the child is stressed and interpret his or her behaviour as appropriate, thinking that 'everything is OK'. This might make the child feel misunderstood and unacknowledged which, in turn, can lead to persistently high levels of stress.

Conclusions: Teaching children to manage stress at an early age may help to prevent daily stress from becoming an ongoing issue contributing to a much more serious mental health problem. It is important that foster parents recognize the early signs of stress in foster children and learn how to act in a non-threatening and understanding manner.

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P153

The relationship between loneliness, depression and anxiety computers with Internet addiction

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Background: Internet addiction can be a significant threat to one's health and social well-being in that it enforces antisocial behavior. The addiction can lead to the inability to communicate in the real world by depriving the addict of the daily practices involved with interpersonal communication. Depression is caused by problems people have in developing representations of healthy relationships. Computer anxiety is "the complex emotional reactions that are evoked in individuals who interpret computers as personally threatening". People can experience loneliness for many reasons and many life events may cause it, like the lack of friendship relations during childhood and adolescence, or the physical absence of meaningful people around a person.

Materials and methods: In the current study took part 51 students. The sample was taken in random order. The assessment tools used were Loneliness (LT), Beck Depression (BDI), Anxiety Computers (ACI) and Internet Addiction tests. Data were analyzed by Pearson and Multiple Regression.

Results: Study results show statistically significant relationships between loneliness, anxiety and depression with Internet addiction, but there were no significant relation between computers anxiety and internet addiction.

Conclusions: These findings illustrate the importance of understanding the relationship between loneliness and depression with computer addiction, and suggest that mood disorder, especially depression should be considered in computer dependency treatment.

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P154

Antiganglioside antibodies in the serum of demented patients and in patients with Parkinson's disease

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Background: Increasing evidence suggests that anti-ganglioside antibodies act as important mediators in neurodegenerative disorders like Alzheimer's (AD) and Parkinson's disease (PD). The aim of the present study was to investigate the levels of antibodies against GM1, GD1b and GQ1b gangliosides in demented as well as in PD patients and to correlate them with clinical parameters (age, severity of the disease, grade of cognitive decline).

Materials and methods: We examined the sera -using ELISA technique- of 103 demented patients versus 60 controls and 44 PD patients versus 44 age matched healthy individuals for investigating the possible connection between IgM antibodies against GM1, GD1b and GQ1b gangliosides and clinical parameters of dementia and PD.

Results: I) Patients with dementia revealed pathological anti-ganglioside antibodies compared with the healthy controls ($p=0.0005$). There was a positive connection between IgM anti-GM1 and the age ($p=0.005$) as well as the severity of dementia ($p=0.005$). Most of the patients that demonstrated increased IgM anti-GD1b titres suffered from AD ($p=0.002$).

II) The group of PD patients revealed increased levels of the evaluated anti-gangliosides, while healthy individuals demonstrated normal levels ($p=0.0005$). A correlation between IgM anti-GM1 and the grade of cognitive impairment (MMSE, $p=0.003$; UPDRS I, $p=0.013$) was also observed.

Conclusions: Our study indicates that elevated IgM anti-GM1 may be connected with the neurodegeneration as they were demonstrated mainly in older and most severe demented patients and that AD may also be associated with increased IgM anti-GD1b levels.

A peripheral neuroimmune response identified in PD patients. Nevertheless, a larger scale study in PD is needed to establish a clear-cut connection between that immune response and disease pathophysiology.

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P155

Exploring the meaning of participation in nursing care: the old persons' perspective in the community

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Background: Participation as a term is widely used but there is no common understanding of it. Moreover, Greece lacks research on the area and would be particularly benefited by a study on participation.

Materials and methods: Husserl's phenomenological perspective was chosen because it offers a fresh look at the phenomenon and focuses on the investigation of the meaning of phenomena. Twenty three unstructured interviews were performed for this study.

Results: Effects of participation in nursing care for old persons are both negative and positive. Negative factors include the personal burden, attachment to the carer, adjustment to a new, more deteriorated, way of life; the financial burden; the emotional and physical fatigue and anxiety. On the other hand there are positive outcomes such as a sense of personal development from the experience, satisfaction, emotional and spiritual reward, a greater ability to meet the patient's needs, security, control, empowerment, feelings of independence (being able to rely on themselves for their care), fulfilment of their role in society (doing their best for their family), achievement, appraisal from the family and the community and gratitude.

Conclusions: Participation is a multidimensional phenomenon in the health care setting. In view of modern developments, including technological and scientific developments, as well as the unprecedented growth of the old population, elucidating its nature is a necessity.



P156

The association of Heart disease and Late-Life Depression

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Background: Late life depression is one of the most frequent disorders in elderly and often remains unrecognized. One of the reasons why late life depression often passes unrecognized is co-morbidity - a number of different chronic diseases coexist with depression. Several practice guidelines recommend that depression be evaluated and treated in patients with cardiovascular disease. The objective of this study was to analyze the impact of co-morbidity of the heart disease and hypertension in elderly like risk factors for late life depression.

Materials and methods: The research was conducted on a sample of 120 participants, 60 patients with late life depression and 60 community-dwelling older adults without depressive symptoms, aged 60+. All participants were examined using a general questionnaire created for the purpose of the study, the existing medical records and the Geriatric Depression Scale.

Results: The patients with late life depression were suffering from larger number of chronic diseases than non-depressed elderly people, especially heart disease ($\chi^2=5.63$; $df=1$; $p=0.018$; $OR=2.59$). There was no evidence for a significant relationship between depression and hypertension (Yates chi-square=0.04; $df=1$; $p=0.84$). But we found that people with uncontrolled hypertension compared with ones with regularly controlled hypertension had significantly greater risk for late-life depression (Fisher exact $p=0.0021$).

Conclusions: These data suggest that late life depression risk is elevated among elderly patients with co-morbid heart diseases and uncontrolled hypertension that point to a necessity of routine screening and early treatment of depression in patients with heart diseases and hypertension in primary care practice.

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P157

The survey about hospital school service for child, adolescent patients with psychiatric disorder

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Background: Hospital school provide educational service to child and adolescent patients in hospital. that will help treatment of disease and offer educational attainment. The objective of the current reports was to identify the use of hospital school services during hospitalization among child and adolescent patients with psychiatric disorders.

Materials and methods: Participants were recruited at Department of psychiatry, Ulsan University Hospital, 63 people had used hospital school during the hospitalization among 122 patients who had hospitalized one or more times. Of these, 22 children and adolescents (12 to 18 years) and parents were investigated via questionnaire and interview.

Results: More than 83% of the participants(patients: 83.3%, parents: 87.5%) expressed above average satisfaction. Participants think that the benefits of hospital schooling is learning social skills through peers relationship, a wealth of educational resource, Supplement the lack of learning, efficient time management by following the regular class time, counseling with professional school teacher, and getting the opportunity of preparation for a return to school.

Conclusions: Many patients suffering from serious mental illness experienced difficulty in receiving school education during treatment, which lead to the interruption of the educational curriculum. These not only affect the course of the disease, but also induce academic failings, deterioration in social and communication skills, atrophy of interpersonal relationships, reduced sense of self-esteem, economic difficulties, and failure of job seeking. So schooling during treatment must be recognized as important. The results of this study will emphasize the need for hospital school service and offer useful guidance in hospital school operation.

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P158

Personality and bipolar disorder: dissecting state and trait associations between mood and personality

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Background: Associations between personality traits and psychiatric disorders may occur for several reasons, including ‘scarring’ of personality by mood episodes, shared genetic risk for personality and disorder, or methodological artifacts such as overlapping items in symptom and personality rating scales.

The aim of present study is that personality traits in bipolar affective disorder (BD) are affected by mood state and specific personality traits in BD present even during euthymic states.

Materials and methods: We enrolled 100 patients who were diagnosed by DSM-IV-TR with BD; 20 in manic episode, 33 in depressive episode, 47 in euthymic state. We evaluated mood state, function and insight by CGI-S, MADRS, PANSS, BDRS, YMRS, SOFAS, GAF, SUMD-K scales. To investigate personality of the participants, TCI and HEXACO were completed by themselves.

Results: The depressive group had significantly lower HA, SD, C scores than others. Manic group had significantly higher extraversion and openness score than others using HEXACO. There were associations between severity of mood states and personality. Nearly one-fifth of the subjects showed ‘Rigid-Patient’ temperament dimensions and more than one-fifth of them had ‘melancholic’ character dimensions in TCI.

Conclusions: It is clear that current mood states affect the specific items of personality in self-reported tools of personality. Quite a number of subjects were rigid-patient temperament, it means maybe a basic of vulnerable temperament in BD. Further studies need to compare the BP and healthy groups to assess the specificity of the personality profile to BD regardless of mood episodes.

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Combination of antipsychotics use in schizophrenia

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Background: Most contemporary guidelines for schizophrenia treatment are advising that combination of antipsychotics should be used only when successive trials of individual medications, not excluding Clozapine fail to produce any positive results. Contrary to this it is common practice the use of combination treatment from the early stages of therapy, even though there are not enough data to support such practice. Aim of the present research is to assess the preva-

lence of polypharmacy in patients, who are hospitalized in the Psychiatric Hospital of Attica.

Materials and methods: Data were collected for a randomly selected group of 305 patients with diagnosis of Schizophrenia who were hospitalized in the 9 acute admission wards of the psychiatric hospital of Attica from July to September 2011. Data on psychopathology were collected and further information was taken from the medical notes. The SPSS statistical package was used throughout.

Results: Our sample consisted of 305 patients. Their mean age was 44.3 (SD=13.2), and 68.2% were males, 31.8% females. Age of onset of disorder at 27.2 years (SD=10.9). The majority had multiple admissions while 7.9% had their first episode and 74.8% had been involuntarily admitted. From the psychopathological point of view: Thought disturbances were present in 89.8%, hallucinations in 54.8%, and aggression in 70.1%. At admission 71.8% were on either first generation antipsychotics (FGA) or second generation antipsychotics (SGA), while 23.6% were on combination FGA and SGA and 4.6% were receiving more than two antipsychotics with long acting antipsychotics being administered for 7.2%. Mood stabilizers were given in 11.2%, antidepressants in 8.2% and benzodiazepines in 48.5%

After 3 weeks of hospitalization 49.9% were on either FGA or SGA, while 38.8% were on combination FGA and SGA and 11.3% were receiving more than two antipsychotics with use of long acting antipsychotics in 27.3%. Mood stabilizers were given in 22.7%, antidepressants in 13.5% and benzodiazepines in 40.8%. We were not able to find any association between polypharmacy and sex, age, illness duration or the presence of any kind of aggression (towards self, others or objects) at admission.

Conclusions: Despite treatment guidelines, and the general acceptance of monotherapy as the preferred practice, antipsychotic polypharmacy continues to increase. A review of the literature finds that the overall point prevalence of antipsychotic polypharmacy ranges anywhere from 4.1% to 69%. One reason for that could be the pressure from mental health providers for early response, remission of symptoms and limitation of hospital admissions. In the literature there are case reports and open uncontrolled, nonrandomized trials, reporting increased incidence of serious adverse events such as hyperprolactinemia, akathisia, hypersalivation and even an increased risk of mortality associated with polypharmacy. This study from a large Greek psychiatric hospital confirms the need for better education and support of the psychiatrists in order to reduce polypharmacy.

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Polypharmacy in psychiatric department of general University hospital

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Background: In spite of the lack of confirmation from treatment guidelines, the practice of antipsychotic polypharmacy has been constantly increasing. Currently, a review shows that antipsychotic polypharmacy varies from 4.1% to 69%. The wide range of reported prevalence can be partially explained by the differences in the design of the studies regarding diagnoses as well as in the options of treatments.

One of the limitations of the relevant studies is the fact that the definition of the antipsychotic polypharmacy is limited due to the design of the studies. Most of those studies are cross-sectional in design and the collected data are either taken in a specific moment or in a specific short period of time (e.g. 1 month).

This cross-sectional study aims to describe the prevalence of polypharmacy in a psychiatric ward of a General University Hospital in Northern Greece.

Materials and methods: Participants (152 patients) were selected from inpatients in the General University Psychiatric Hospital "Papageorgiou". The study was conducted from July to September 2011. Patients had to be hospitalized for at least 3 weeks in order to be included. A group of psychiatrists in the hospital performed the psychopathological assessment and were unanimous about the assessment of symptoms, signs and the final diagnoses. The drug treatment has been noted at the time of admission and has been compared to the treatment given at the time of the assessment. Data had been collected by the patients' medical and nursing files. The statistical program SPSS was used for the analysis.

Results: Our sample consists of 152 patients, of average age 48.9 years (SD=16.4), males were 46.1%, with an average onset age of disease 37.5 years (SD=17.7). For 6.6% this admission was their first. 82.9% were voluntary hospitalized. The diagnoses were: Schizophrenic spectrum disorder 33.6%, bipolar disorder 17.1% and major depression 49.3%. 24.3% of patients were working before being admitted and 18.4% had used illegal substances. The reason for admission were: Suicidal ideation 11.8%, aggression towards others 5.9% and acute relapse 78.23%. Their treatment at admission included more than one antipsychotic in 1.3% of patients, more than one antidepressant in 12.5% and a benzodiazepine in 40.8%. with depot antipsychotics being used in 1.3%. At the time of discharge, the rates of polypharmacy showed a statistically significant difference when compared to the ones upon admission regarding the use of antidepressants (22.4%) and the long-acting formulations which rose to 9.9%.

Conclusions: The patients admitted in the Psychiatric department of the General Hospital had the following profile: They presented with mood disorders, their admissions had a shorter duration and their psychosocial function was less affected, in comparison to patients admitted in a State Psychiatric Hospital. These factors probably are associated with the decreased use of polypharmacy. A larger sample of patients, a perspective study and a literature review are necessary in order to confirm the presented findings.

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P161

Use of long acting antipsychotics in the psychiatric hospital of Attica

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Background: Antipsychotic medication is vital for the treatment of the positive symptoms during the acute phase of schizophrenia and continuous use reduces the possibility of relapse. At the same time antipsychotic medication causes various adverse effects (movement, metabolic, cognitive and cardiovascular) resulting in reduced compliance and negative outcomes. Poor compliance leads to relapse, emergency admission, excessive use of antipsychotics which again lead to increased side effects, poor compliance perpetuating a vicious circle. Long acting antipsychotic medication enhances compliance and reduces hospital admissions. Aim of the current study is to explore the use of long acting antipsychotic medications in mentally ill patients with multiple admissions in a big psychiatric hospital of central Greece.

Materials and methods: The participants (376 patients) were randomly selected from a total of 530 in-patients hospitalized in 9 acute wards at the Psychiatric Hospital of Attica from July 21011 to September 20011. Psychopathological evaluation was carried by a team of psychiatrists, who are working in the hospital and agreed in the evaluation of psychopathology and in final diagnosis. Data collection was supplemented from medical folders of the patients, their relatives and notes of other mental health professionals. The SPSS statistical package was used for the analysis.

Results: The assessed 376 patients had a mean age of 45.2 (SD=12.8). 62.8% were males 37.2% females, with age of illness onset 27.5 years (SD=11.2). The majority had multiple admissions

(53.8% had more than three admissions) while only 8.2% had their first episode, and 70.4.8% were admitted under the mental health act. Diagnosis was schizophrenia spectrum disorders was reached for 81.1%, and bipolar affective disorder type I for 18.9%. The reasons of admission included self destructive behavior or aggression towards others at 19.2%, relapse at 49.2% and medication cessation at 29.5%.

During admission more than one antipsychotics was used for 26.3%, while later on 46.1% were receiving two or more antipsychotics. Long acting antipsychotics were used in 24.8% of the patients, Long acting antipsychotics use was not associated with multiple admissions history.

Conclusions: Despite the fact that use of long acting medication is considered one of the ways to enhance compliance, reduce relapse and avoid another admission, we were not able to find a statistically significant associations in the use of long acting medications between patients with one or two admissions and patients with multiple admissions. There are many possible explanations for this finding including, the psychiatrists' focus on psychopathology and not at the number of admissions, or that maybe the number of admissions is not considered to be a valid criterion of the severity of the disorder, or that the this finding is due to the sample size and the large number of treating psychiatrists and treatment regimes used by them.

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P162

Diltiazem induced OCD with suicidal depression

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Background: To present a case of treatment emergent Obsessive compulsive disorder with suicidal ideations in a 45-year old male with severe rheumatic mitral stenosis with atrial fibrillation treated with Diltiazem.

Materials and methods: Diltiazem treatment emergent Depressive disorders and probable suicide is reported in literature but its OCD has not been. We present a case of OCD with depression and suicidal ideations due to probable side effect of Diltiazem.

Results: Results: Here we present a 45-year old non diabetic, non hypertensive male without personal or family history of depressive or anxiety disorder. He underwent balloon mitral valvuloplasty (BMV) for severe rheumatic mitral stenosis. Postoperatively he maintained well with

Benzathine Penicillin G (1.2 MV/3 weeks), Metoprolol (12.5mg/d) and Clopidogrel prophylaxis till four months. Cardiologist stopped Metoprolol for complain of erectile dysfunctions and started him on Diltiazem 30mg/d. Within two weeks he developed depressive symptoms and was referred to Psychiatry department. On evaluation he was found to have repetitive intrusive blasphemous thoughts pertaining to God and his religious book. He would have guilt regarding the same and fear of god's punishment, but unable to control. He developed sadness, palpitation, poor interest in routine activities and serious suicidal ideas. His investigations including ECG, haemogram, thyroid function test, and serum calcium and MRI brain were normal. He did not respond to Sertraline 100mg/d. In view of temporal association cardiologist was requested for withdrawal of Diltiazem. As it was stopped his obsessive symptoms started reducing in severity and YBOCs reduced to 1 within a week.

Conclusions: Psychiatric side effects of CCB are reported in literature in the form of depression and suicide [1,2,3]. However ODC has not been reported. Given the role of serotonin in both the disorders it is quite possible to have such side effect. Hence, it merits further evaluation in larger studies.

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P163

Higher Amplitudes of Gamma Oscillations in Visual Bottom-up Salience are associated to Schizotypy

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Background: Oscillatory gamma responses in perception and their aberrations in schizophrenia have been of growing interest over the last years (Uhlhaas & Singer, 2010). Their occurrence might be of interest also in the schizophrenia spectrum indicating biological vulnerability being related to prodromal states of the disease. The schizophrenia spectrum ranges from slight schizotypal personality accentuation over schizotypal personality disorder to full-blown schizophrenia (Meehl, 1962) and is assessed highly reliable with the schizotypal personality questionnaire (SPQ; Raine, 1991). Our current study aims at the neurophysiology of early visual selection in relation to schizotypy. It has been shown recently, that schizophrenia patients have reduced gamma-band responses in auditory processing (Leicht et al. 2010). While there are behavioral indications of disturbed bottom-up processing in schizophrenia patients as well (Hahn et al. 2010). To assess bottom-up and top-down factors of visual processing with regard to the phenomenal experience of aberrant salience (Kapur, 2003) and possible increased gamma-band responses, we linked the perception of visual bottom-up salience to oscillatory patterns in occipital cortex, assessing its relation to schizotypy.

Materials and methods: Bottom-up salience was implemented within an EEG paradigm by physically salient, intensely colored distracter stimuli. The paradigm consisted in 270 simple visual discrimination (VD) trials in which either bright or dark grey target stimuli (4°) were displayed on a medium grey background. Subjects were asked to respond to these targets by button-press

(left = bright grey, right = dark grey). The target trials were pseudo-randomly intermixed with 90 distracter trials, containing additional bottom-up information (red, green or blue filled circles) around the targets, which were irrelevant for the VD task. Stimuli were presented for 250 ms with an inter stimulus- interval between 2500-7500 ms via Presentation (Neurobehavioral Systems, Albany, CA). In total 23 healthy participants were investigated, individual scorings on the schizotypal personality questionnaire (SPQ; Raine, 1991) were additionally obtained.

Results: We were able to show a dissection in the neural pattern of oscillations between the simple visual discrimination task compared to a condition containing salient distracter stimuli, resulting in a stronger perceptual bottom-up experience. The amplitudes in the VD + distracter condition were higher than in the simple VD condition both at 1) 55 Hz at 100 ms ($t = 2.346$; $p = .028$) and at 2) 28 Hz at 200 ms ($t = 2.424$; $p = .024$). The results are displayed in figure 1. The increase of oscillatory beta-band amplitudes at 28 Hz in the bottom-up condition was correlated to more pronounced schizotypal personality traits ($r = .518$; $p = .006$), this result is displayed in figure 2. Moreover, latencies in early gamma-band responses at 55 Hz in the bottom-up condition were shorter (indicating faster neural transmittance) in higher schizotypy ($r = -.358$; $p = .047$).

Conclusions: Our results indicate that the experience of aberrant salience might result from aberrancies in neuronal bottom-up vs. top-down stimulus processing. Neural oscillations in the beta and gamma frequency range appear to intensify perception of salient visual stimuli in higher schizotypy. Our findings expand the knowledge on the phenomenology of aberrant salience bridging the gap to low-level neurophysiological research on sensory processing in schizophrenia and its spectrum.

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P164

Comparison of eye movement desensitization and reprocessing (PTSD)with psychological debriefing(PD) in treatment of post traumatic stress disorder patients after the Zarand earthquake

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Background: Post Traumatic Stress Disorder (PTSD) is one of the anxiety disorders that interfere with routine individual life, occupational and social functions. There is controversy about the first choice of treatment for PTSD between Eye Movement Desensitization and Reprocessing (EMDR) and Psychological Debriefing (PD).The aim was to investigate the efficacy of EMDR compared with PD in treatment of PTSD.

Materials and methods: This randomized controlled trial was carried out on 40 PTSD patients that randomly were assigned into two groups. They either received therapeutic sessions of EMDR or PD during 12 weeks. Both groups blindly were evaluated by the Clinician-Administered PTSD Scale (CAPS)and Posttraumatic Stress Disorder Checklist (PCL) before and after the trial period.

Results: There was significant difference between the mean CAPS and PLC scores of the two groups after treatment and EMDR was more effective than PD in improvement of PTSD signs.

Conclusions: It is concluded that although both therapeutic methods (EMDR and PD) had significant effect in improving PTSD signs but it seems that in short term EMDR has better effect in improvement of final outcome of PTSD.

Acknowledgements: This work was funded by the Islamic Azad University, Zarand Branch, Kerman, Iran.

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P165

Study of personality and mental disorders in risky behaviors

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Background: Risk-taking refers to the tendency to engage in behaviors that have the potential to be harmful or dangerous. In adolescents such behaviors tend to be interrelated and have co variation patterns. Due to its unfavorable and irremediable consequences such as pregnancy, infective diseases, and HIV, sexual risk-taking has been recently highlighted more than other high-risk behaviors. Current study focuses on the frequency and co-occurrence of various risk-takings, and the mental disorders.

Materials and methods: The main purpose of this research is to perform a comparative study of personality and psychological disorders among risky behavior students. Consequently, 60 students were selected as the sample group from whom 30 were the ones under Consultation Center for risky behavior. To measure risk-taking behaviors the Iranian Adolescents Risk-Taking Scale was used. The others were 30 risky behavior students who were selected randomly. They all were assessed by means of the Millon Clinical Multiaxial Inventory-III. The obtained data were finally analyzed by the use of T-test and Man-withney test.

Results: The results displayed the fact that risky behavior students compared with non risky ones suffered a higher level of mental and personality disorders in their lifetime. Borderline disorder, anxiety, dysthymia, alcohol and drug dependence, major depression were the problems investigated.

Conclusions: Given the strong positive associations between mental disorders and risky behaviors, clinicians should screen for mental illness in individuals partaking in this conduct.

Acknowledgements: This research was financially supported by Islamic Azad University, Zarand Branch.

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P166

Prevalence of Common Psychiatric Disorders in Women with Polycystic Ovary Syndrome

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Background: Polycystic ovary syndrome (PCOS) is the most common endocrine disorder during a woman's reproductive period and it affects 5% to 10% of all women. Clinical manifestations include hirsutism, acne, alopecia, menstrual irregularities, obesity and infertility. A number of studies have evaluated the relationship between PCOS and psychiatric disorders. However, most of them evaluated psychiatric symptoms based on self-report measures and several studies have established that women with PCOS are more likely to experience depressive symptoms as compared to a group of women without PCOS. PCOS is associated with many psychiatric disorders. The aim of this study was to determine the existence of psychiatric disorders in women with untreated PCOS by a structured clinical interview. Another objective of our study was to examine whether an association exists between psychiatric disorders, insulin resistance, and BMI.

Materials and methods: Women with PCOS (n=88) were included and all met the Rotterdam criteria for PCOS. Psychiatric interviews were conducted by means of the Structured Clinical Interview for DSM-IV (SCID-I). Following the psychiatric evaluations, blood samples were obtained from the participants.

Results: The prevalence rate for all comorbid psychiatric disorders in the sample was 50% (n=44). The most common psychiatric disorder was major depression (33%), followed by generalized anxiety disorder (13.6%) and binge eating disorder (6.8%). We found no significant difference among patients with PCOS with and without psychiatric disorders in terms of BMI scores and insulin resistance index scores ($P>0.05$ for both comparisons).

Conclusions: Results of the present study suggest that considerable rate of subjects with PCOS experience a psychiatric disorder during their lifetime. Clinicians should be aware that women with PCOS are at high risk for major depression, generalized anxiety disorder and binge eating disorders.

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P167**An unusual biological therapy from the father of psychoanalysis**

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Princess Alice of Battenberg, later Princess Andrew of Greece and Denmark (1885-1969), was the mother of Prince Philip, Duke of Edinburgh, and mother-in-law of Queen Elizabeth II. She was congenitally deaf, and grew up in Germany and England. In the late 1920s she began claiming that she was receiving divine messages, and that she had healing powers. In 1930, she was diagnosed with paranoid schizophrenia at Dr Ernst Simmel's sanatorium at Tegel, Berlin, and when treatment in Berlin clinic failed, medical records suggest that Sigmund Freud recommended her womb blasted with X-rays in order to induce menopause and thus to cure her of frustrated sexual desires. The treatment was carried out by Dr Ernst Simmel. There is no evidence the patient was consulted about this (1).

For her actions during WWII she was recognized as "Righteous Among the Nations" at Yad Vashem (the Holocaust Memorial). After the war, she stayed in Greece and founded an Orthodox nursing order of nuns known as the Christian Sisterhood of Martha and Mary. Her remains were transferred to be buried at the Convent of Saint Mary Magdalene in Gethsemane on the Mount of Olives in Jerusalem, in 1988. In 2010, the Princess was posthumously named a Hero of the Holocaust by the British Government.

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P168**Antiepileptic drugs and suicidality**

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The current study is a systematic review of the literature concerning the possible relationship of antiepileptics and suicide-related clinical features and behaviours. A MEDLINE search returned

863 papers but only 5 were chosen as relevant. A critical analysis of the FDA report is also included. Overall the current review suggests there is no convincing data concerning a 'class effect' of antiepileptics in inducing any type of suicide-related behaviours. Further research is needed concerning topiramate, lamotrigine and maybe leviracetam. Clinicians are expected to inform patients and their families on the possible increased risk but it is important not to overemphasize the issue, since stopping or refusing to start antiepileptics may result in serious harm, including death of the patient. Future RCTs should specifically focus on issues concerning depression and suicidal thoughts in patients with epilepsy.

P169

Comparison of demographic and biochemical factors in bipolar patients with regard to 1st episode polarity

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Background: The polarity at the onset of bipolar disorder (BD) has been identified as a predictive factor of various illness longitudinal characteristics.

The investigation for any differences in terms of demographic and biochemical factors in patients with different types of mood episodes at illness onset.

Materials and methods: Forty-eight bipolar inpatients participated in the study. Thirty (64.6%) had a depressive, 10 had a manic (20.8%) and 7 (14.6%) had a mixed episode at BD onset. The three groups were compared in terms of demographics (sex, age and family status) and biochemical factors (glucose, total cholesterol, LDL, HDL, fT3, fT4, TSH), age at illness onset, illness duration, family history of mood disorder, BD type, and duration of index hospitalization. In a second step, the manic and mixed 1st episode groups were merged and compared with the depressive 1st episode group.

Results: The comparison among the three groups revealed no significant differences apart from a trend concerning the values of fT3 (4.21 ± 0.80 ; 4.97 ± 1.22 ; 4.70 ± 0.81 in the depressive, manic and mixed 1st episode groups, respectively; $p=0.072$). However, when the manic and mixed 1st episode groups were merged and compared with the depressive 1st episode group a significant difference was found with regard to the values of fT3 (4.21 ± 0.80 in the depressive group vs 4.87 ± 1.06 in the manic/mixed group; $p=0.026$) in addition to a trend that marginally failed to reach statistically significant levels with regard to the type of bipolar disorder as currently diagnosed ($p=0.053$).

Conclusions: Lower current levels of free triiodothyronine (fT3) - not necessarily abnormal - were found in patients with a depressive episode at BD onset compared with patients with a manic/mixed episode. The cross-sectional type of the study makes definite conclusions about causality difficult to be drawn. Although an association between hypothyroidism and depression has been well established, the relationship between subclinical hypothyroidism and depressive episodes in bipolar disorder in particular - under a bi-directional perspective - has to be further investigated.

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The Global Disability Scale (Glo.Di.S)

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Background: The assessment of functioning and disability is an important part of the clinical evaluation, since it measures disease burden and reflects the effectiveness of therapeutic planning and interventions. The aim of the current poster was to describe the development of such a self-report instrument on the basis of a review of the literature, and compatible with the WHO approach.

Materials and methods: The review of the literature led to the development of the Global Disability Scale (Glo.Di.S) with 25 items assessing different aspects of disability. The study sample included 728 persons from vulnerable populations (homeless, jobless, very low income, single parent families etc.; (29.12% males and 70.88% females; aged 55.96±15.22 years). The protocol included also the STAI and the CES-D. The statistical analysis included factor analysis item analysis and ANCOVA.

Results: The factor analysis revealed the presence of 4 factors explaining 71% of total variance (Everyday functioning, Social and interpersonal functioning, Severity and Mental disability). Chronbach's alpha for the whole scale was 0.95 and for subscales were 0.74-0.94.

Conclusions: The results of the current study suggest that the Glo.Di.S. has the potential to serve as a reliable and valid tool for assessing functioning and disability. Further research is needed to prove that it could be useful across countries, populations and diseases, and whether it provides data that are culturally meaningful and comparable. It can be used in surveys and in clinical research settings and it can generate information of use in evaluating health needs and the effectiveness of interventions to reduce disability and improve health.

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Lower current levels of thyroid hormones in patients with later onset of bipolar disorder

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Background: Early onset of bipolar disorder (BD) has been associated with less favourable illness course and outcomes.

The investigation for any differences in terms of demographic as well as biochemical factors with regard to the age at illness onset.

Materials and methods: Fifty bipolar inpatients divided in two equal groups according to the median age at onset (26 years) participated in the study. A comparison between the two groups

(earlier vs later onset) was performed in terms of demographics (sex, age and family status) and biochemical factors (glucose, total cholesterol, LDL, HDL, fT3, fT4, TSH), polarity of first episode, illness duration, family history of mood disorder, BD type, and duration of index hospitalization.

Results: Statistically significant differences were found with regard to the current age (40.68 ± 12.50 vs 49.76 ± 11.23 ; $p=0.010$) as well as fT3 (4.85 ± 1.02 vs 3.99 ± 0.83 ; $p=0.003$) and fT4 (17.31 ± 1.27 vs 14.26 ± 4.89 ; $p=0.016$). A marginal difference was found concerning illness duration (17.96 ± 12.53 vs 11.36 ± 10.58 ; $p=0.050$). ANCOVA revealed that the differences in thyroid hormone values remained significant (though attenuated) after controlling for age, both for fT3 and fT4 ($p=0.017$; $p=0.022$, respectively) as well as after controlling for illness duration ($p<0.001$; $p=0.017$, respectively). As for lipid profile, trends were found with regards to total cholesterol (191.13 ± 45.13 , vs 219.45 ± 51.95 ; $p=0.055$) and LDL levels (113.87 ± 41.10 vs 138.59 ± 42.86 ; $p=0.057$) which became clearly non-significant after controlling for age or thyroid hormones levels. Finally, a marginal difference was found with regard to family status with a higher rate of married patients in the later onset group ($\chi^2=3.746$; $p=0.053$), which further attenuated to non-significant levels after controlling for current age.

Conclusions: Patients with later onset of BD had lower levels of thyroid hormones - not necessarily abnormal - during index hospitalization, independent of illness duration or current age and less favourable lipid profile attributable to the aforementioned differences in thyroid hormones levels. Thus, an interesting hypothesis of a potential impact of neuroendocrinological diversities on the age of bipolar illness onset emerges. However, due to the cross-sectional design of the study no definite conclusions concerning causality can be drawn yet.

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Marginal and task-specific neurocognitive deficits attributable to older age in patients with later onset of bipolar disorder

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Background: Early and late onset of bipolar disorder (BD) are regarded as rather distinct entities in terms of illness course and outcomes.

The investigation for any association between age at BD onset and demographic factors as well as current status of neurocognitive function.

Materials and methods: Fifty bipolar inpatients divided in two equal groups according to the median age at onset (26 years) participated in the study. A comparison between the two groups (earlier vs later onset) groups was performed in terms of demographics (sex, age, and family status) and neurocognitive function indicators [Wechsler Memory Scale (WMS), Trail Making Test (TMT), Figures drawing (coil;rhombs;cube;house) and clock testing (simple and Mendez)], polarity at illness onset, illness duration, family history of mood disorder, BD type, and duration of index hospitalization.

Results: Statistically significant differences were identified with regard to the current age (40.68 ± 12.50 vs 49.76 ± 11.23 ; $p=0.010$). Marginal differences were found concerning illness duration (17.96 ± 12.53 vs 11.36 ± 10.58 ; $p=0.050$) as well as the 'digits' task scores in WMS (10.5 ± 2.06 vs 9.10 ± 2.38 ; $p=0.051$). ANCOVA revealed that the aforementioned difference in WMS scores became significant when disease duration was taken into account ($p=0.02$), where-

as it was further attenuated to clearly nonsignificant levels after controlling for current age ($p=0.285$). When controlling both for current age and illness duration, none of the variables (including age at onset group) was independently significantly associated with the WMS score, but the interaction produced a statistically significant model. Finally, a marginal difference was found with regard to family status with a higher rate of married patients in the later onset group ($\chi^2=3.746; p=0.053$), which further attenuated to non-significant levels after controlling for current age.

Conclusions: Patients with later onset of BD demonstrated a slightly lower performance in neurocognitive tasks in comparison with patients with earlier onset of BD. Although different disease duration might elicit more pronounced differences, the latter were clearly attributable to differences in current age. Conclusively, although early onset BD is regarded to be associated with poorer illness outcomes, the current study challenges the attribution of cognitive decline to the earlier age at onset per se or to longer illness duration. Patients with later illness onset are older and thus more vulnerable to age-related cognitive decline. The current study implicates a multi-level interaction incorporating age at onset, disease duration and current age.

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Possible polyneuritis cranialis in a psychotic patient: diagnostic and therapeutic dilemmas

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We report here the case of a 42 years old single woman with past history of bipolar I disorder (onset at the age of 28) with psychotic features and hypothyroidism. Until the index hospitalization she suffered from several relapses and consequent hospitalizations. At day 35 she manifested severe dysphagia, dysarthria and hypersalivation at the absence of peripheral muscular disorder. The phenomena were considered to be extrapyramidal in nature and all antipsychotic treatment was stopped. At day 39 she suffered from a second fever episode (37.8o C) and during days 39-41 she was lethargic. At day 45 a new neurological examination revealed the presence of skew deviation and confirmed the presence of dysphagia and dysarthria. During the next 12 days the patient started improving, but neither the psychiatric symptoms, dysarthria, dysphagia, nor skew deviation remitted completely. She was released and put on outpatient follow-up. She was followed up 1-2 times per month on an outpatient basis. No peripheral EPS were ever evident. Dysphagia, dysarthria and skew deviation continued to improve slowly and disappeared after another 2.5 months, that is 6 months after they first appeared. The fact that none of the motor symptoms responded to anticholinergic treatment, they persisted for more than 1 month after stopping high dosages of haloperidol and their independent fluctuation argue against an extrapyramidal causation. The most probable cause could be multiple cranial neuritis (polyneuritis cranialis) (PC), which is a rare disorder of multiple cranial nerve palsies without spinal cord involvement.

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P174

Trends in suicidality amid the economic crisis in Greece

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Background: Greece has entered a long period of economic crisis with adverse effects on various aspects of daily life, including the mental health of its citizens. Several risk factors for suicidal behavior have been identified and have been classified as primary (such as the presence of psychiatric and medical conditions), secondary (adverse life situations and psychosocial risk factors) and tertiary (demographic factors such as male gender and old age). The current article tries to clarify the situation in Greece through the last decade and among the ongoing economic crisis which is characterized by recession and high unemployment rates.

Materials and methods: The authors gathered the official data concerning completed suicides, accidental falls and poisoning as well as total deaths and total population size from the Hellenic Statistical Authority (www.statistics.gr) for the years 2000-2011.

Results: The data suggest a stable suicidal rate through the years 2000-2010 with numbers fluctuating from 323 (2002) to 402 (2006) and a sharp increase during 2011 with 477 total completed suicides.

Conclusions: The results of the current study suggest an increase in suicidality in Greece during the recent economic but the relationship to specific economic indices remains problematic. Greece experienced extreme indices of crisis, so there is a possibility that high distress and suicidal thoughts lead to increased numbers of completed suicide only after a few years. A recent systematic review by the senior author of the current article showed that only community networking is effective in reducing the actual number of suicides, while training of gatekeepers and other 'educational-type' campaigns have no real effect at all. Especially, only the creation of a social support network has proven efficacy in reducing suicidality, maybe more for elderly females than for males.

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A complex pattern with no easily identifiable differences in neurocognitive tasks performance in bipolar patients with regard to first episode polarity

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Background: The type of the mood episode at the onset of bipolar disorder (BD) has been associated with various aspects of illness course and outcome.

The investigation for any differences in terms of demographic factors and the current status of neurocognitive function in patient with regard to polarity at illness onset.

Materials and methods: Forty-eight bipolar inpatients participated in the study. Thirty (64.6%)

had a depressive, 10 had a manic (20.8%) and 7 (14.6%) had a mixed episode at BD onset. The three groups were compared in terms of demographics (sex, age and family status) as well as performance in neurocognitive tasks [Wechsler Memory Scale (WMS), Trail Making Test (TMT), Figures drawing (coil;rhombs;cube;house) and clock testing (simple and Mendez)], age at illness onset, illness duration, family history of mood disorder, bipolar disorder type and duration of index hospitalization. In a second step, the manic and mixed 1st episode groups were merged and compared with the depressive 1st episode group.

Results: The performance in various neurocognitive tasks for the three groups was found to be ordered as follows: WMS (mean of the percentage of maximum score achieved per subscale): depressive>mixed>manic; TMT-A: mixed>manic>depressive; TMT-B:mixed>depressive>manic; figures drawing (overall): mixed>depressive>manic; clock-testing (simple and Mendez): manic>mixed>depressive. Nevertheless, the comparison among the three groups revealed no statistically significant differences. When the manic and mixed 1st episode groups were merged and compared with the depressive 1 episode group, trends that marginally failed to reach statistically significant levels were found with regard to the type of bipolar disorder as currently diagnosed (chi-square=5.860; p=0.053) as well as in TMT-A performance, with the latter categorized as normal, mildly to moderately and moderately to severely impaired (chi-square=5.421; p=0.066).

Conclusions: Polarity at onset seems to affect neurocognitive function in a rather complex way making definite conclusion concerning any associations of a certain polarity at onset with cognitive decline in general difficult to be infer. The hypothesis that certain types of moods episode at illness onset seem to be implicated in impaired performance in specific tasks rather than cognitive impairment in general arises but warrants further research.

P176

Relationship between social functioning as measured by the Social Dysfunction Rating Scale (SDRS) and symptom severity in schizophrenia patients: Is it possible to predict perceived social support?

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Background: Social functioning has been broadly described as the ability of a person to interact appropriately and effectively in the social world. Impaired social functioning is one of the core features of schizophrenia.

Materials and methods: The current study presents the Social Dysfunction Rating Scale (SDRS) as a tool to assess social functioning in schizophrenia patients. Firstly, we evaluated its construct validity and then examined its relationship to symptom severity and perceived social support in a clinical sample of schizophrenia patients. Subjects (N=30) were recruited from the inpatient unit of the Psychiatric Clinic of Veroia and assessed with the Greek version of the Positive and Negative Syndrome Scale (PANSS), the SDRS and the MOS Social Support Survey.

Results: Principal component analysis with Varimax rotation revealed a four factor structure for the SDRS (1.Lack of interest for social activities, 2.Dissatisfaction, 3.Negative self-image, 4.Interpersonal difficulties deriving from psychopathology). As expected, social dysfunction



increases as symptoms become more severe and negative symptoms are important determinants of psychosocial functioning in schizophrenia. Certain aspects of social functioning such as negative self-image were associated rather with negative symptoms, while dissatisfaction with general psychopathology. Lack in perceived emotional and informational social support was predicted only by negative self-image and did not correlate with symptom severity.

Conclusions: Conclusively, the application of SDRS to schizophrenia population proved its adequate construct validity and reliability. The study also confirmed the crucial role of negative symptoms in the manifestation of deficits in social function, and that of self-image in perceived social support.

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P177

Self-Management on Chronic Diseases: Literature Review

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Background: Chronic diseases are conditions that develop slowly and get worse over time (2). With the help of modern medicine, the progression of chronic diseases can often be slowed but few people can be cured. Many factors contribute to the development and evolution of a chronic disease. For example, lifestyle choices, such as smoking, drinking, excessive amounts of alcohol, poor diet, lack of exercise, and many other factors put people at risk of developing a chronic disease, having a lower quality of life and/or dying prematurely. Thus, many people can prevent or change the progression of their disease, and associated symptoms, with proper education and support.

Self-management

Self-management refers to an individual's ability to manage the symptoms, treatment, physical, psychosocial, and lifestyle changes inherent in living with a chronic condition. Self-management programmes seek empower individuals to cope with disease and live better quality lives with fewer restrictions from their illness by developing self-efficacy, which is the level of confidence that an individual has in his or her ability to succeed in dealing with their own chronic disease. It is important to note the distinction between initiatives to build patient self-management and self-management support. Self-management support requires a provider or health care team to perform a certain set of tasks to create the self-efficacy necessary for a patient to deal confidently with their own range of emotional, physical, and physiological symptoms of their

chronic disease (1,2).

Materials and methods: Medline, CINAHL and EMBASE were searched using combinations and variants of the following MeSH and key word terms: 1. self-management, self-care, self-administration, self-help, self-efficacy, patient education, patient compliance, patient participation, and 2. chronic disease, chronic illness care, chronically ill, chronic condition, long term care.

Results: Much research has been done on methods to improve chronic disease care over the past decade. Of the self-management strategies actually implemented, the characteristics vary significantly. Previously, most implementations were based on theoretical models for self-management, such as the Stanford model(4) Flinders Model or the Expert Patient Programme. (3,4) More recently, however, implemented programmes frequently blend elements from different models to apply to specific population groups and/or diseases. For example, many include the use of publicly available patient education resources(3). Most interventions continue to focus on individuals with an existing specific disease, such as diabetes, rather than addressing the common situation of people with multiple chronic conditions.

Conclusions: Self-management techniques should be taught to patient suffering from chronic diseases (including CFS and psychological/psychiatric diseases) via psychoeducational programmes, given those methods' effectiveness.

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P178

The global burden of bipolar illness

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Background: Bipolar Disorder (BD) is a severe mental illness with serious consequences for daily living of patients and their caregivers. Over 90% of patients with BD experience recurrences during their lifetime, often within 2 years of the initial episode, and the consequences of recurrent illness are substantial for the patients. Most of the patients are symptomatic for almost half of their lives despite drug treatment.

Materials and methods: literature review related to the global burden of BD was conducted using several databases.

Results: According to some studies 1/3 of BD patients have severe and 1/3 moderate disability. Both psychiatric and somatic comorbid disorders are frequent, especially personality disorders, substance abuse, cardiovascular diseases and diabetes. Medical morbidity and mortality are double in comparison to the general population with cardiovascular and metabolic issues pre-

dominating. In addition to the patient burden, caregiver burden is currently one of the key factors in managing patients with BD. While caregivers can accept some of the burden for the care of patients with BD, management of the disease also places a substantial burden on healthcare providers. BD typically places greater demand on hospital psychiatric services than non-BD depression.

Conclusions: BD can adversely affect the individual, reducing health-related quality of life and functioning, including employment and productivity at work. It is becoming increasingly recognized that BD is associated with a higher level of functional impairment than previously thought, particularly with regard to social adjustment and vocational functioning. BD (especially the spectrum) might be the most costly mental disorder and the cost of comorbid medical conditions is substantial and double of the general population.

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P179

A case of Hashimoto's encephalopathy presenting with seizures and neuropsychiatric symptomatology

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Background: Hashimoto's encephalopathy (HE), first described in 1966, is still controversial in terms of its pathophysiology, diagnosis, and treatment. The syndrome is more common in women, and is associated with an autoimmune process resulting in the development of antithyroid antibodies. The clinical presentation varies considerably and includes cerebral ischemia, seizures, cognitive decline and periods of fluctuating consciousness or psychic phenomena such as psychosis or depression. Prompt diagnosis and management are of paramount importance since the florid symptomatology of the syndrome responds in general well to immunomodulatory or immunosuppressive treatment.

Materials and methods: We describe a case of Hashimoto encephalopathy in a 31-year-old woman. She presented with complex partial seizures and neuropsychiatric symptoms (personality changes, aggression, delusional behavior, cognitive impairments such as, concentration, memory problems and disorientation, headaches and psychotic-like manifestations).

Results: CSF and imaging tests (CT & MRI of the brain, MRA, MRV) were within normal limits. The EEG was clearly abnormal (characterized by the presence of an electrographic seizure with onset in the right temporal lobe as well as mild generalized slowing). The patient was initially treated with levetiracetam for a few days which subsequently replaced (due to the gradual emergence of psychiatric phenomena) by valproic acid, oxcarbazepine, clobazam and risperidone.

Laboratory tests revealed positive antinuclear antibody (ANA), TSH: 1,82 mcUI/ml; FT4: 1.07

ng/dl, F3T: 3.36 ng/dl, and antithyroperoxidase (TPO)553,14 UI/ml (normal range: 0-35 UI/ml). An ultrasound of the thyroid was compatible with hashimoto's thyroiditis. Notably, the patient's mother is also affected by hypothyroidism secondary to Hashimoto's thyroiditis. In view of these neurolo-psychiatric symptoms, associated with high titers of antithyroid antibodies and the exclusion of other possible causes of encephalopathy, the patient was diagnosed with HE. She was started on methylprednisolone 1g/day i.v. which was discontinued on the first day due to tachycardia, hypotension and respiratory difficulty and was subsequently treated by low dose methylprednisolone resulting in a gradual improvement in the majority of her symptoms and her cognitive function, over the next 4 weeks.

Conclusions: HE should be considered in the differential diagnosis of psychotic disorders, particularly for those patients with abnormal EEG findings, history of autoimmune thyroiditis, or poor response to conventional psychiatric treatment. The early institution of immunotherapy in these patients results in general in satisfactory resolution of the prominent neuropsychiatric symptoms.

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After matriculating with a baccalaureate in mathematics, he qualified in Medicine (AOA honors) at the American University of Beirut. As an undergraduate, he published poetry and wrote a thesis on metaphysics. As a senior medical student, he won first prize for his monograph, Genes, Learning, and Sexual Behavior, that was adapted for a course in the medical school curriculum. He obtained his psychiatric training at the Universities of Tennessee (Memphis) and Wisconsin (Madison), and research training at the Wisconsin Primate Laboratory. Appointed Professor of Psychiatry and Pharmacology at the University of Tennessee (1972-90), where he also served as research director of the Sleep Center and Neurophysiological Laboratory. He was subsequently recruited as the Senior Science Advisor to the Director of the National Institute of Mental Health (1990-94), followed by a brief stint as Special Advisor to the Director of Mental Health of the WHO (Geneva). **He is presently Distinguished Professor of Psychiatry and Director of the International Mood Center at the University of California at San Diego**, where he has concurrently served on the faculty of International Health and Cross-Cultural Medicine. He

has also served as visiting clinical professor at McGill and Université Laval (Quebec, 1987-92). He is a foreign member of the Académie Nationale de Médecine [Paris], and he has received doctor honoris causae from the Universities of Lisbon (2003), Aristotle at Thessaloniki (2005), and the Armenian National Academy of Sciences (2007). Following the devastating 1988 Spitak earthquake, he led a US psychiatric delegation to Armenia. For a decade, he also served as Honorary President of the Hungarian Psychiatric Suicide Prevention Society and l'Union Nationale des Dépressifs et des Maniaco-dépressifs (Paris). He is distinguished life fellow of the American Psychiatric Association, honorary member of the Royal College of Psychiatrists (UK), founding fellow of the International Society of Affective Disorders, founding chair of the private practice section of the World Psychiatric Association, honorary fellow of the Egyptian psychiatric association, and honorary member of Argentine, Peruvian, and Mexican Psychiatric Associations.

His advisory positions include, among others, European Science Foundation, the Stella Maris Foundation, and the Fundación Juan José López-Ibor. His 1973 paper in *Science*, "Unified Theory of Depression," bridged the challenging divide between psychosocial and biomedical perspectives. His research on chronic depressions as treatable mood disorders provided hope to millions of sufferers. His mood clinics have had worldwide appeal because of his philosophy of delivering high quality care while conducting clinical training and research. His research on the offspring of bipolar patients was among the first to delineate juvenile bipolarity. His concept of bipolar spectrum contributed to early diagnosis and recognition, thereby ushering the new era of research in bipolar disorders worldwide. Jointly with Kareen Akiskal, they developed the Temperament Evaluation of Memphis, Pisa, Paris and San Diego [TEMPS], now translated into over 25 languages. The couple has also studied the creativity of Blues musicians and Parisian writers and painters: Their research on cyclothymia in artists has been replicated at Harvard, Stanford, and Calgary (Italy). The TEMPS has been instrumental in identifying 4 genes involved in the temperamental pathways to bipolar disorder, and with Norwegian collaboration, genes shared by cyclothymia and migraines.

Prof. Akiskal is the author of over 400 journal articles, and is listed by Thomson ISI "top-10 most-cited researchers in psychiatry and psychology." He is also listed in Top Doctors and Best Doctors in America. In Biomed Experts, he is listed #1 in mood disorders and the psychometrics of Temperament. Fluent in 5 languages, he has been invited to lecture in over 70 countries. His most favorite presentations include "Bridging Art, Science and Practice" at the New Parthenon Museum (Athens) and a Radio City Show (New York) to de-stigmatize mental illness. He has organized numerous congresses, of which, his favorites are: "Can We Use Laboratory Tests in Psychiatric Diagnosis?" (Memphis, 1975) and "Fifty Years of Bipolar Treatments" (Mon-

te Carlo, 2002). He is Editor-in-Chief of the *Journal of Affective Disorders* (Amsterdam) and Honorary Editor of *Psychopathology* (Heidelberg). Of his 20 books, *Bipolar Psychopharmacotherapy: Caring for the Patient* (2011, ed 2) is the latest. He has been decorated with numerous national and international prizes: Jean Delay Prize of the World Psychiatric Association, Gold Medal of the Society of Biological Psychiatry, German Anna Monika Prize, the NARSAD Prize for Affective Disorders, the Ig Noble prize for “the chemistry of romantic love,” the Italian Aretaeus Prize, as well as “the lifetime achievement award” of the European Bipolar Forum (IRBD), the Mkhitar Heratsi Gold Medal [Yerevan State Medical University], and the “lifetime achievement award” of the Armenian American Medical Society of California, special commendations for service to the community from Governor Schwarzenegger and the Mayor of Memphis, Ellis Island Medal of Honor “for exceptional national humanitarian service”, and the Aristotle Gold Medal “for distinguished contributions to psychiatry, science, and humanity.”



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Dr Andreou graduated from the School of Medicine, Aristotle University of Thessaloniki in 1997, completed her residency in psychiatry in 2005, her training in CB IN 2006 (Beck Institute for Cognitive Therapy and Research, Extramural Training Program) and completed her doctorate in 2007 (topic “Neuropsychological and psycholinguistic investigation of context-dependent information processing in schizophrenia”). He has word as research assistant in the 1st Psychiatric Department of the Aristotle University of Thessaloniki (2005-2010) and in the Department of Psychiatry, Braunschweig General Hospital, Braunschweig, Germany (2010-2011). Since 2011 she works by the Department of Psychiatry and Psychotherapy, University Medical Center Hamburg-Eppendorf, Germany. She has published a significant number of papers in national and international journals, and has received a grant by the NARSAD Young investigator Grant, Brain & Behavior Research Foundation and by the German Research Foundation.



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Dr. Awad is a professor emeritus in the Department of Psychiatry, and on the Faculty of the School of Graduate Studies in the Institute of Medical Science, University of Toronto. He also serves as the Psychiatrist in Chief of the Department of Psychiatry and Mental Health at Humber River Regional Hospital in Toronto. Dr. Awad continues to serve as a national and international reviewer and consultant for academic and service programs. He also serves in several national and international organizations, including recently being elected as the first Founding President of the newly developed International Society for CNS Clinical Trails and Methodology (ISCTM). He also served as the eleventh president of the Canadian College of Neuropsychopharmacology. He chaired and served on a number of NIH, NIMH, CINP committees. He continues to serve as a member of the International Advisory Board to the German federal government, which oversees the network of Schizophrenia Centres of Excellence in Germany. Dr. Awad made significant contributions to the Canadian Psychiatric Research Foundation, having chaired its Professional Advisory Board for a number of years and was instrumental with support from the Tanenbaum family to establish the Tanenbaum Distinguished Scientist Award in Schizophrenia. Dr. Awad was honoured to receive such an award in 1998. In 2000, he was also awarded the Canadian College of Neuropsychopharmacology medal for meritorious contributions in psychopharmacology research, teaching and services. Dr. Awad is recognized for his national and international contributions that has led to significant research development in such areas as quality of life, subjective tolerability to medications and patient reported outcomes, and outcomes research in general.



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Nazan Aydin is currently a Professor of Psychiatry at the Atatürk University, School of Medicine and director of the Department of Psychiatry. She also serves as the Medical Director of the Women Mental Health Division of Psychiatry Department at Atatürk University in Turkey.

Aydin received his medical degree from Cumhuriyet University and completed his postgraduate medical education at Atatürk University with a training in adult psychiatry. She was appointed as Assoc.Prof. in 2003. She has been working as a professor in Psychiatry since 2008.

Her research efforts have lately been on women's mental health and especially on perinatal psychiatry. She aims to enhance the awareness, prevention, and treatment of mental health problems related to childbearing. Aydin has initiated to set up an official cooperation between International Marcé Society and the Turkish Association for Psychopharmacology (TAP). She is the corresponding representative of Turkish Marce society and these two associations have been working together on global issues related to perinatal area. In connection with this interest she also became interested in Interpersonal Psychotherapy (IPT) which is one of the preferred treatments in perinatal psychiatry. She has been conducting some educational activities to disseminate IPT in Turkey.

Dr. Aydin is also founder and coordinator of Women Mental Health Section of TAP, Pregnancy and Birth Related Psychiatric Disorders Section of The Psychiatric Association of Turkey.

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Born in Thessaloniki Greece. Received her B.S. Degree from the Experimental-Cognitive Psychology Sector of the Psychology Department of the Aristotle University of Thessaloniki (AUTH). She is currently a postgraduate student in the Cognitive Psychology and Neuropsychology Program of the Aristotle University of Thessaloniki. Has received training in Cognitive Behavioral therapies. Her research interests include health psychology and neuropsychology.



Bender, Stefan

Medical Director of the LWL Hospitals for Adult and Child and Adolescent Psychiatry, Psychotherapy and Psychosomatics in Marsberg, Germany

Dr. Stefan Bender is Medical Director of the LWL Hospitals for Adult and Child and Adolescent Psychiatry, Psychotherapy and Psychosomatics in Marsberg, Germany (LWL-Kliniken Marsberg).

He studied medicine, philosophy and sociology at the Universities of Münster and Konstanz. In 1986, he earned his doctorate (MD) at the University of Münster. After performance of residencies in neurology and psychiatry he obtained board examinations for neurology, psychiatry and psychotherapy. Between 1992 and 1998 as well as 2000 and 2002 he worked as senior physician at the Department of Psychiatry and Psychotherapy of the University of Duisburg-Essen. In 1999, he was a Visiting Fellow in the School of Psychiatry at the University of New South Wales in Sydney, Australia.

Currently, Dr. Bender is head of the LWL Psychiatric Hospitals in Marsberg. He received his postdoctoral lecture qualification ("Habilitation") in psychiatry and psychotherapy by the University of Duisburg-Essen. His research interests focus on treatment as well as biological basis of schizophrenia and on treatment of substance-related disorders.



Bez, Yasin

Medical Director of the LWL Hospitals
Associate Professor of Psychiatry (on
Behalf of Prof. Dr. Murad ATMACA), Dicle
University School of Medicine, Depart-
ment of Psychiatry, Diyarbakir, Turkey

Yasin Bez is currently the director of Mood Disorders Section of Psychiatry Department in Dicle University School of Medicine and employed as teaching staff in the same department and pursues his PhD degree in pharmacology.

He has studied on side effects of atypical antipsychotics and FDA MedWatch database in Virginia Commonwealth University. His works in psychiatry mainly focus on schizophrenia, bipolar disorders, depression, and social phobia. He has conducted many phase 3 and 4 studies in these fields as principal investigator or sub-investigator. He has published over 60 articles in the field and is the current online editor of Bulletin of Clinical Psychopharmacology. He organized many national and international congresses during the last 7 years. He is married with two children.



Bouras, Constantin

Professor, University of Geneva,
Switzerland

Professor Constantin Bouras (M.D.) has worked since 1973 in the Department of Psychiatry, Division of Neuropsychiatry of the Geneva University Hospitals. He obtained his medical diploma in 1973 at the University of Athens (Swiss Diploma in 1982 at the University of Geneva) and acquired the title of specialist in pathology in 1988 at the University of Athens; recognized in 2004 in Switzerland. In 1987 he obtained the "Diplôme d'Etudes Approfondies en Neurosciences" at the Medical University of Marseille. Since 1992 he is Visiting Associate Professor of Neurobiology at the Mount-Sinai School of Medicine. "Privat docent" in 1990 and "chargé de cours" (senior lecturer) in 1994, he was named professor in 2004. Since 1994 he works as Chief of the Division of Neuropsychiatry in the Department of Psychiatry. He is currently Co-director of the Swiss Reference Center for the neuropathological diagnosis of neurodegenerative disease. He is active in diagnostic, teaching and research activities.

His main research interests are clinicopathological correlations in the different types of dementia, mainly Alzheimer's disease. In the last years his group has also focused on vascular brain lesions which can have an important role in the development of cognitive decline. He is author or co-author of more than 175 peer reviewed publications with an *h-index* of 49.



Boutros, Nash

Wayne State University, Department of Psychiatry and Behavioral Neurosciences, USA

Professor of Psychiatry and Neurology. Degrees: MBCh, Cairo University (1974); MD equivalency, ECFMG (1978); Psychiatry Residency, Illinois State Psychiatric Institute (1979-82); Neurology Residency, University of Illinois, Chicago (1982-84); Clinical Neurophysiology fellow, University of Illinois, Chicago (1982-1983), Behavioral Neurology fellow, University of Texas, Dallas (1983-1984). Assistant Professor Psychiatry and Neurology, University of Texas, San Antonio (1985-1988). Assistant Professor Psychiatry and Neurology and director of sleep laboratory, University of Texas, Houston (1988-1991). Assistant Professor Psychiatry and Neurology, Ohio State University (1991-1995). Associate Professor of Psychiatry, Yale University (1995-2005). Professor of Psychiatry and Associate Chair for Research, Wayne State University (2005-present). Research: Transcranial Magnetic Stimulation (TMS) in Psychiatry, auditory evoked responses in schizophrenia, use of diagnostic tests in Psychiatry. 180 peer-reviewed publications, chapter contributions, reviews, author of three books. On the editorial board of *Activitas Nervosa Superior*, *J of Integrated Neurosciences*, *Asian Journal of Psychiatry*, *Clinical Schizophrenia and Related Psychoses*, *Psychiatry Research*, *Neuropsychiatry and Clinical Neurosciences*, *Clinical EEG and Neurosciences*, and ad hoc reviewer for 28 journals. Current support: National Institutes of Drug Abuse, National Institute of Mental Health and State of Michigan. Member: American Psychiatric Association, Society of Biological Psychiatry, American Neuropsychiatric Society, World Psychiatric Organization (Section secretary), EEG and Clinical Neuroscience Society (ECNS, Founding member and treasurer), Society for Psychophysiology Research, American Clinical Neurophysiology Association, Association for Academic Psychiatry, International Pharmacology EEG Group (IPEG), and International Society for Transcranial Stimulation.



Bozikas, Vasilis P.

Assistant Professor of Psychiatry 1st Department of Psychiatry Aristotle University of Thessaloniki Greece

Vasilis P. Bozikas MD, PhD, is an Assistant Professor at Aristotle University of Thessaloniki, 1st Department of Psychiatry of General Hospital of "Papageorgiou", in Thessaloniki, Greece. Dr Bozikas received his medical degree (1991), performed his residency in psychiatry (1999), and earned his PhD in psychiatry (2002) at the Aristotle University of Thessaloniki. He collaborated with the Division of Neuropsychiatry, at the University of Geneva in Switzerland investigating on the neuroanatomical substratum of depression in patient with cerebrovascular disease. He is the head of the inpatient service and the "Early Intervention in 1st Psychotic Episode" service of the department. He participates in psychiatric training of undergraduate and postgraduate students as well as of psychiatry residents. Dr Bozikas' fields of clinical and research interest are general psychiatry, biological psychiatry, psychopharmacology, neuropsychology, schizophrenia, and bipolar disorder. He has authored and co-authored more than 240 papers and 65 of them have been published in international peer review and Medline

indexed journals such as *Schizophrenia Research*, *Journal of the International Neuropsychological Society*, *Psychiatry Research*, *Comprehensive Psychiatry*, *American Journal of Geriatric Psychiatry*, *Stroke*, *Progress in Neuropsychopharmacology and Biological Psychiatry*, *Journal of Neuropsychiatry and Clinical Neurosciences*, *Journal of Nervous and Mental Diseases*, *Australian and New Zealand Journal of Psychiatry*, among others, with over 700 citations, impact factor 172, and h index 17. He, also, authored or co-authored a number of chapters in books.



Campanella, Salvatore

Laboratory of Psychological Medicine
and Addiction, Free University of
Brussels, Belgium

Salvatore Campanella (19/01/1973) is a full-time Research Associate for the Belgian Fund of Scientific Research (FNRS), Laboratory of Psychological Medicine and Addiction, University of Brussels (ULB), Belgium. His main project consists in identifying through electrophysiology cognitive mechanisms that should be faced with in alcohol-dependent patients to reduce relapse. He is officer since 2011 of the WPA (World Psychiatric Association) Section on Psychophysiology in Psychiatry. He is Lecture course teacher in the master and PhD teaching program at the Faculty of Psychology of the Free University of Brussels (Belgium). He authored or co-authored 64 scientific papers (with 58 indexed in Scopus, 820 citations, h-index: 15), 4 books chapters and he's editor of 4 books.

Five most outstanding publications

1. S. Campanella, F. Joassin, B. Rossion, R. Bruyer, A. De Volder, & M. Crommelinck. Association of the distinct visual representations of faces and names: A PET activation study. *NeuroImage*, 14(4), 873-882 (2001). IF : 5.895
2. S. Campanella, P. Quinet, R. Bruyer, M. Crommelinck, J-M Guerit. Categorical perception of happiness and fear facial expressions : an ERP study. *Journal of Cognitive Neuroscience*, 14 (2), 210-227 (2002). IF : 5.175
3. S. Campanella, P. Belin. Integrating face and voice in person perception. *Trends in Cognitive Sciences*, 11(12), 535-543 (2007). IF : 12.586
4. F. Joassin, M. Pesenti, P. Maurage, E. Verreckett, R. Bruyer, S. Campanella. Crossmodal integration of faces and voices in the left angular gyrus. *Cortex*, 47(3), 367-76 (2011). IF : 6.080
5. G. Petit, C. Kornreich, X. Noel, P. Verbanck, S. Campanella. Alcohol-Related Context Modulates Performance of Social Drinkers in a Visual Go/No-Go Task: a Preliminary Assessment of Event-Related Potentials. *Plos One*, 7(5):e37466 (2012). IF : 4.41.



Carvalho, André F.

Associate Professor of Psychiatry,
Federal University of Ceará, Brazil

André F. Carvalho received his medical degree (2000) from the Federal University of Ceará (Brazil). He had completed psychiatry residency at the Fundação Mário Martins in Porto Alegre (Brazil). In 2005, he earned a doctorate degree from the Federal University of Rio Grande do Sul (Brazil) under the advice of Iván Izquierdo, a worldwide recognized neuroscientist. He is currently associate professor of psychiatry at the Federal University of Ceará (Brazil). He leads the psychiatry research group in the same institution.

Prof. Carvalho currently advises several graduate students. His main areas of research interest are in the field of mood disorders and consultation-liaison psychiatry. He performs both basic and clinical research. His research efforts had resulted thus far in several publications in peer-reviewed journals, such as *Current Opinion in Psychiatry*, *Bipolar Disorders*, *Pediatrics*, *Journal of Affective Disorders*, *Psychopharmacology*, *European Neuropsychopharmacology*, *European Archives of Psychiatry and Clinical Neuroscience* and *Arthritis Care and Research*. He is a frequent reviewer of several periodicals, such as *Psychotherapy and Psychosomatics*, *International Journal of Neuropsychopharmacology*, *Journal of Affective Disorders* and *Journal of Psychosomatic Research*.

His research has been funded by the 'National Counsel of Technological and Scientific Development' (CNPq, Brazil), the 'Fundação Cearense de Apoio ao Desenvolvimento Científico and Tecnológico' (FUNCAP, Brazil) and the Greek Ministry of Education-Lifelong Learning and Religious Affairs (NSRF-European Union) - ARISTEIA project. He collaborates with several researchers abroad and had set the "Fortaleza-Ioannina coalition", which is a strong collaborative effort between the medical schools of the University of Ioannina (Greece) and the Federal University of Ceará (Brazil). Prof. Carvalho is a speaker for several national and international meetings and he enthusiastically teaches basic and clinical psychopharmacology.



Carvalho, Hudson de

Professor of Clinical Psychology, Federal
University of Pelotas, Brazil

Hudson W. de Carvalho is a psychologist, holds a Master of Science degree in Developmental Psychology and a Ph.D in Psychiatry. His main areas of research are psychiatric nosology and individual differences in temperament and personality. Currently, he is a full time professor of Clinical Psychology at the Federal University of Pelotas and a researcher of the Brazilian Internet Study on Temperament and Psychopathology (BRAINSTEP).



Çetin, Mesut

Gülhane Military Medical Academy (GATA), Haydarpaşa Training Hospital, Department of Psychiatry, Turkey

Mesut Çetin was born in Uşak Turkey in 1957. He is married and he currently works at Gülhane Military Medical Academy (GATA), Haydarpaşa Training Hospital, Department of Psychiatry which is located at Kadıköy, 81327 İstanbul/Turkey. Between 1976 and 1980 he received undergraduate education at the School of Medicine of Ege University, located in Bornova-İzmir/Turkey. He received his graduate education at Gülhane Military Academy, Department of Psychiatry, which is located in Ankara, Turkey.

Çetin worked as an Assistant Prof. of Psychiatry at Gata Haydarpaşa Training Hospital's Department of Psychiatry, which is located in Kadıköy-İstanbul, between 1989 and 1991. Between the years 1991 and 1999, her has been an Associate Professor Psychiatry. Besides, he also is the Director of Dept. of Psychiatry of GATA Haydarpaşa Training Hospital, located in İstanbul since 1996. His faculty work at GATA Haydarpaşa Training Hospital as Head of the Dept. of Psychiatry, continues with him being a Professor of Psychiatry since 1999.



Chrysanthou, Christos

Medical Director of the LWL hospital for Psychiatry, Psychosomatics and Neurology in Lengerich, Germany

Dr. Christos Chrysanthou is the medical director of the LWL hospital for Psychiatry, Psychosomatics and Neurology in Lengerich, Germany.

He graduated at the University of Muenster where he also gained his doctorate in 1990. He specialized in the field of Psychiatry, Psychotherapy and Neurology and is furthermore a nationally registered supervisor for postgraduate training in cognitive behavioral therapy and therapist in dialectical behavioral therapy.

For years, Dr.Chrysanthou has been engaged in the implementation and scientific evaluation of disorder-specific concepts of psychotherapy in psychiatry.

Since 2008 he is involved as a lecturer in the department of psychology at the University of Muenster.



Cuijpers, Pim

Professor of Clinical Psychology, VU University Amsterdam, The Netherlands

Pim Cuijpers is Professor of Clinical Psychology at the VU University Amsterdam (The Netherlands), and Head of the Department of Clinical Psychology. Since 2009, Pim Cuijpers is also Vice Director of the EMGO Institute for Health and Care Research (www.emgo.nl), and was Vice Dean and Research Director of the Faculty of Psychology and Education of the VU University from 2007 to 2010.

According to Microsoft Academic Search, he is currently number 26 on the list of most influential researchers of the past five years in the field of psychiatry and psychology. Pim Cuijpers has published more than 400 peer-reviewed papers, chapters, reports and professional publications. Pim Cuijpers is specialised in conducting randomised controlled trials and meta-analyses on prevention and psychological treatments of common mental disorders. Furthermore, he has published about drug prevention, psychoeducational treatment of depression, bibliotherapy and internet interventions for depression. He was recently appointed as Member of the Guideline Development

Panel (GPD) for Depressive disorders of the American Psychological Association, and is advisor for several other international projects. His h-index currently is 47 (according to Publish or Perish; 35 in ISI Web of Knowledge; 42 in Scopus). Since 2005 he has acquired for more than 4 million euros on research funding as principal investigator, and was involved by many other research grants as advisor. Since 2005, he was the supervisor of 20 finished Ph.D students, and currently supervises another 22 Ph.D. students. On average he gives 10 invited and keynote lectures per year of which about 5 are in the Netherlands and 5 in other countries. Before he was appointed as a Professor at the VU University in 2004, Pim Cuijpers worked for 15 years in mental health care as psychologist and prevention specialist. He received his PhD at the Radboud University in Nijmegen in 1993 for his thesis on support groups for caregivers of dementia patients. He also worked at the Trimbos Institute, as Head of the Prevention Department (1997-2004).



Das, Arundhuti

Institute of Medical Chemistry,
Molecular Biology and Pathobio-
chemistry, Semmelweis University,
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Arundhuti Das is a Ph.D scholar in the Department of Anthropology, North Eastern Hill University, Shillong, India. Currently she is on a partial PhD programme in the group of Prof. Maria Sasvari-Szekely at the Institute of Medical Chemistry, Molecular Biology and Pathobiochemistry at Semmelweis University, Budapest, Hungary. She is under a scholarship program from the Balassi Institute, Budapest. Her research interest lies in the field of psychiatric genetics. She is working on different ethnic groups from India studying the genetic background behind traits that is perceived to have strong cultural predisposition in the respective environmental setting of the population. She is working on traits like addiction to tobacco, betel nut and alcohol and also on impulsivity and aggression. She has also studied genetic association of bipolar disorder and the serotonergic system in a clinical population. She has her Masters degree in Human Genetics and Bachelors degree in Biotechnology.



Diakogiannis, Ioannis

Associate Professor of Psychiatry,
3rd Department of Psychiatry, School
of Medicine, Aristotle University of
Thessaloniki, Greece

Dr Ioannis Diakogiannis was born in Thessaloniki in 1956, and graduated from the American College of Thessaloniki. He received his medical degree from the Medical School of Aristotle University of Thessaloniki (AUTH) in 1980. He was specialized in Psychiatry in the 1st and 3rd Psychiatric departments of A.U.TH and in the Department of Psychiatry of the Yale University-USA. He received a fellowship in Substance Abuse Treatment Unit from the Yale University-USA. From 1991 to 1998 worked as a scientific associate in the Department of Psychiatry and the Department of Pharmacology of the Aristotle University of Thessaloniki while he achieved his doctorate thesis in 1992. In 1998 he became Lecturer in Psychiatry, in 2002 Assistant Professor and in 2008 Associate Professor. Since 1998 he is the head of the Drug Dependence Unit of the 3rd Department of Psychiatry of A.U.TH. Dr. Diakogiannis has co-authored more than 100 scientific papers which have been presented in scientific meetings or have been published in scientific journals.



He is member of many Scientific Committees and national associate representative in the Scientific Committee of the European Center for Drugs and Drug addiction in Lisbon, Portugal. He is also a member of the European Commission's projects for Alcohol ("Bridging the Gap", "brief interventions for alcohol abuse" and "building capacity") and a member of the working group of the European Psychiatrists specialized in alcoholism. He is General Secretary of the Greek Society for the Study of Addictive Substances, member of the Advisor Committee of the South East European Society for Neurology and Psychiatry, member of the American Academy of Addiction Psychiatry, General Secretary of the branch for Psychiatry of addictions of the Greek Psychiatric Association and member of the editorial board of the scientific journal Biological Psychiatry and Neurology.



Dikeos, Dimitrios

Associate Professor of Psychiatry,
University of Athens, Greece

Dimitris G. Dikeos is an Associate Professor of Psychiatry at the 1st Department of Psychiatry of Athens University Medical School, Athens, Greece and a Visiting Research Associate at the Division of Psychological Medicine, Institute of Psychiatry, King's College London, London, UK. His research activities have focused on psychiatric genetics, sleep research, psychopharmacology and clinical studies in psychiatry. He has participated in various Multicentre Research Programmes in Europe and the U.S.A. such as: European Science Foundation, European Collaborative Studies of Affective Disorders, Johns Hopkins Genetic Epidemiology Schizophrenia Program, Meta-analysis of Sleep Laboratory Studies on Tolerance and Rebound Insomnia with Rapidly Eliminated Hypnotics, Maudsley Family Study, European Collaborative study by the Group for the Study of Resistant Depression, International Multicentre Study "FACTOR", etc. He is or has been member of various scientific and professional Societies and Boards, as well as member of the Executive Committees of the Hellenic Sleep Research Society, the International Neuropsychiatric Association, the Athens Medical Society, the Hellenic Society for the Advancement of Psychiatry and Related Sciences. He has also served as member of the Editorial Board of the "Archives of Hellenic Medicine" and is a reviewer in many international Journals. Dr. Dikeos is the author or co-author of more than 100 full publications, out of which 50 articles in SCI Journals, among which: American Journal of Medical Genetics, British Journal of Psychiatry, Current Opinion in Psychiatry, International Clinical Psychopharmacology, Journal of Psychosomatic Research, Molecular Psychiatry, Nature Genetics, Psychiatric Genetics, and Science.



Dimellis, Dimos

Consultant, 424 General Military Hospital, Thessaloniki, Greece

Graduated from the Medical School of Aristotle University of Thessaloniki in 1994, and completed his residency in psychiatry in 2002. He served as consultant, Psychiatric department, 404 General Military Hospital, Larissa, Greece (2003-2004) and currently is consultant at the rank of Lieutenant Colonel, Psychiatric department, 424 General Military Hospital, Thessaloniki, Greece, and also private practice ("EGO IDEAL", Private Institute of Mental Health). He is scientific associate, 2nd Psychiatric Department, Aristotle University of Thessaloniki (2006 - Today) and responsible for the continuous seminars of "Psychobiology" and "Psychopharmacology". As from 2007 he prepares his doctorate thesis ("Detection of bipolarity in Major Depressive disorder"). His interests include Psychopharmacology, Schizophrenia and other Psychotic disorders, Bipolar Spectrum disorders. He has participated in more than 50 International and Regional and meetings and congresses and was invited speaker for various scientific associations.



Dimitraka, Maria

Consultant Psychiatrist in Adult Psychiatry, Psychiatric Hospital of Attica, Athens, Greece

Born in Greece (30.01.1976) and lives in Pireus.

Married and mother of three children.

Earned medical degree from the University of Medicine and Pharmacy "G.T.POPA" in Iasi-Romania.

Completed psychiatric residency at the Psychiatric Hospital of Attica, in October 2011.

Trained in Family therapy, CBT and psychodynamic psychotherapy. Carried out publications and presentations covering the fields of psychopharmacology, geriatric psychiatry and Forensic Psychiatry. Member of the Hellenic Forensic Psychiatric Association.

She is currently a private psychiatrist and is also working in a Psychosocial Rehabilitation Unit. Also working in the field of Clinical Research as investigator in clinical trials. Scientific personnel of the 5th psychiatric department at the Psychiatric Hospital of Attica.



Dittmann-Balcar, Alexandra

Outpatient Department of the LWL Hospital for Adult Psychiatry, Psychotherapy and Psychosomatics, Marsberg, Germany

Dr. Alexandra Dittmann-Balcar is a psychologist in the outpatient department of the LWL Hospital for Adult Psychiatry, Psychotherapy and Psychosomatics in Marsberg, Germany (LWL-Klinik Marsberg). She specializes in the treatment of acute stress disorder and posttraumatic stress disorder.

Dr. Dittmann-Balcar received her psychological degree at the Ruhr University Bochum in 1993 and earned her doctorate (PhD) in medical science at the University of Duisburg-Essen in 2002. She served an apprenticeship in solution focused family therapy and cognitive behavioral trauma therapy.

Since 2004, she is a staff member in the LWL Psychiatric Hospital in Marsberg and in 2008 she was appointed deputy head of the psychotherapeutic emergency management system of the network of all LWL Psychiatric Hospitals in Westfalia (LWL-PsychiatrieVerbund Westfalen).

She is a volunteer at the German Federal Agency for Technical Relief as well.



Donikis, Manina

Department of Philosophy, Aristotle
University of Thessaloniki, Greece

After graduating American College Anatolia in 2002, she attended the German School of Aristotle University studying Translation, Literature and Culture. In 2008 she obtained a scholarship for the German Philosophy and Culture summer programme in Fulda, Hessen University. Since October 2011 she entered the Department of Philosophy of Aristotle University focusing on Theory of Knowledge, Phenomenology, Ontology and Metaphysics combined with Theories of Consciousness of the Psychology Department. Along with freelance translating she is teaching German and English and German Literature at the Anatolia International Baccalaureate Programme.

The primary research interests focused upon are the function of perception as the substructural field of the whole system of cognitive "reality"; transformative consciousness regarding the handling of external conceptions, thus also their representative formation in memory; the simulative expression of knowledge and language, as well as action control.



Douzenis, Athanasios

Associate professor of Psychiatry and
forensic Psychiatry, Second University
Psychiatry Department, Attikon Hos-
pital, Greece

Athanasios Douzenis qualified in Medicine in 1985 from the Ioannina Medical School and did higher psychiatric training in the UK receiving an M. Med. Sci from Sheffield University Medical School. He trained in psychiatry in England (Sheffield and London) and became MRCPsych in 1992. He completed his doctorate in Athens University Medical School on Forensic Psychiatry under the supervision of Prof. Stefanis. Since his return in Greece (1995), he worked with OKANA where he helped establish the first substitution programme in Greece and was head of the largest methadone unit in Athens. He became a lecturer in Forensic Psychiatry in 2000 and Assistant Professor on the same subject in 2005. Initially he worked in Eginition Hospital and later moved on with Prof Soldatos and Lykouras to establish the Second Athens University Psychiatry Department in Attikon Hospital. He has published 2 books about Forensic Psychiatry, has written more than 30 chapters in psychiatric books (3 with international publishers) and has 36 SCI publications. He has participated in numerous national and international psychiatric conferences. He is heading the Forensic Psychiatric Unit in the Second Psychiatry Department which is the only Forensic Unit in Greece.

He is President of the Section of Forensic Psychiatry of the Greek Psychiatric Association and is the publisher of the journal "Ate" (Ατη) He is married and has three children.



Einat, Haim

Professor, School of Behavioral Sciences, Tel Aviv-Yaffo Academic College, Tel-Aviv, Israel

Haim Einat is a professor at the School of Behavioral Sciences, Tel Aviv-Yaffo Academic College in Israel and an adjunct professor at the Dept. of Clinical Biochemistry and Pharmacology, Ben-Gurion University of the Negev, Israel and in the College of Pharmacy at the University of Minnesota, USA. Professor Einat received diverse education with an undergraduate degree in biomedical sciences from the Hebrew University of Jerusalem, followed by graduate degrees in zoology (from Tel-Aviv University) and in neuroscience and behavioral sciences (McMaster University, Canada) and finally a Ph.D. in psychopharmacology from Ben-Gurion University of the Negev in Israel. Professor Einat received additional training as a post-doctoral fellow at the National Institute for Mental Health in Bethesda, MD and in 2004 accepted a faculty position at the College of Pharmacy, University of Minnesota. In 2011, Professor Einat moved back to his home country Israel and took his current position.

Professor Einat is using a combined behavioral, biochemical and molecular approach to study the underlying biology of affective disorders and to identify possible novel drug targets. His work is highly recognized by the scientific community with over 80 publications in the professional literature, numerous conference presentations and over 2000 citations. Professor Einat also serves on the editorial boards of a number of journals in his field of research and serves as an ad hoc reviewer most scientific journals in the field as well as a reviewer for many of the granting agencies.



Falkai, Peter

Professor of Psychiatry and director, Psychiatric Department of the University of Munich Psychiatric Hospital, Munich, Germany

Peter Falkai has been working in the field of psychiatry for 25 years. He obtained his doctor of Medical Science in 1987, specialized in psychiatry in 1992 and completed his postdoctoral thesis (habilitation) in psychiatry in 1995. In 1996 he was appointed Professor of Medical Psychology and vice-chairman of the Department of Psychiatry, University of Bonn, Germany, where he functioned as senior medical director from 1997 to 2002.

From 2002 to 2006 Prof. Falkai was appointed full professor and chairman of the Department of Psychiatry and Psychotherapy at the University of Saarland, Germany. From 2006 to 2012 he functioned as full professor and chairman of the Department of Psychiatry and Psychotherapy at the University of Göttingen, Germany. He is currently full professor and chairman of the Psychiatric Department of the Ludwig-Maximilians-University München, Germany.

Prof. Falkai's main research interest is focused on the neurobiology of psychotic disorders, namely schizophrenia, allowing the use of techniques ranging from functional imaging to gene expression in human post-mortem-tissue. He has managed to obtain state funding for numerous of his research projects.

In addition to authoring many scientific publication (Hirsch-Index: 43) Prof. Falkai acts as Chief- Editor of The European Archives of Psychiatry and Clinical Neuroscience (EAPCN) and

holds positions on the editorial boards of other national and international psychiatric journals. He has been involved in creating treatment guidelines for schizophrenia for the World Federation of Biological Psychiatry (WFSSBP) as well as for the German Society of Psychiatry, Psychotherapy and Nervous Diseases (DGPPN), where he has been chairman since 2011.



Fotiadis, Petros

Consultant at rank of Lieutenant Colonel, Psychiatric department, 424 General Military Hospital, Thessaloniki, Greece

Petros Fotiadis MD, is Consultant with the rank of Lieutenant Colonel, at the Psychiatric department, 424 General Military Hospital, Thessaloniki, Greece.

Petros Fotiadis received his medical degree at Aristotle University of Thessaloniki (A.U.TH.), Greece in 1993. He spent his residency in psychiatry in the 2nd Psychiatric department of A.U.TH, and completed specialization in psychiatry in 2002. He served as consultant with the rank of Major, Psychiatric department, 496 General Military Hospital, Didimoteixo, Greece (2002-2003), and as consultant at rank of Lieutenant Colonel, Psychiatric department, 424 General Military Hospital, Thessaloniki, Greece (2004-2012). He also works in his private practice (2002-Today).

He has received a 2 years Fellowship, 3rd Psychiatric department (A.U.TH), Greece (2012-Today), in "Neuropsychological Assessment of Cognitive deficits in Schizophrenia and other Organic Psychiatric disorders". His areas of clinical and research interest are Schizophrenia, Bipolar spectrum disorders, Organic Psychiatric disorders, Military and Disaster Psychiatry and Psychopharmacology. He has participated in more than 100 International and Regional meetings and congresses, in some of which as a speaker for specific areas of interest. He has authored and co-authored more than 20 papers delivered in Greek and International congresses. He is also in collaboration with the National and Kapodistrian University of Athens, Faculty Nursing, in the Post Graduate program "Disaster Medicine and Crisis Management". He has participated at several Training Meetings and Masterclasses, and also at the translation of Judith S. Beck book "*Cognitive Therapy Basics and Beyond*" 1995 The Guilford Press.



Fountoulakis, Konstantinos N.

As. Professor of Psychiatry,
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Konstantinos N. Fountoulakis, MD, is As. Professor of Psychiatry at Aristotle University of Thessaloniki, AHEPA University Hospital, in Thessaloniki, Greece.

Dr. Fountoulakis received his medical degree (1989), performed his residency in psychiatry (1998), and earned his doctorate in psychiatry (1999) at the Aristotle University of Thessaloniki. He received a 3-year fellowship in psychosomatic medicine and a 1-year postdoctoral fellowship for research from the State Scholarships Foundation of Greece. Until 2003 he served as a medical officer in the Greek Armed forces retired with the rank of major. In 2005, Dr. Fountoulakis was a Research Fellow in the Department of Psychiatry, Division of Neuropsychiatry, at the University of Geneva in Switzerland.

Dr. Fountoulakis' areas of clinical and research interest are reflected in the topics that he teaches: general psychiatry, biological psychiatry, psychopharmacology, mood disorders, schizophrenia and personality disorders. He is an active member of a number of national and international professional organizations, including the EPA, APA, WPA, CINP, ECNP, ISAD, ISBD, EBF and others, peer referee for the Cochrane Collaboration and was most recently a member of the Collegium Internationale Neuro-Psychopharmacologicum (CINP) Advisory Board to the Task Force on the Usefulness of Antidepressants and the Mental Health Economics Task Force of the International Psychogeriatric Association (IPA).

In 2009 was appointed member and in 2012 chair of the Greek Ministry of Health Committee for the Administrative, Economic and Scientific Supervision of the Mental Health Units of the deinstitutionalization project. He chairs the ISNP and since 2006, he served as Secretary, since 2008 as co-chair, and currently as Chair of the Private Practice Section, of the World Psychiatric Association. He served as Chair of the CINP Credentials and Membership Committee (2010-2) and currently he chairs the Neuropsychological and Psychometric Instruments Section, of the Greek Psychiatric Association.

Dr. Fountoulakis is Editor in Chief of *Annals of General Psychiatry* and is Section Editor of *Current Opinion in Psychiatry*. He has coauthored more than 350 papers delivered to congresses and more than 160 of them are published in international journals such as the *LANCET*, *Biological Psychiatry*, *International Journal of Neuropsychopharmacology*, *Journal of Affective Disorders*, *Schizophrenia Research*, *Psychiatry Research*, *Bipolar Disorders*, *Annals of General Hospital Psychiatry*, and the *British Journal of Psychiatry*, among others, with over 2000 citations and $h=25$. He authored or co-authored a number of chapters in books including the Mood disorders chapter for the Wiki project of the World Psychiatric Association (WPA). He has received a number of national and international research awards, including the 2012 Kraepelin-Alzheimer Medal of the Psychiatric Department of the University of Munich.



Garyfallos, Georgios

Associate Professor of Psychiatry,
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Psychiatry Aristotle University of
Thessaloniki, Greece

George Garyfallos M.D., Ph.D. is Associate Professor of psychiatry at the Aristotle University of Thessaloniki, and director of the 2nd Department of Psychiatry of the psychiatric Hospital, In Thessaloniki, Greece.

Dr. Garyfallos received his medical degree (1976), performed his residency in neurology and psychiatry (1981) and earned his Ph.D. in psychiatry (1985) at the Aristotle University of Thessaloniki. He made further postgraduate studies at the United Medical and the Dental Schools of Guy's and St Thomas's Hospital, Division of Psychiatry (Chairman Prof. JP. Watson), London, (1988-1989). There, he is trained in Cognitive-Analytic Therapy, Marital Therapy and Crisis intervention. He worked in the NHS, in Greece at the 2nd Dept. of Psychiatry of the Aristotle University from 1981 - 2006. From 1996-2006 he was, as a consultant of Psychiatry, the head of Mental Health Center of N/W District, Thessaloniki, Greece, while offered, at the same time clinical and educational work in the 2nd Dept. of Psychiatry of the Aristotle University. At 2006 he has been elected assistant professor of Psychiatry. Since 1981, Dr. Garyfallos participates in psychiatric training of undergraduate and postgraduate students, as well as, of residents in psychiatry. Since 2008, he is the tutor of the training program of the 2nd Dept. of Psychiatry of the Aristotle University, for psychiatry residents.

Dr. Garyfallos' fields of clinical and research interests are psychopathology, psychopharmacology and psychotherapy. He has authored and co-authored more than 250 papers, 35 of them have been published in international peer review journals such as *Acta Psychiatrica Scandinavica*, *Br. J. Psychiatry*, *Compr. Psychiatry*, *Psychiatry Research*, *Schiz. Research* etc. with over 350 citations and impact factor 76. He also authored a number of chapters in books. Dr. Garyfallos is one of the two national delegates, of the Hellenic Psychiatric Association, at the UEMS. He is a member of several national and international psychiatric associations and is/was member of the executive council of such associations or sections.



Giannakopoulos, Panteleimon
Professor of Psychiatry, University of
Geneva, Switzerland

Prof. P. Giannakopoulos, born in Athens, Greece in 1965, where he achieved his education and medical studies before specializing at the Faculty of Medicine in Geneva where he graduated as privat docent in 1997. In 1999 he achieved the board certification as specialist in psychiatry and psychotherapy followed in 2008 by the board certification in Old Age psychiatry and psychotherapy and in 2010 he added the Board certification in Liaison psychiatry. In 2005, he becomes Head of the Psychiatry Department of the Geneva University Hospital. Prof. P. Giannakopoulos developed an early interest in Dementia as well as in Alzheimer Disease which led him to be granted several times by the Swiss National Fund for Research since 1994.

The ongoing work at the Faculty of Medicine at the Geneva University is a patient-oriented research together with a translational research addressing the following topics.

Patient-oriented research

Identification of EEG markers of cognitive decline in mild cognitive impairment

Identification of biological and neuropsychological markers of cognitive decline in elderly patients with late-onset depression and bipolar disorders

Cognitive impact of vascular lesions in brain aging

Furthermore, a European research fund has granted prof. P. Giannakopoulos together with other main researchers in the topic of the identification of functional and structural biomarkers of AD.



Gold, Gabriel
Professor, University of Geneva,
Switzerland

Professor Gabriel Gold is currently Chief of Service in the Department of Rehabilitation and Geriatrics of the University Hospitals of Geneva where he is responsible for a 146 bed sector of the Geriatrics Hospital, including a unit specializing in acute medical care for demented patients. His service also includes a large outpatient Memory Clinic. He has trained in France and in the United States where he received his board certifications in Internal Medicine and in Geriatrics. He has extensive clinical experience in geriatrics and the care of people with cognitive disorders. His main research interests include dementia and cognitive impairment focusing more specifically on diagnosis, clinicopathologic correlations and vascular lesions. He is the author of more than 100 peer-reviewed articles in this field with over 2'000 citations and an H index of 24.



Gonda, Xenia

Assistant professor, Department of Clinical and Theoretical Mental Health, Department of Pharmacodynamics, Semmelweis University, Budapest, Hungary

Xenia Gonda MA PharmD PhD is a clinical psychologist and pharmacist working as assistant professor at the Department of Clinical and Theoretical Mental Health of Semmelweis University, Budapest. Her main research interests include personality genetics, neurobiology of suicide and bipolar disorders, effects of seasonality and birth season, and mood fluctuations related to the reproductive cycle.



Gonul, Ali Saffet

Ege University School of Medicine, Department of Psychiatry, Izmir, Turkey

Prof. Dr. Ali Saffet Gönül was born in 1970.

He performed his study of medicine at University of Hacettepe, in Ankara-Turkey between 1987 and 1994. He became a resident physician at the Department of Psychiatry Erciyes University School of Medicine in Kayseri, Turkey in 1995, continued his job there until 2001. In the year 2001 he became a Research Fellow at Ege University School of Medicine Department of Psychiatry, Izmir, Turkey and continued to work there until the year 2004, during which he went to Europe, through the Charcot grant from State Ministry of France, to be a Guest Researcher at Institut de Physique Biologique, located at 4 rue Kirschleger, 67085 Strasbourg Cedex France. His Guest Researcher status at the latter Institute lasted from November 2004 to November 2005.

In the year 2006, he began his studies at Stony Brook University School of Medicine Department of Psychiatry and Behavioral Sciences in Long Island, NY, USA as a post doc fellow, and worked there until 2007. Meanwhile, in the year 2004, he had become an Associate Professor of Psychiatry at Ege University School of Medicine Department of Psychiatry in Bornova, Izmir, Turkey, before he became a full professor at the same department in the year 2010. In 2008, he also became an Associate Professor of Clinical Psychiatry at Mercer University School of Medicine Department of Psychiatry and Behavioral Sciences in Long Island, NY, USA. In the year 2010, Gönül became the Director of SoCAT (Standardization of Computational Anatomy Techniques for Cognitive and Behavioral Sciences) Neuroimaging Lab.

Ali Saffet Gönül received many honors and awards through his studies and works; these are the European Collage of Neuropsychopharmacology, Poster Award in 1999 and 2000; World Federation of Societies of Biological Psychiatry Regional Meeting, Poster Award in the year 2000; European Collage of Neuropsychopharmacology Fellowship Award in the year 2003 and European Collage of Neuropsychopharmacology Travel Award

in the years 2004, 2009 and 2010. His activities in the scientific community includes the Society of Biological Psychiatry International Travel Scholarship granted in the year 2003.



Goulis, Dimitrios G.

Assistant Professor of Reproductive Endocrinology, 1st Department of Obstetrics and Gynecology, A.U.Th. Greece

Dr. Dimitrios G. Goulis was born in Thessaloniki, Greece. He completed his basic medical training (M.D.) and received his Ph.D. degree from the Aristotle University of Thessaloniki (A.U.Th.). Having a European Union scholarship, he worked for four years at St. Mary's and Hammersmith Hospitals, Imperial College, London, UK, acquiring the specialty of Endocrinology and Metabolism. During his training in the UK, he worked in the fields of metabolism, reproductive endocrinology and metabolic complications of pregnancy, under the supervision of professors Desmond Johnston, Stephen Franks and Michael de Swiet. In 2004, he was appointed lecturer and in 2009 assistant professor of Reproductive Endocrinology in the First Department of Obstetrics and Gynecology, A.U.Th. (Head: Professor Basil C. Tarlatzis). Dr. Goulis' main research interests include endocrine complications of pregnancy, Andrology and research methodology. He has published more than 100 full papers in peer-review international journals. Currently he is associate editor of "Human Reproduction" and a member of the executive councils of the European Academy of Andrology and the Hellenic Endocrine Society.



Hatzichristou, Dimitrios

Professor of Urology, Aristotle University of Thessaloniki, Greece

Dimitrios Hatzichristou is Professor of Urology at Aristotle University of Thessaloniki, Greece. He is also President of the Institute for the Study of Urological Diseases (ISUD), a non profit organization, dedicated to education and awareness on Urological conditions.

He received his MD and Ph.D. degrees and completed his training in Urology at Aristotle University in Thessaloniki, Greece. Then, he completed a 2-year fellowship in Andrology at Boston University, Boston, USA and then he worked as visiting scholar (prostate diseases) for a year at Stanford University, California, USA.

Dr. Hatzichristou organized and chaired the foundation meeting of the European Society for Sexual Medicine in 1995, served as Secretary General (1995-97), President Elect (1999-2001) and President (2001-2004) of ESSM. He has served also as Chairman (2004-06) of the European Sexual Dysfunction Alliance (ESDA), a non-profit organization dedicated to patients' awareness Europe-wide. He has been also a faculty member of the European School of Urology (ESU), founding member of the European Society of Andrological Urology (ESAU), member of the Executive Committee of the International Society for Sexual Medicine (ISSM), the EAU Committee for the guidelines on erectile dysfunction. He serves as co-chairman of the Committee on "Diagnostics and Scales in Sexual Medicine" of the International Consultation in Sexual Medicine since 2004.

Dr Hatzichristou has served as Review and Educational Editor

for the Journal of Sexual Medicine and the Journal for Impotence Research, Editorial board member for *Urologia Internationalis* and the Journal for Sexual and Reproductive Medicine, and reviewer in several scientific journals, including European Urology and the Journal of Urology. He has been invited speaker in more than 150 international meetings and teaching courses worldwide. He has been guest editor in 2 special issues in scientific journals and he has authored 23 book chapters in international books, as well as more than 100 review articles and peer-review papers with more than 6500 citations (h-factor=35).



Hole, Oliver

LWL-Klinik Lengerich, Germany

Dr. Oliver Hole is senior physician at the LWL Hospital for Psychiatry, Neurology, Psychotherapy and Psychosomatics in Lengerich, Germany (LWL-Klinik Lengerich).

He studied biochemistry (B.S.) and medicine at the Free University of Berlin. In 1997, he earned his doctorate (MD) in experimental surgery.

After performance of residencies in internal medicine and psychiatry and psychotherapy including training in psychodynamic and behavioral psychotherapy, he obtained board examination for psychiatry and psychotherapy in 2000.

Since 2006, Dr. Hole is head of the LWL outpatient department and day clinic in Lengerich. He specialized in the treatment of personality disorders and PTSD. He has learned and practised DBT since 1997, is being trained to be a certified EMDR-therapist (EMDRIA) and is member of the psychotherapeutic emergency management system of the network of all LWL Psychiatric Hospitals in Westphalia (LWL-PsychiatrieVerbund Westfalen).



Hyphantis, Thomas N.

Associate Professor of Psychiatry,
University of Ioannina, Greece

Thomas Hyphantis is a General Adult Psychiatrist and an Associate Professor of Psychiatry in the Medical School of the University of Ioannina, Greece and the Head of the Consultation-Liaison Unit of the Department of Psychiatry in the University Hospital of Ioannina. He obtained his PhD degree from the University of Ioannina in 1990. He is trained in family systems therapy and psychodynamic psychotherapy. He has contributed to the development of Community Psychiatry in Greece and especially in the development of units which provide mental health care in remote rural areas (Mobile Mental Health Units) and he has established the first independent psychodynamically oriented Consultation-Liaison Psychiatry Unit in Greece within the University Hospital of Ioannina. His research is focused on the complex relations of personality traits, ego mechanisms of defense, psychological distress, and quality of life in patients with medical illnesses and he has published more than 60 papers in international peer-reviewed journals. He is the Secretary of the Consultation-Liaison Sector of the Hellenic Psychiatric Association, a Member of the European Association of Psychosomatic Medicine (EAPM) and of the European Asso-

ciation for Somatisation and Medically Unexplained Symptoms (EURASMUS). He is an Advisory Board Member of the Journal of Psychosomatic Research and a Member of the Editorial Board of the Case Reports in Psychiatry and the Encyclopedia of Quality of Life Research.



Iacovides, Apostolos

Professor of Psychiatry and Chairman of the 3rd Psychiatric Department, Aristotle University of Thessaloniki, AHEPA University General Hospital, Thessaloniki, Greece

Apostolos I. Iacovides, MD, PhD, is Professor of Psychiatry and Chairman of the 3rd Psychiatric Department of Aristotle University of Thessaloniki, at AHEPA University General Hospital in Thessaloniki, Greece.

Prof. A. Iacovides received his medical degree (1974) and performed his residency in Neurology-Psychiatry (1978). During the period 1978-1986 worked as a Scientific Associate at the Educational Branch of Aristotle University in the General Hospital of Alexandroupolis, which was the first General Hospital Psychiatric Department in Greece. He obtained his PhD in Psychiatry in 1985. Since 1987, he has been working in the 3rd Psychiatric Department of Aristotle University of Thessaloniki, at AHEPA University General Hospital in Thessaloniki, as Lecturer at first (1987-1991) and then as an Assistant Professor (1991-2001), as Associate Professor (2001-2007) and as Professor of Psychiatry (2007-to date). He has undertaken the Chair of the 3rd Psychiatric Department of Aristotle University of Thessaloniki since 2010.

The clinical, research and teaching work of Prof. Iacovides' embraces various topics of Clinical Psychiatry, such as Psychopathology, Psychosomatics, BioPsychoSocial approach, Consultation-Liaison Psychiatry, Psychopharmacology, Community Psychiatry, Psychotherapy etc.

The 3rd Psychiatric Department which he runs, includes in-patient and out-patient services and facilities, not only in a tertiary setting but also connected with primary care.

Prof. A. Iacovides has co-authored more than 400 scientific papers, including presentations in congresses and congress supplements, books or book chapters and more than 65 published in international journals, such as British Journal of Psychiatry, General Hospital Psychiatry, Schizophrenia Research, Psychiatry Research, Annals of General Hospital Psychiatry, Biological Psychiatry, International Journal of Neuropsychopharmacology, Journal of Affective Disorders, Current Opinion in Psychiatry, Acta Psychiatrica Scandinavica, Psychopathology, Nephron, European Psychiatry and Neuropsychobiology, among others. His publications have yielded more than 700 citations (H=16). He was the chairman of the organizing committee of the "1st Congress of Biopsychosocial Approach in Medical Care" (March 17-19, 2011) and the "1st Educational Meeting in Psychosomatic Medicine" (October 15, 2011). During March 15-17, 2012, the "2nd Congress of Biopsychosocial Approach in Medical Care" is going to take place in Thessaloniki.

His teaching work is addressed to both undergraduate and postgraduate medical studies. He has also organized programs

of mental health professionals' training.

He is a member of various national and international scientific associations.



Ierodiakonou-Benou, Ioanna

Associate Professor of Psychiatry,
3rd Department of Psychiatry,
Aristotle University of Thessaloniki,
AHEPA University General Hospital,
Thessaloniki, Greece

Dr Ioanna Ierodiakonou-Benou was born in Thessaloniki in 1956, she graduated from the Medical School of Aristotle University of Thessaloniki in 1981 and she received her specialty in Psychiatry in 1988.

She attended a 4-year postgraduate course in Psychoanalysis and Psychoanalytic Psychotherapy in the Adolescent Unit of the Tavistock Clinic of London and she earned her PhD in 1994.

She has served as a Consultant of the National Health System in the Department of Psychiatry of the "Ippokraton" General Hospital of Thessaloniki for 10 years. Since 2000 she works at the 3rd Department of Psychiatry, Aristotle University of Thessaloniki at AHEPA Hospital. Today is Assistant Professor of Psychiatry and in charge of the Psychotherapeutic Service of the Department.

Her clinical, teaching and research work focuses on the Psychoanalysis and the Psychoanalytic Psychotherapy in clinical psychiatry and on Consultation-Liaison psychiatry. Her main research interests include suicidal behavior, psychotherapy in the General Hospital, perinatal mourning and psychotherapy of chronically suffering patients.

She participated with presentations and scientific papers in International and National Scientific Meetings and with publications in International and National scientific journals.

Dr Ioanna Ierodiakonou-Benou is member in 7 International Scientific Societies and 5 Hellenic.



Iliadou, Paschalia K.

Endocrinologist, research associate,
1st Department of Obstetrics and
Gynecology, Aristotle University of
Thessaloniki, Greece

Dr. Paschalia K. Iliadou was born in Thessaloniki, Greece. She completed her basic medical training (M.D.) and received a Master of Science (M.Sc.) degree in Medical Research Methodology from the Medical School of the Aristotle University of Thessaloniki (A.U.Th.). She worked for four years as a resident at the Department of Endocrinology & Endocrine Oncology of the Theagenion Anticancer Hospital of Thessaloniki (Head: Dr. Kalliopi Pazaitou-Panagiotou) and acquired in 2012 the specialty of Endocrinology and Metabolism. In 2013 she received her Ph.D. degree from the Aristotle University of Thessaloniki (A.U.Th.). During her postgraduate studies she worked in the fields of andrology and reproductive endocrinology under the supervision of professors Ioannis Papadimas and Dimitrios G. Goulis at the First Department of Obstetrics and Gynecology, A.U.Th. (Head: Professor Basil C. Tarlatzis). Dr. Iliadou's main research interests include reproductive endocrinology and endocrine oncology.



Juckel, Georg

Professor of Psychiatry, director of
the Dept of Psychiatry Ruhr
University Bochum, Germany

1961 born in Hamburg
1982-86 Research Fellow at Institute for Philosophy of Freie
Universität Berlin
1986-95 studying medicine at Freie Universität and Humboldt
Universität Berlin
1989-93 Research Fellow at the Laboratories of Clinical Psycho-
physiology and Clinical Psychopharmacology of Department of
Psychiatry of Freie Universität Berlin, Doctoral Thesis "Auditory
evoked potentials in depressed patients"
1992-93 research stay at Department of Psychophysiology of
the Institute of Psychology of the Hungarian Academy of Sci-
ences Budapest (supported by Deutsche Forschungsgemein-
schaft)
1995-2002 working as Medical Doctor at the Department of
Psychiatry of Ludwig-Maximilians-Universität München and as
Senior Researcher in the Laboratory of Clinical Neurophysiol-
ogy
1996 receiving the Scientific Award of the German Society for
Psychiatry and Duphar Company (DGPPN-Duphar-Prize)
1997-98 Research stay in the Program in Neuroscience, Princ-
eton University, USA (Prof. B.L. Jacobs)
2001-2002 Dept. of Neurology LMU Munich, becoming Con-
sultant for Psychiatry and Psychotherapy, Habilitation („The
loudness dependence of auditory evoked potentials as indica-
tor of central serotonergic system - Investigation in an animal
model and in psychiatry patients")
2002-5 Senior Lecturer and Deputy Head of the Dept. of Psy-
chiatry, Charite, Humboldt-Universität Berlin, Director of the
Early Recognition Center Berlin-Brandenburg, Director of the
Laboratory of Experimental Psychiatry, Director of the Labora-
tory of Functional Brain Diagnostics
since 2005 Full Professor of Psychiatry (C4) and Chair, Dept. of
Psychiatry, Ruhr-University Bochum
since 2006 Director of the LWL Institute for Research in Preven-
tion and Public Health



Julu, Peter O. O.

Imperial College London; Breakspear
Clinic, UK and National Rett Center,
Frösön, Sweden

Dr. Julu is a leading world expert in autonomic neurophysiol-
ogy. He practises clinically and carries out cutting-edge clini-
cal neurophysiological research in both the UK and Sweden,
where he is the Neurophysiologist in charge of autonomic as-
sessment in the Swedish National Rett Centre, Frösön. Dr. Julu
gained his PhD (investigating the pathophysiology of diabetic
neuropathy) jointly at University College London (UCL) and the
Institute of Neurology, Queen Square, London. He was the win-
ner of the Cormie Prize for Neurology at the University of Glas-
gow, where he established an Autonomic Unit in the Institute
of Neurological Sciences, Southern General Hospital, Glasgow,
during the 1990s. Dr. Julu has been the recipient of several ma-
jor grants, including from the British Government (Department
of Environment, Food and Rural Affairs (DEFRA)) to study the
neurological health of farmers, and from the European Union

to study autonomic disturbances in Rett syndrome in Nordic countries. Dr. Julu is the inventor of the NeuroScope, a machine for autonomic assessment and monitoring of brainstem function, which is used in major international academic centres. In addition to numerous major publications, Dr. Julu has also been interviewed as an international expert by the media, including the BBC, CNN and Zembla Dutch Television.



Kakkavas, Panagiotis
Psychiatrist, Athens Greece

Dr Panagiotis Kakkavas graduated from the Medical School of the University of Athens in 1983 and he completed his residency in Psychiatry in 1990, at the Athens Psychiatric Hospital. He was educated on Group Psychotherapy for two years, while being a resident doctor. He was publisher of the "Madness" and "Heat" Magazines, during the decade of 1980. From 1985 until 2008, he worked at "Sinouri" Private Psychiatric Hospital, at Kifissia, at first as Internal Psychiatrist and from 2001 onwards as Director of the Clinic, where ninety beds functioned in order to treat patients of schizophrenic, bipolar, depressive, substance abuse and dementia cases. He has been engaged in many Psychopharmacology Protocols, Trials and Clinical Work. He has worked as a Medical Consultant for Astra Zeneca, BMS and Janssen. He has been a founding member of the Hellenic Psychopharmacology Society and member of its Scientific Committee. He is now working as a Psychiatrist in his private practice, in Athens.



Kaprara, Athina
Unit of Reproductive Endocrinology,
First Department of Obstetrics &
Gynecology, Medical School, Aristotle
University of Thessaloniki, Greece

Dr. Athina Kaprara was born in Veria, Greece. She graduated in 1998 from the Medical School of the Aristotle University of Thessaloniki (MD). She received her master of science (MSc) from the Greek Open University and her PhD degree from the Democritus University of Thrace. She worked for two years at "Theagenio" Anticancer Hospital and for 4 years at "Panagia" General Hospital. During these years she was trained in the fields of general endocrinology, diabetology and metabolism. She acquired the specialty of Endocrinology in 2011. From 2012 she has worked as a private doctor. She participated in the writing of two book chapters and she has 21 publications in peer-review journals, 14 of them cited in PubMed (National Library of Medicine). Her main research interests concern neuroendocrinology, reproduction and metabolism. She participated in more than 50 congress with an oral presentation, poster or as invited speaker. She is a member of the Hellenic Endocrine Society.



Karamustafalioglu, Oguz
Professor of Psychiatry, Üsküdar University Istanbul Turkey

Professor of Psychiatry at Üsküdar University in Istanbul Turkey. Üsküdar University is a thematic university on neuropsychiatry placed at Asian side of Istanbul. Dr.Karamustafalioglu is currently directing mood disorders and OCD research programs. He started his psychiatric studies at Bakırköy Neuropsychiatry Teaching and Research Hospital in Istanbul, where he worked for 15 years. He was the director of 2.Psychiatry Clinic for four years. Dr.Karamustafalioglu was the clinical chief of Şişli Etfal Teaching and Research Hospital during 2002-2011. He has many publications at both national and international journals. He has taken part in many scientific meetings . He is currently ambassador of ECNP for Turkey.



Kargopoulos, Philip V.
Associate Professor of Philosophy of Mind and Logic, Department of Psychology, Aristotle University of Thessaloniki, Thessaloniki, Greece

Born in Thessaloniki Greece. Studied philosophy and logic at the University of Chicago and philosophy of science at Boston University. Did post-doctoral research at the Boston Center for the Philosophy of Science. Taught at the University of Massachusetts in Boston and at Brandeis University. Returned to Greece and served as officer in the Greek Army. Elected to the position of Lecturer in Logic, Epistemology and Philosophy of Mind in the Department of Psychology of the Aristotle University of Thessaloniki, where he is currently teaching as associate professor of Philosophy of Mind and Logic. Has published articles in philosophy, psychology and cognitive science and books in Logic and Philosophy of Science.



Kosmidis, Mary H.
Associate Professor of Psychology, Aristotle University of Thessaloniki, Greece

Mary H. Kosmidis, Ph.D. is an Associate Professor, the Director of the Lab of Cognitive Neuroscience and Vice-Chairperson of the School of Psychology at Aristotle University of Thessaloniki in Greece.

Dr. Kosmidis received her Ph.D. in Clinical Psychology from American University, Washington, DC (1992) and worked as a staff fellow at the NIMH conducting research in psychophysiology and neuropsychology. In 1999 she accepted a faculty position in Greece. Her undergraduate and graduate teaching has focused on neuropsychology, assessment and rehabilitation, including clinical supervision of graduate students. She has organized a number of educational and academic activities on a national and international level, including conferences, seminars, workshops, and the Vivian Smith Advanced Studies Institute of the International Neuropsychological Society (an international annual summer course held for advanced graduate students in neuropsychology and medical residents in related specialty areas). She has also served as an expert evaluator of grant proposals for the European Commission and Greek and Cypriot national research councils. Her research interests focus on investigations of the pathophysiology of neurological and psychiatric disorders through the study of dysfunctional cognitive mechanisms and their implications for optimal interven-

tion, cognitive correlates of illiteracy, early signs of cognitive decline among the elderly and protective factors, and cross-cultural issues in neuropsychological assessment, including test development/adaptation. She has published 3 books in Greek, 8 book chapters and over 60 scientific journal articles. Her research has been awarded with several grants (NIH, European Commission, Hellenic Ministry of Education) and has been recognized through conference prizes.



Koufaki, Ioanna
Psychologist, Thessaloniki, Greece

Ioanna Koufaki completed her Bachelor's degree in Psychology at the University of Westminster in London, UK. She was then trained in Psychomotor Therapy PPA® at Bernard Aucouturier Training Centre (CEFOPP) in Madrid, Spain. Since then she has collaborated with "Saint Demetrios Child Care Centre" in Thessaloniki, Greece, supporting the treatment of patients with mental health problems and dual diagnoses. She was trained from 2004 to 2010 at the Child and Adolescent Unit and currently at the Laboratory of Psychophysiology, at the 3rd Department of Psychiatry, AHEPA University Hospital, Aristotle University of Thessaloniki, Greece. She is involved in research projects in the area of psychosis and mood disorders. She has worked in private practice since 2008, providing individual psychotherapy to adults and adolescents in a range of mental health problems, particularly anxiety and mood disorders.



Kouniakos, Philippos
Psychiatrist Thessaloniki Greece

Philippos Kouniakos graduated from the Aristotle University of Thessaloniki, Medical School in 1996, completed his residency in psychiatry in the 2nd University Psychiatric Department, Aristotle University of Thessaloniki in 2003 and obtained his doctorate in 2011. He worked during 2003-2011 as consultant in the Psychiatric department, Unit of Social Care "St Panteleimon" and also since 2003 works in private practice. Since 2004 he is Scientific Associate, 2nd Psychiatric Department, Aristotle University of Thessaloniki. He has participated in a number of congresses, workshops and meetings as speaker and trainer. His scientific interests include psychopharmacology, Schizophrenia and other Psychotic disorders, Bipolar Spectrum disorders and Group Psychotherapy. He is author and co-author of several scientific papers, published in well-known psychiatric journals.



Kovari, Eniko

Professor, University of Geneva,
Switzerland

Enikő Kövari has worked since 1995 in the Department of Psychiatry, Division of neuropsychiatry of the Geneva University Hospitals. She obtained her medical diploma in 1981 at the Medical University of Budapest, Hungary (Swiss Diploma in 2001 at the University of Geneva) and acquired the title of specialist in pathology in 1985 at the Medical University of Budapest; recognized in 2007 in Switzerland.

“Médecin adjointe” since 2004, she obtained the title: “Privat docent” in 2006 and “chargé de cours” (senior lecturer) in 2009 at the University of Geneva with her studies on the neuropathology and clinicopathological correlations of non-Alzheimer type of dementias. She participates in neuropathological diagnosis, teaching and research activities. She is a key participant in the Swiss Reference Center for the neuropathological diagnosis of neurodegenerative disease. Her main research interests are clinicopathological correlations in the different types of dementia, mainly in vascular, Parkinson and Alzheimer’s diseases. She is author or co-author of more than 70 peer reviewed publications with an *h-index* of 25.

Division of Neuropsychiatry, Department of Mental Health and Psychiatry, University Hospitals and University of Geneva.



Leicht, Gregor

University Medical Center Hamburg-Eppendorf, Department of Psychiatry and Psychotherapy, Psychiatry Neuroimaging Branch, Germany

Dr Leicht graduated from the School of Medicine of the Ludwig-Maximilians-University Munich in 2005 and currently works at the Department of Psychiatry and Psychotherapy University Medical Center Hamburg-Eppendorf, Psychiatry Neuroimaging Branch. Is member of the Organization for Human Brain Mapping (OHBM), and the German Society for Psychiatry, Psychotherapy and Neurology (DGPPN). He has received a number of awards including the OHBM (Organization for Human Brain Mapping): Travel Award 2007, DGPA (Deutsche Gesellschaft für Psychophysiologie und ihre Anwendung): Young Scientist Award 2012. He has acted as reviewer for the Archives of General Psychiatry, Biological Psychiatry, Journal of Psychiatric Research, Schizophrenia Research, Neuropharmacology and Current Pharmaceutical Biotechnology. His doctorate thesis (2007) is on ‘The early auditory evoked gamma-band response and its sources in the auditory and anterior cingulate cortex: influence of task difficulty and mental effort’ under the guidance of Prof. Dr. U. Hegerl, Department of Psychiatry and psychotherapy, Ludwig-Maximilians-University of Munich („magna cum laude“). During 2001-2005 he was student research assistant, Clinical Neurophysiology and Functional Imaging Branch, Department of Psychiatry and Psychotherapy, Ludwig-Maximilians-University Munich. From 2005-2009 he worked at the Department of Psychiatry und Psychotherapy, Ludwig-Maximilians-University Munich (Head: Prof. H.J. Möller) and since 2010 in his current position.



Leucht, Stefan

Associate professor of Psychiatry,
Department of Psychiatry,
TUMünchen, Germany

Doctor Leucht has been practicing at the Department of Psychiatry and Psychotherapy of the Technische Universität München, Munich, Germany since 1994. In 2002/2003 he spent a year as a research associate at the Zucker Hillside Hospital, Albert Einstein College of Medicine, in New York. He was appointed associated professor in July 2011, and he has been vice-chairman of the department since 2009. He is also an editor of the Cochrane Schizophrenia Group. Dr. Leucht's research focus is psychopharmacology and evidence-based medicine in schizophrenia with a focus on meta-analyses, clinical trials and the improvement of methodology of studies in this area. He also has a research interest in pharmacogenetics, compliance enhancement strategies and medical decision making.



Lykouras, Lefteris

Professor Emeritus, Kapodistrian
University of Athens, Greece

Professor Lykouras was born in Piraeus Greece, graduated from the Athens University School of Medicine in 1969 and completed his residency in Neurology and Psychiatry in 1975. He completed his PhD in 1981 and a post-doctorate appointment in 1988. He speaks Greek English and French. He received a Doctoral dissertation scholarship (1974-1975) and a Post-doctoral research scholarship (1978-1981). He was appointed Lecturer in Psychiatry, in 1982, Senior Lecturer in Psychiatry, in 1988, Reader in Psychiatry, in 1996 and Profesor in Psychiatry, School of Medicine Athens University in 2004. He is member of a significant number of national and international scientific societies and participated in the organization of congresses and was invited speaker chairman of session or participant in more than 150 scientific events. He acts as regular reviewer in international journals and is active in the research in Clinical Psychiatry, Biological Psychiatry and Psychopharmacology General Hospital Psychiatry, and Psychiatric Education. He has authored or co-authored more than 500 journal articles and abstracts, received more than 1.000 citations and 10 books. **He has received a number of national and international awards included the "Papanikolaou" award for the best research paper in 2011.**



Mageiria, Stamatia

Research Associate, 3rd Department
of Psychiatry, Aristotle University of
Thessaloniki, Greece

Dr Stamatia Mageiria received her medical degree at Aristotle University of Thessaloniki, Greece in 2000. She performed her residency in psychiatry and received her license in 2009. From then she is working as a psychiatrist in her private practice. Her areas of clinical and research interest is psychopharmacology, biological psychiatry, mood disorders and transcultural psychiatry. She has co-authored more than 30 papers delivered to Greek and international congresses and 11 of them are published in International Journals such as Schizophrenia Research, Annals of General Psychiatry, Psychiatry Research, Cognitive and Behavioral Neurology among others, with 37 citations and h=3.



Mastorakos, George

Associate Professor, Endocrine Unit,
Aretaieion Hospital, Athens University
School of Medicine, Greece

George Mastorakos was born in Athens. He graduated *summa cum laude* from the Athens University Medical School in 1983. He specialized in Internal Medicine and Endocrinology in the Lariboisière Hospital (University Paris VII) and in Cochin Hospital in Paris (University Paris V), where he received the “Resident Etranger des Hopitaux de Paris” Prize from the “College de Medecine des Hôpitaux de Paris”. He also received the “Assistant Etranger” degree from the “University Paris Nord”. He received his PhD on a Doctorate Thesis from the Athens University Medical School. For the next 4 years he was a Visiting Fellow in the International Fogarty Centre in the Department of Developmental Endocrinology of NICHD, at the National Institute of Health (NIH), Bethesda, Maryland, USA. Since 1994 he works as scientific consultant of the department of endocrinology of the University of Athens (Evgenideion Hospital) and in 2002 he was elected Assistant Professor of Endocrinology and in 2009 Associate Professor of Endocrinology at the University of Athens (Aretaieion Hospital). He is the author of 149 ISI scientific publications. His main publications dealt with peripheral CRH (first proving the existence of ovarian CRH), endogenous and exogenous interleukin-6 in the Hypothalamic-Pituitary-Adrenal axis, somatostatin in inflammation, various aspects of the immune-inflammatory systems in Neuroendocrinology, PCOS in adolescence and menopause, and, recently, with metabolic aspects of pregnancy (adipocytokines, incretins, appetite-related peptides, insulin resistance).

His actual scientific interests include the effects of the metabolic syndrome in reproductive endocrinology, PCOS and pregnancy. He is also interested in understanding the development of neuroendocrine mechanisms underlying chronic or acute stress in models such as pregnancy and exercise. His editorial experience include editorship in seven volumes in the Annals of the New York Academy of Sciences and associate editorship in the international Pubmed-indexed journal HORMONES. He is a reviewer to many International Journals, including “New England Journal of Medicine”, “Clinical Endocrinology”, “Journal of Clinical Endocrinology and Metabolism”, “European Journal of Endocrinology” and “Fertility and Sterility”.

Among other scientific societies, he is long-standing member of the European, the American, the French and the Hellenic Societies of Endocrinology. He is the current president of the Hellenic Endocrine Society.



Mavreas, Venetsanos
Professor of Psychiatry, Director of
the Department of Psychiatry at Uni-
versity of Ioannina, Greece

Professor Venetsanos Mavreas was born in Athens in 1951. He studied medicine at the University of Athens and specialized in Neurology and Psychiatry in Athens. From 1983 to 1988, he worked at the Maudsley Hospital and the Institute of Psychiatry in London, where he took his Ph.D. in 1990. From 1988 to 2000, he worked at the Department of Psychiatry of the University of Athens Medical School and the University Mental Health Research Institute in Athens. From 2000 to date, he is Professor of Psychiatry at the University of Ioannina Medical School and Director of the Department of Psychiatry of the University Hospital of Ioannina. The main topics of his work is psychiatric epidemiology, social and community psychiatry, trans-cultural psychiatry and research methodology in mental health. He is member of the Hellenic Psychiatric Association, the World Psychiatric Association and President of the Hellenic College of Academic Psychiatry. He has been advisor of the World Health Association in issues of mental health, psychiatric classifications, research instruments and disability. He is deputy member of the Health Central Council of Health. He has published over 100 scientific papers in international and Greek scientific journals and books.



Miziou, Stella
Psychologist
Thessaloniki, Greece

Stella Miziou is a Psychologist in Thessaloniki, Greece. Ms Miziou received her degree in Psychology in 2009 at the Aristotle University of Thessaloniki. In 2010 she started a post-graduate degree at the Hellenic School of Research for Behavior with a major in Cognitive-Behavioral Psychotherapy (CBP). Simultaneously Ms Miziou was working at a Private Psychiatric Clinic in Veria, Imathia from March 2010 till July 2011. As part of her undergraduate studies, Ms Miziou voluntarily assisted at the General Hospital of Trikala in the Department of Psychiatry and also at the Municipal House for Psychosocial Rehabilitation, where both positions were held in the summer of 2008 from June till September. Since 2005 till now, she has been attending Conferences and Seminars held in Northern Greece. In December 2012 Ms Miziou participated in the Temperament, Personality, Character and Mood Disorders Spectrum Congress held in Thessaloniki, and was a key speaker for the subject of Theories for the Personality, Temperament and Character.



Moeller, Hans-Jurgen
Professor Emeritus of Psychiatry
Ludwig-Maximilians University,
Munich, Germany

Hans-Jürgen Möller has been working in the field of psychiatry for 30 years. After obtaining his Doctor of Medical Science in 1972 from the Universities of Göttingen and Hamburg, Germany, he then specialised in psychiatry and postgraduate training at the Max Planck Institute of Psychiatry in Munich. Professor Möller completed a postdoctoral thesis (habilitation) in psychiatry in 1979. From 1980 to 1988 he was professor of psychiatry at Munich Technical University, and from 1988 to 1994 full professor of psychiatry and chairman of the Psychiatric Department at the University Bonn, Bonn, Germany. From 1994 to 2012 he was chairman of the Psychiatric Department at the Ludwig-Maximilians-University, Munich.

Professor Möller's main scientific contributions include clinical and neurobiological research into psychiatry, schizophrenia and depression and clinical psychopharmacology. He has been a member of the boards (executive committees) of several national and international psychiatric societies. Currently, he is president of the European Psychiatric Association (EPA). He serves as chairman of the Section on Pharmacopsychiatry of the World Psychiatric Association (WPA). For two years he has been a member of the executive committee of the Collegium Internationale Neuro-Psychopharmacologicum (CINP), where he is now president-elect. From 1997 to 2001 he was president of the World Federation of Societies of Biological Psychiatry (WFSBP), where he is now honorary president.

In addition to authoring and co-authoring over 1000 international publications and several books, he is also chief editor of *The World Journal of Biological Psychiatry*, main editor of *European Archives of Psychiatry and Clinical Neuroscience*, and editor of two psychiatric journals, *Nervenarzt* and *Psychopharmakotherapie*. He holds positions on the editorial boards of numerous national and international psychiatric journals.

In 2008 Professor Möller was awarded the prestigious Jean Delay Prize from the World Psychiatric Association.



Moeller-Leimkühler, Anna Maria
Department of Psychiatry, Ludwig-
Maximilians-University München,
Munich, Germany

Qualifications

- 2011 Extraordinary professorship or "Social Science in Psychiatry"
- 2005 Habilitation for 'Sociological Psychiatry' at the Medical Faculty, University of Munich, Germany
- 1988 Doctoral degree in Social Science, University of Wuppertal, Germany
- 1980 Diploma in Social Science, University of Bochum, Germany

Positions

- since 1998: Senior social scientist at the Department of Psychiatry, Ludwig-Maximilians-University of Munich
- 1991-1997: Lecturer on Public Health, University of Düsseldorf
- 1982-1998: Scientific collaborator, Department of Psychiatry, University of Düsseldorf

Main activities

Main research fields: gender and mental health, caregiver burden, patient satisfaction.
Chair of the expert group “Gender” of the German National Suicide Prevention Program
Scientific consultant of the German Society of Men and Health and of the Foundation Men’s Health, Berlin



Moysidou, Stefania

Consulting psychologist at PAOK FC,
Thessaloniki, Greece

Stefania Moysidou, is psychological consultant with PAOK FC. Stefania Moysidou received her degree in psychology (2006) from the Aristotle University of Thessaloniki. During her studies she received an Erasmus Scholarship for one semester of attendance at the University of Bologna, Italy. She has completed a 3-year program (2008-2011) of training in Cognitive - Behavioral Psychotherapy and she is competent in the use of the MMPI-2, and various other neuropsychological and psychometric instruments. She has worked on a voluntary basis for various NGOs and has participated as trainer in a number of workshops, and as assistant in a number research projects.



Monro, Jean A.

Medical Director, Breakspear Hospital,
Wood Lane, Hemel Hempstead, Herts, UK

Dr Jean Monro has a background in hospital general medicine and worked at the National Hospital for Nervous Diseases, Queen Square, London, researching migraine and multiple sclerosis. She entered full time practice in Environmental Medicine in 1982 and in 1988 established the Breakspear Hospital for Allergy and Environmental Medicine. Dr Monro has also been a Consultant at Fachkrankenhaus Nordfriesland, Germany since 1991. She has many publications to her name and regularly speaks at conferences worldwide. Her primary areas of interest are nutritional medicine and immunology, metabolic function and environmental medicine.



Mulert, Christoph

University Medical Center Hamburg-Eppendorf, Department of Psychiatry and Psychotherapy, Psychiatry Neuroimaging Branch, Germany

Current position: Professor of Psychiatry
Head of Psychiatry Neuroimaging Branch

Academic education

06/2000 License to practise medicine (Approbation), Medical Association Berlin

11/1998 Medical state examination, Free University, Berlin

10/1993 - 10/1998 Study of Medicine, Free University, Berlin

Academic degrees

01/2008 - 11/2009 Lecturer (Privatdozent) in Psychiatry and Psychotherapy, Ludwig-Maximilians-University, Munich

12/2007 Habilitation in Psychiatry and Psychotherapy, Ludwig-Maximilians-University, Munich (supervisor: Prof. Dr. H.-J. Möller)

09/2002 Medical doctorate (Dr. med.), Free University, Berlin (supervisor: Prof. Dr. W.M. Herrmann) “*summa cum laude*”

Professional experience

- 03/2010 - present Consultant Psychiatrist, Dept. of Psychiatry and Psychotherapy, Hamburg University
- 12/2009 - present Professor of Psychiatry and Head of the Psychiatry Neuroimaging Branch, Dept. of Psychiatry and Psychotherapy, Hamburg University
- 12/2007 - 11/2009 Consultant Psychiatrist, Department of Psychiatry and Psychotherapy, Ludwig-Maximilians-University, Munich
- 12/2006 - 11/2009 Head of the Functional Brain Imaging Group, Department of Psychiatry and Psychotherapy, Ludwig-Maximilians-University, Munich
- 08/2008 - 11/2008 Visiting Associate Professor, Department of Psychiatry, Harvard Medical School, Boston

Other academic functions and honors

- 2007 Research Award Imaging in Psychiatry of the German Society of Psychiatry and Psychotherapy
- 2007 Travel Award, Society for Human Brain Mapping
- 2006 Early career contribution award, International Society for Neuroimaging in Psychiatry and the EEG & Clinical Neurophysiology Society
- 2006 Sponsorship award, German Society for Biological Psychiatry



Nazlidou, Elena-Ioanna

Department of Psychology, Aristotle University of Thessaloniki, Greece

Born in Katerini, Greece in 1989. Studied Cognitive and Experimental Psychology at the Aristotle University of Thessaloniki. She is currently completing her M.Sc. degree in Cognitive Psychology and Neuropsychology and is doing practical training at the Department of Neurology III, Aristotle University of Thessaloniki, G.Papanikolaou Hospital. Has also done practical training in KE.P.EP "Agios Demetrios" (Care Center for Children with special needs). Her research interests include Theory of Mind across the life span, Theory of Mind in Multiple Sclerosis and Epilepsy, Behavioral and Mood changes in Epilepsy and in Multiple Sclerosis.

**Nigritinou, Magda**

Department of Psychology, Aristotle
University of Thessaloniki, Greece

Magdalini Nigritinou, has graduated the year 2009 from the Psychology Department of Aristotle's University of Thessaloniki. Currently, she is a post-graduate student in the master program of Cognitive Psychology and Neuropsychology offered by the above department. She also holds a certificate in Special Education, from the University of Western Macedonia. During her pre-graduate studies she had voluntarily worked as a psychologist in the 4th special education school in the city of Thessaloniki, in the psychiatric hospital of Leros and in the Hellenic Company for Protection and Rehabilitation of Disabled Children (ELEPAP). As a post-graduate student, she has completed her practice as clinical neuropsychologist, in the neurology clinic of Papageorgiou General Hospital in Thessaloniki, where she continues to work till today as scientific collaborator, with specialization upon dementia and memory impairments. This time, she is working upon her master thesis, which is focused upon life-span emotional development. She also has contributed and participated in five formal scientific publications so far, upon issues concerning epilepsy, emotion recognition and emotional aging.

**Nimatoudis, Ioannis**

Professor of Psychiatry, 3rd Department of Psychiatry Aristotle University of Thessaloniki, Greece
Director of the Division of Neurosciences AUTH

Ioannis Nimatoudis is Professor of Psychiatry and director of the Division of Neurosciences at the Aristotle University of Thessaloniki, Greece. He received his Medical degree from the Aristotle University Thessaloniki in 1979 and completed his residency in Psychiatry - Neurology in 1984. Since 1990 he is active member in Psychiatric Reform and rehabilitation in Greece, and specially devoted in the "Leros Programme" of the Regulation 815/84 of E.U. During 1991- 2003 he served as scientific coordinator of rehabilitation units in Thessaloniki under the auspice of the N.G.O. "Society of Mental Health and Social Rehabilitation" in collaboration with the Ministry of Health and the E.U.

He has supervised 9 PhD that completed successfully in four of them been part of the three member committee. He is currently the main supervisor in 4 PhD that are in process. He is responsible for organising elective courses in Neuropsychiatry, he participates in education programmes of other Medical Universities in Greece and is responsible for organizing educational workshops in international conferences. His main research interests rely on neuropsychology, psychopharmacology, psychopathology and evaluation of psychiatric services. He served as member of the organizing committee of 13 international and 13 national conferences. He is an active member of 11 national and international scientific societies. He has participated in 83 Greek and International scientific conferences and in 58 round tables, lectures, and seminars as invited speaker. He is author or coauthor of more than 250 papers presented in conferences or published in national and international scientific journals.



Ntounas, Petros

Consultant Psychiatrist in Adult Psychiatry, Psychiatric Hospital of Attica, Athens, Greece

Dr Ntounas was born in Greece and he lives in Pireas. He earned his medical degree from the University of Medicine and Pharmacy, "Carol Davila" in Bucharest. He completed his psychiatric residency at Psychiatric Hospital of Attica, in 2011. During his training he carried out numerous studies in the field of psychopharmacology, geriatric psychiatry, and forensic psychiatry. He has over 100 publications covering these topics in psychiatric congresses.

Furthermore during his professional career, he was trained in multiple forms of psychotherapy such as psychoanalytic, psychodynamic, CBT and group analysis.

He is member of the Hellenic Forensic Psychiatric Association and the Hellenic Psychiatric Association.

He is in the process of finishing his PhD.

His current position is in the field of clinical research, working as coordinator in clinical trials. He is scientific personnel of 5th psychiatric department at Psychiatric Hospital of Attica. He also works as private psychiatrist and psychotherapist.



Nystazaki, Maria

Psychiatric Nurse, MSc, Greece

Maria Nystazaki is Nurse, MSc in Mental Health, works in the University Department of Psychiatry of the General Oncological Hospital :Agioi Anargiroi" in Kifisia Athens Greece where she is responsible for the Depot clinic. Currently she is working on her doctorate thesis in the Nursing School of University of Athens, and she is responsible for the project concerning the development of depot clinics of the School. She is active in the training of nursing students and has participated in congresses and training seminars and workshops.



Pantiou, Krystallia

Department of Psychology, Aristotle University of Thessaloniki, Greece

Born in Thessaloniki, Greece in 1988. Studied Cognitive and Experimental Psychology at the Aristotle University of Thessaloniki. She is currently completing her M.Sc. degree in Cognitive Psychology and Neuropsychology. Has done extensive practical training at the Neurology Department of the AHEPA Hospital of the Aristotle University of Thessaloniki. Her research interests include Theory of Mind in elderly, Theory of Mind in Alzheimer Disease (AD) and Vascular Dementia (VD), Neuropsychology of dementias.



Papageorgiou, Georgios
NHS Director, Department of Psychiatry,
Evangelismos Hospital, Athens,
Greece

Dr. Papageorgiou was born in Athens, Greece in 1954, received his degree in Medicine from Athens University in 1979 and his MD Thesis from the Dpt of Pathology, Athens University, Summa Cum Laude in 1984 (title: Astrocytes of The Cerebral Hemispheres: Anatomoclinical Correlations).

He served as staff psychiatrist in the Adolescent Unit, Athens General Hospital During (1985-6), Consultant Psychiatrist, Sismanoglion Hospital, Athens (1986-7), Consultant Psychiatrist, Evangelismos Hospital, Athens(1987), Director, Leros Psychiatric Hospital, Leros, Dodecanese Islands (1987-9), Postdoctoral Fellow, UMDS Guy's Hospital, London (1990-1), Locum Lecturer, Brook General Hospital, Woolwich, London (1991), Consultant, Outpatient Department and Consultation-liaison Department, Evangelismos General Hospital, Dpt of Psychiatry (1991-today), Deputy Director (2006-9), Chairman, Outpatient Department, Evangelismos Hospital (2008-today). In 2009 he was promoted to Director, National Health Service.

He is author or co-author of over 50 papers in published in Greek and International Journals, 50 posters in International and Greek Congresses, chapters in Textbooks of Consultation-Liaison Psychiatry and General Hospital Psychiatry. He participated in many psychopharmacology trials.

He is founding member of the Greek Society of Clinical Psychopharmacology, with extensive educational work in Greek Psychiatrists all over Greece. He is engaged in many Psychopharmacology Protocols, Scientific Writing, Teaching, Administrative and Clinical Work.



Parrott, Andrew C.
Department of Psychology, Swansea
University, Swansea, UK

Andrew Charles Parrott is chartered Psychologist and Fellow of the British Psychological Society. BSc in Psychology, University of Durham, UK (1972). PhD in Psychology, University of Leeds, UK (1979). Over 150 refereed journal papers in the field of human psychopharmacology, with an H index of 36 (ISI citations). Over 200 national and international conference papers. Organizer of numerous symposia and conferences. Research adviser for government bodies in UK, USA, Netherlands, Australia, and New Zealand.

1977-1982. Lecturer, Department of Psychology, University of Leeds, UK.

1882-1986. Senior Psychologist, Institute of Naval Medicine, Hampshire, UK.

1986-2003. Senior Lecturer, Reader, Professor, School of Psychology, University of East London, UK.

2004-present. Professor, Department of Psychology, Swansea University, UK.

Some selected recent papers:

Parrott AC (2009). Cortisol and MDMA (3,4-methylenedioxymethamphetamine): neurohormonal aspects of bioenergetic stress in Ecstasy users. *Neuropsychobiology* 60: 148-158.
Parrott AC, Gibbs A, Scholey AB, King R, Owens K, Swan P, Ogden E, Stough C (2011). MDMA and methamphetamine: some para-

doxical negative and positive mood changes in an acute dose laboratory study. *Psychopharmacology* 215: 527-536.

Burgess A, Venables L, Jones H, Edwards R, Parrott AC (2011). Evidence for selective impairment of verbal recollection in abstinent recreational methylenedioxymethamphetamine ("Ecstasy")/polydrug users. *Psychopharmacology* 216: 545-556.

Parrott AC (2012). MDMA and temperature: a review of the thermal effects of 'Ecstasy' in humans. *Drug and Alcohol Dependence* 121: 1-9.

Singer LT, Moore DG, Min MO, Goodwin J, Turner JJD, Fulton S, Parrott AC (2012). One year outcomes of infants exposed to MDMA (Ecstasy) and other recreational drugs during pregnancy. *Pediatrics* 130: 407-413.



Paspala, Koralia

Department of Psychology, Aristotle
University of Thessaloniki, Greece

Koralia Paspala was born in Thessaloniki, in 1985. She graduated from the Mandoulides Schools in 2003 with honors. She has studied at the Department of Psychology in Aristotle University of Thessaloniki, where she graduated in 2008. During her attendance she conducted research on the role of phonological decoding in hearing and deaf individuals, which she presented in November 2008 as a Poster at the 2nd National Conference of Cognitive Psychology. She holds the highest degree of certification of English, the basic degree of German and certification of Braille writing system. She also holds the Certificate of Greek Sign Language.

During the academic year 2011-2012 she attended a course lasting 400 hours for special education.

Since 2010 she is doing her master degree in the Department of Psychology at the Aristotle University of Thessaloniki with a specialization in Cognitive Psychology and Neuropsychology. She also studies as an apprentice Greek sign language interpreter since 2008.

In 2008 she worked in the nursery "Play and learn" for the custody and supervision of a five-year boy with mobility and communication problems due to brain surgery. Since 2006 she collaborates with the Foundation "Melissa" which hosts children with family problems. In 2010 she offered voluntary secretarial and interpretation services in the "Deaf Association of Northern Greece". Finally, during the year 2011-12 she worked as an intern neuropsychologist in Neurosurgery ward at the University Hospital of Thessaloniki AHEPA, while since 2010 she has been working as a trainee interpreter of Greek Sign Language. Having set a personal goal to combine the knowledge gained from the previous series of studies, she is conducting a research on the influence of language on thought, examining the effect of visual-motor linguistic system, as Greek Sign Language, on the development of specific cognitive functions.



Perrin, Raymond N.
UCLAN, UK

Dr Raymond N. Perrin DO, PhD qualified in 1984 from the British School of Osteopathy. In 1989 he embarked on research into CFS/ME. He runs CFS/ME clinics in Manchester and London.

In July 2005 he was awarded a doctorate by the university of Salford for his thesis on CFS/ME. Dr Raymond Perrin's research at the University of Salford and The University of Manchester between 1993 and 2005 has provided strong evidence that an important component of CFS/ME involves a disturbance of the lymphatic drainage of the brain and muscles.

Since 2007 he has continued research and is honorary senior lecturer at The University of Central Lancashire, Preston, UK.

He has lectured extensively internationally to the medical profession on the physical diagnosis and treatment of CFS/ME.

In 2006 he was also invited to give evidence to the UK parliamentary enquiry into CFS/ME (The Gibson Enquiry). In 2007 his research into CFS/ME was the lead article in the Journal of The American Osteopathic Association . Also in 2007 his best selling book *The Perrin Technique: How to beat CFS/ME* was published by Hammersmith Press, London.

He has lectured twice before to the European Psychiatric Association conference in Thessaloniki and was a member of the 2011 scientific committee.

In 2013 Ray is to lead a new National Health Service clinical trial into the diagnosis of CFS/ME. For his service to osteopathy Ray was appointed a vice-patron The British School of Osteopathy. He is also UK ambassador for the International Association of CFS/ME and he is listed in the World edition of Who's Who. He lives in Manchester, UK with his wife and sons. More info at: www.theperrinclinic.com Email: drperrin@theperrinclinic.com



Perugi, Giulio
Clinica Psichiatrica, Dipartimento di
Medicina Sperimentale, University of
Pisa, Pisa, Italy

Dr Giulio Perugi is professor of Clinical Psychiatry and Psychopharmacotherapy at the University of Pisa, Italy. He works as director of the Out-patient and Day-Hospital units. Dr Perugi is the director of the Institute of Behavioural Sciences "G. Delisio" in Pisa. He is involved in the International Research Project on Mood Disorders in collaboration with the University of South California at San Diego. He has developed and directed many research projects on Mixed States, Mania, Anxious-Bipolar Comorbidity and Atypical Depression-Bipolar II-Borderline connection. In the field of anxiety disorders he has directed several studies on clinical features and long-term naturalistic treatment of Panic Disorder-Agoraphobia, Obsessive-Compulsive Disorder and Social Phobia. He is part of the editorial board of the Journal of Affective Disorder and other 5 International Journals. He is the author of 3 books and over 400 original articles on psychopathology, clinical psychopharmacology, and pharmacotherapy of mood and anxiety disorders.



Pezawas, Lukas

Associate Professor of Psychiatry,
Medical University of Vienna, Vienna,
Austria

Dr. Lukas Pezawas is currently working as a senior physician and associate professor at the Division of Biological Psychiatry, Department of Psychiatry and Psychotherapy at the Medical University of Vienna (Chair: Prof. S. Kasper). He is heading the main outpatient clinic, the electrophysiological lab and the clinical neuroimaging group. Dr. Pezawas acquired the doctoral degree of medicine in 1994 at the Medical University of Vienna, was trained as a psychiatrist and behavioral therapist at the Department of Psychiatry and Psychotherapy at the Medical University and approved as psychiatrist in 2001 by the Austrian Medical Association. After his residency he joined the Genes, Cognition and Psychosis Program (GCAP) (Head: Dr. D. Weinberger), National Institute of Mental Health (NIMH), National Institutes of Health (NIH), Bethesda, USA as a post-doctoral fellow and became quickly member of the neuroimaging core. He returned in 2005 to Vienna, received the *venia docendi* for "Functional and Structural Neuroimaging and Imaging Genetics" in 2007, was promoted as an Assistant Professor in 2010 and as an Associate Professor in 2012. Professor Pezawas has published over 60 peer reviewed scientific articles mainly in the field of mood disorders, some of which rank amongst the most cited articles in the field (e.g. Pezawas et al. 2005, Nat. Neuroscience). He has collaborated and co-authored with well-known scientists such as J. Angst, A. Meyer-Lindenberg, D. Weinberger, S. Kasper, and U. Wittchen. Lukas Pezawas served as editor of a special issue on Imaging Genetics for Neuroimage, and is field editor for several journals.



Politis, Antonis

Assistant Professor of Psychiatry,
University of Athens, Greece

Antonios M. Politis, MD is Ass. Professor of Psychiatry at National and Kapodestrian University of Athens, 1st Dep. of Psychiatry, Eginition Hospital, Athens, Greece. Dr. Politis received his medical degree (1986), performed his residency in psychiatry (1995), and his doctorate in psychiatry (1998) at the National and Kapodestrian University of Athens. In 1998, Dr. Politis became faculty member of the 1st Dep. of Psychiatry and in 2003 he was appointed as part-time faculty member of Division of Geriatric Psychiatry and Neuropsychiatry, at the John's Hopkins University School of Medicine, Department of Psychiatry and Behavioral Sciences in Baltimore, USA. He is member of several National and International Scientific Societies, Hellenic American Psychiatric Association (HAPA), International Psychogeriatric Association (IPA), International College of Geriatric Psychoneuropharmacology (ICGP) International Society to Advance Alzheimer's Research and Treatment (ISTART) and he is founding member and currently secretary of the Hellenic Psychogeriatric Association (HPA).

He published several papers in national and international peer-reviewed scientific journals and books, among which: *International Journal of Geriatric Psychiatry*, *Academic Psychiatry*, *Comprehensive Psychiatry*, *Progress in Neuropsychopharmacology and Biological Psychiatry*, *European Psychiatry*, *Schizo-*



phrenia Research, Journal of ECT, International Psychogeriatrics, Current Alzheimer Research, International Journal of Alzheimer's Disease.

Dr Politis main research interest is Geriatric Psychiatry: genetics and Alzheimer disease, clinical studies concerning behavioural disturbances in Alzheimer disease, translation and validation in Greek of several psychometric scales regarding Alzheimer disease (3MS),(NPI),(FAB), (CSDD), (ADL), (ADQRL), (GMHR), (AS) and recently NPI-C and research on the application of telematics in psychiatry with EC and "Stavros Niarhos" funded research projects (ISLANDS). He is editor of the first Hellenic textbook in Geriatric Psychiatry.



Popovic, Dina

Bipolar Disorders Program of Hospital Clinic, University of Barcelona, Spain

Dr. Dina Popovic has received her degree in Medicine, *cum laude*, from the University of Bologna (Italy) and completed residency in Psychiatry at the University of Pisa. Alongside with active clinical practice Dr. Dina Popovic performs clinical research at Bipolar Disorders Program of Hospital Clinic, University of Barcelona, Spain, headed by Dr. Eduard Vieta, and is a PhD student at the Department of Psychiatry, Neurobiology, Pharmacology and Biotechnology of University of Pisa, Italy under the guidance of Dr. Giulio Perugi. Her scientific interests and publications primarily include Bipolar disorder, cyclothymia and dual diagnosis, with a special focus on clinical, pharmacological, genetic and neurophysiological aspects of mood disorders.



Puri, Basant K.

Imperial College London, UK

Prof. B. K. Puri received his primary and postgraduate degrees in medicine from the University of Cambridge, and carried out post-doctoral work in molecular genetics at the University of Cambridge and in imaging at the Royal Postgraduate Medical School at Hammersmith Hospital, London. He also has post-graduate degrees in mathematics. He is the author of over 40 books and around 200 papers.



Rihmer, Zoltán

Department of Clinical and Theoretical Mental Health, Semmelweis University, Budapest, Hungary

Prof. Zoltán Rihmer, MD, PhD, DSc, received his medical diploma in 1971 at the Medical University of Pécs, Hungary. Since then till 2007 he has been working at the National Institute for Psychiatry and Neurology, Budapest, Hungary. From 2007 he is professor of psychiatry at the Department of Psychiatry and Psychotherapy, and scientific director at the Department of Clinical and Theoretical Mental Health, Semmelweis University, Faculty of Medicine, Budapest, Hungary. Professor Rihmer has three special examinations: psychiatry (1976), neurology (1979) and clinical pharmacology (1990). He received his PhD at the Hungarian Academy of Sciences in 1993, and his DSc in 2004. His special interest is the clinical and biological aspects of mood and anxiety disorders, with particular regards to prediction of treatment response and prevention of suicide. An additional interest of him is the interface of mood and cardiovascular disorders. He has published more than 420 scientific articles/book chapters (more than 210 in English) and five books. His cumulative impact factor is above 450, the number of his independent citations is more than 2500 and his h-index is 29. He received the Nyírő Gyula Award of Hungarian Psychiatric Association (1987, 2013), the Brickell Suicide Research Award of the Department of Child and Adolescent Psychiatry, Columbia University, New York (1999), the Award of the Presidency of Hungarian Psychiatric Association (2005), the Premio Aretaeus of the Associazione per lo studio della malattia maniaco-depressiva (2010), the „Szabó György Award” of the Hemingway Foundation (2010), the Lifetime Achievement Award of the European Bipolar Forum (2011), the „Oláh Gusztáv” Lifetime Achievement Award of the Hungarian Psychiatric Association (2012) and the „Széchenyi Prize” of the Government of Hungary (2012). He is National Clinical Audit Lead in Psychiatry of Hungary. Prof. Rihmer is a member of several Hungarian and international scientific boards and associations, including the editorial board of Journal of Affective Disorders, International Journal of Psychiatry in Clinical Practice, World Journal of Biological Psychiatry, Depression Research and Treatment, Clinical Neuropsychiatry, Psychiatria Danubia, Suicidology Online, Psychiatria Hungarica and Neuropsychopharmacologia Hungarica. He was also a member of the Executive Committee of the European College of Neuropsychopharmacology (2005-2010).

**Rizos, Emmanouil**

Assistant Professor of Psychiatry,
University of Athens, Greece

Dr. Emmanouil Rizos is an Assistant Professor in Psychiatry, at the University of Athens General Hospital Medical School, at Second Psychiatric clinic of University General hospital "ATTIKON", since March 2006. His previous employment was at National health Service Doctor, as a senior Registrant Psychiatrist at "DROMOKAITEIO" Psychiatric hospital, TARSI & SEVAS-TOPOULEIO division, since July 2002 to February 2006.

His interest in psychiatric research has been consistent and he was specializing in genetic psychiatry. Pr. Rizos has been doing research involving genetic studies in the field of schizophrenia in the Greek population as well as pharmacogenetic studies of antipsychotic drugs. He has published several original papers in international psychiatric publications and he also took part in several multicenter European psychopharmacological studies. Pr. Rizos has been a member of the organizing committees in several medical conferences concerning molecular medicine. He is also in charge of a clinical psychiatric department as a senior psychiatrist (second psychiatric department ATTIKON University Hospital) as well as senior psychiatrist of liaison psychiatry, in the Athens University Medical School of Psychiatry and finally, he represented Greece as a national coordinator for one year in the European Union of Consultation- Liaison Psychiatry.

**Sajatovic, Martha**

Professor of Psychiatry, Case Western
Reserve University, School of Medicine,
Cleveland, Ohio, USA

Dr. Sajatovic is Professor of Psychiatry at Case Western Reserve University School of Medicine in Cleveland, Ohio. She is a researcher, educator, and clinician who has devoted herself to the study and treatment of traditionally hard-to treat populations with serious mental illness. Dr. Sajatovic is Director of Geropsychiatry at University Hospitals Case Medical Center (UHCMC) and holds the Willard Brown Chair in Neurological Outcomes at UHCMC/Case Western Reserve University School of Medicine.

Dr. Sajatovic's research interests have focused on illness outcomes in serious mental illness such as bipolar disorder and schizophrenia. Dr. Sajatovic is a recognized expert in the areas of treatment adherence in bipolar disorder and in late-life bipolar disorder. She also has research interests in the psychopharmacology of psychosis and serious mood disorders, and in mental health rating scales. Over the last two decades, Dr. Sajatovic has been the recipient of multiple research grants to study serious mental illness including support from the National Institute of Mental Health (NIMH), the National Institute of Aging (NIA), the Ohio Department of Mental Health (ODMH), the Veterans Health Administration (VHA), a variety of Mental Health Foundations, and Industry Sponsored clinical trials.

Dr. Sajatovic has published widely on treatments and health services delivery among individuals with serious mental illness including geriatric and mixed-age individuals with bipolar disorder, schizophrenia, depression and post-traumatic stress disorder as well as in the area of treatment adherence in bipolar

disorder. She has authored or co-authored over 120 peer-reviewed publications, and has published over 40 book chapters or books on serious mental illness topics.

Dr. Sajatovic has been a guest lecturer at numerous academic and community settings, both on a national and international level, including speaking to consumer and family advocacy groups for individuals with psychiatric illness. Dr. Sajatovic has been a recipient of the Exemplary Psychiatrist Award bestowed by the National Alliance for the Mentally Ill (NAMI), and was a Depression and Bipolar Support Alliance (DBSA) 2006 Gerald Klerman Young Investigator Award winner.



Sakellaridou, Elina
LWL-Klinik Lengerich, Germany

Dr. Elina Sakellaridou is a medical resident at the Department of General Psychiatry and Psychotherapy of the LWL Hospital for Adult Psychiatry, Psychotherapy and Psychosomatics in Lengerich, Germany (LWL-Klinik Lengerich).

She studied medicine at the University of Brno, Czech Republic. Between 2006 and 2008 she worked as an early stage researcher for the Marie Curie Research Training Network on Language and Brain (RTN-LAB). In 2010 she earned her doctorate (Dr. med.) at the University of Münster, Germany. Since 2012 she studies Health Administration at the University of Bielefeld, Germany.

She performed residencies in internal medicine and neurology and is, since 2009, a staff member in the LWL Psychiatric Hospital in Lengerich. Since 2011 she also works for the "Home Treatment" program of the same hospital, an interdisciplinary, community-based treatment for people with schizophrenia and affective psychosis.



Sartorius, Norman
Professor of Psychiatry, Geneva,
Switzerland

Professor Norman Sartorius, MD, MA, DPM, PhD, FRCPsych, was the first Director of the Division of Mental Health of WHO. Subsequently Professor Sartorius served as President of the World Psychiatric Association (WPA) and of the Association of European Psychiatrists (EAP). He is the President of the Association for the Improvement of Mental Health Programmes and a member of the Geneva Prize Foundation having been its President 2004-2008. Dr Sartorius holds professorial appointments at the Universities of Beijing, London, Prague, St Louis, New York and Zagreb. Professor Sartorius has published more than 400 articles in peer reviewed scientific journals, authored or co-authored several books and edited a number of others.

Professor Sartorius is a corresponding member of the Croatian Academy of Arts and Sciences and of the Spanish Royal Academy of Medicine and a honorary member of the Medical Academies of Croatia, Mexico and Peru. He holds honorary doctorates of the Universities of Bath, Copenhagen, Prague and Umea and is a honorary fellow of the Royal College of Psychiatrists of the United Kingdom of Great Britain, of the American College of Psychiatry and of the Royal Australian and New Zealand College of Psychiatrists. He is also a Distinguished Fellow of the

American Psychiatric Association. He is an Honorary Member of numerous professional associations and advisory boards, both national and international. He is the Co-editor of three scientific journals and a member of editorial and advisory boards of many scientific journals. He speaks Croatian, English, French, German, Russian and Spanish.



Savas, Haluk

Professor of Psychiatry, Gaziantep
University School of
Medicine, Department of Psychiatry,
Gaziantep, Turkey

Dr. Haluk Asuman Savaş was born in March 2, 1966.

Between 1984 and 1991 he studied at Marmara University, School of Medicine in Istanbul, Turkey. In 1992 he became a Resident in Psychiatry and worked at Bakırköy Nervous and Mental Diseases Research and Training Hospital, Department of Psychiatry, 2nd Psychiatry Unit until 1997. Between the years 1997 and 1999, he received his master education on sociology and anthropology at Marmara University, Department of Sociology and Anthropology, Middle East Institute.

In 1997, Savaş started to work as a Fellow at Bakırköy Nervous and Mental Diseases Research and Training Hospital, Department of Psychiatry, 8th (Forensic) Psychiatry Unit in İstanbul, Turkey and continued his work there until 1999, during which he started to work as a Fellow at Ministry of Health, Avcılar Center for Treatment, Rehabilitation and Research on Psychiatric complications of Marmara Earthquake, in İstanbul, Turkey. In the year 2000, he became Assistant Professor and worked as the Director of the Mood Disorders and Dependence Units at Gaziantep University School of Medicine, Department of Psychiatry, in Gaziantep, Turkey until 2003. Savaş became an Associate Professor in the year 2003 has continued his work at the same department under the latter title until 2008, in which he became a professor. He had been the chair of the Psychiatry Department Gaziantep University School of Medicine, Department of Psychiatry in the year 2005 and continued his work here until the year 2011, in which he became the Editor in Chief of Journal of Mood Disorders. Since the year 2010, he is also the Chair of the Mood Disorders Section of the Turkish Association for Psychopharmacology (TAP-MooDS). He also is the Director of Alcohol and Substance Usage Disorders Unit.

He has been interested in molecular biology and clinical phenomenology of psychiatric disorders since 15 years, he is also interested on Psychiatry Ethics - in fact his Dissertation thesis was "Ethics and Psychiatrists in Turkey, Cultural Psychiatry - his sociology-anthropology master dissertation thesis was named "Culture and Psychiatry Interaction - and Forensic Psychiatry, which he studied as a fellow for 3 years in the largest mental hospital of Turkey.

Savaş currently studies molecular biology of several neuropsychiatric disorders, especially bipolar disorders. The study in which he was involved, on adrenomedullin in psychiatric disorders, was the first of its kind. He also studied the role of nitric oxide, free radicals, and adrenomedullin on the etiology of bipolar disorders and schizophrenia. Besides, he has have

studied Angiotensin Converting Enzyme gene (ACE), catechol methyl transferase gene, serotonin transporter gene, 5 HT2A receptor gene which are thought to have a role on schizophrenia and bipolar disorders. He intends to focus on metabolic aspects of psychiatric disorders and treatments as well as Pharmacogenetics and biological factors related with treatment response. Meanwhile, he was involved in the first publication, which shows a relationship between the hippocampal volume and risperidone treatment response is done by him.

He is the co-author of many original international reports and author and co-author of many original reports published in Turkey. According to ISI, he has been cited 440 times. Dr. Savaş also acted as a referee for many international and Turkish journals, and has been in advisory and editorial board of journals and magazines.



Schulze, Thomas G.

Section on Psychiatric Genetics,
Department of Psychiatry & Psychotherapy,
University Medical Center,
Georg-August-University, Göttingen,
Germany

Department of Psychiatry & Behavioral Sciences,
The Johns Hopkins
University, Baltimore, MD, USA

Thomas G. Schulze, born in 1969, studied medicine in Germany, the USA, and Catalonia. He trained as a psychiatrist and held positions in Germany (Bonn, Mannheim) and the USA (Chicago, IL; Bethesda, MD; Baltimore, MD). Since 2010, he has held the position of Professor of Psychiatric Genetics at the University of Göttingen in Germany. He is also on Faculty at the Department of Psychiatry and Behavioral Sciences at The Johns Hopkins University in Baltimore, Maryland (USA).

Dr. Schulze's research focuses on genotype-phenotype relationship in psychiatric disorders. At the University of Göttingen, he coordinates a 4 million € center grant on genotype-phenotype relationships and the neurobiology of the longitudinal course of psychosis (www.kfo241.de). To study the genetic basis of response to lithium treatment in bipolar disorder, he organized the international Consortium on Lithium Genetics (www.ConLiGen.org), which comprises several research groups from Europe, North and South America, Asia, and Australia.

He has authored more than 150 papers in leading journals. He is the 2006 recipient of the *Robins-Guze-Award* of the American Psychopathological Association (APPA), the 2006 recipient of the *Theodore-Reich-Award* of the International Society of Psychiatric Genetics (ISPG), the 2007 recipient of the *Future Award* of the German Society of Bipolar Disorders, and the 2009 recipient of the *Hans-Jörg-Weitbrecht Award for Clinical Neuroscience* of the German Psychiatric Association. Since 2012, he has held the office of Secretary of the *International Society of Psychiatric Genetics* (ISPG).

**Siafakas, Nikolaos**

Biologist PhD, Lecturer of Microbiology, National and Kapodistrian University of Athens, Medical School, Microbiology laboratory, University "ATTIKON" General Hospital, Athens, Greece

Dr. Nikolaos Siafakas is a lecturer in Diagnostic Virology at the Clinical Microbiology Laboratory of the ATTIKON University General Hospital in Athens, Greece. He received his B.Sc. (Hons) in Biological Sciences from the University of Essex, UK in 1997. He completed his Ph.D. in Biological Sciences with focus on Molecular Virology at the same University in 2001. Till then, he obtained a PgDipl in Infectious Diseases from the London School of Hygiene and Tropical Medicine and he is about to complete his studies towards an M.Sc. in Infectious Diseases from the same University, through a distance-learning program. He has been working in the field of virology with special focus primarily on enterovirus biology and molecular diagnostics of viral diseases for 15 years, since he was a postgraduate student in UK. He recently widened his interests on the molecular biology of psychiatric disorders, as well as the biology of miRNA and their possible role in infectious and psychiatric diseases. He has produced scientific work, presented by 35 scientific publications in peer reviewed journals, which deals with important aspects of detection, genetic characterization and molecular epidemiology of viruses and bacteria, as well as with pharmacogenomics and the underlying molecular biology of psychiatric disorders.

**Siamouli, Melina**

Research Associate, LMU, Munich, Germany

Melina Siamouli, MD, is a Research Associate at the LMU Munich Germany

Dr. Siamouli received her medical degree at Aristotle University of Thessaloniki, Greece in 1998. She performed her residency in psychiatry and received her license in 2006. After that she worked as a psychiatrist in a private mental clinic (2008-2011) and in her private practice (2006-today). Dr Siamouli is a research associate in the 3rd Department of Psychiatry of the Aristotle University of Thessaloniki (2006-2008 and 2010-today). Her areas of clinical and research interest are biological psychiatry, psychopharmacology, mood disorders and trans-cultural psychiatry. She has co-authored more than 50 papers delivered to Greek and international congresses, and participated as a speaker in 5 symposiums. She is also the co-author of 23 papers published in international journal such as the *Journal of Affective Disorders*, *Schizophrenia Research*, *Psychiatry Research*, *Annals of General Hospital Psychiatry*, and the *British Journal of Psychiatry*, among others, with 142 citations and h=27. Dr Siamouli served as an invited reviewer for several peer-reviewed international journals and was an invited author for the *Current Opinion in Psychiatry*.



Simos, Gregoris

Assistant Professor of Developmental Psychopathology, Department of Educational and Social Policy, University of Macedonia, Thessaloniki, Greece

Gregoris Simos graduated from the Medical School of the Aristotelian University of Thessaloniki, Greece, and trained in Psychiatry and Psychotherapy at its 2nd University Department of Psychiatry. He also earned his PhD from the same University. During 1989-1990 he worked at the Institute of Psychiatry, University of London/ Maudsley and the Royal Betlem Hospitals, where he was attached at Prof. Isaac M. Marks Psychological Treatment Unit, Dr Michael Crowe's Sex and Marital Clinic, and Prof. Gerald Russell's Eating Disorders Clinic. He was consequently accredited as a Cognitive and Behavioural Therapist by the BABCP, and also registered with the United Kingdom Council of Psychotherapy (UKCP) as a Cognitive Behaviour therapist..

During 1993 Dr Simos visited Prof. Aaron T. Beck's Centre for Cognitive Therapy at the University of Pennsylvania and trained at Cognitive Therapy. He also became a Founding Fellow of the Academy of Cognitive Therapy in 1999.

Dr Simos and his colleagues founded the Greek Association for Cognitive and Behavioural Psychotherapies (GACBP) in 1994 and has been its elected and re-elected President since then. He is also at the Board of the International Association for Cognitive Psychotherapy (post of the International Representative).

Dr Simos has published several books, book chapters, and journal articles in Greek and in English.



Skapinakis, Petros

Assistant Professor of Psychiatry, Department of Psychiatry, University of Ioannina, Greece

Petros Skapinakis is a graduate of the Medical School of the University of Athens and also holds a Masters in Public Health (MPH) from the University of Wales College of Medicine and a PhD in Psychiatry from the same University. He is currently an Assistant Professor of Psychiatry in the University of Ioannina School of Medicine. Dr Petros Skapinakis has authored/co-authored more than 50 peer-reviewed international journal publications and his main research interests include the common mental disorders and their association with the socioeconomic status, symptom-based epidemiological research (sleep, fatigue, depressive and anxiety symptoms), psychiatric epidemiology in adolescence and adults, obsessive compulsive disorder and other anxiety disorders and evidence synthesis.



Soldatos, Constantinos R.
Professor Emeritus of Psychiatry,
Mental Health Care Unit, Evgenidion
Hospital, University of Athens,
Greece

Constantin R. Soldatos, M.D., Ph.D., is Professor of Psychiatry and Director of the Mental Health Care Unit, Evgenidion Hospital, University of Athens. He is the founder and Director (1980-2007) of the Sleep Research Unit at the Eginition Hospital and he has served as chairman of both the 1st and the 2nd Departments of Psychiatry at the University of Athens. Professor Soldatos is consultant/advisor to several governmental and nongovernmental organizations and Committee member of various national and international scientific bodies, such as the World Health Organization and the Committee for Proprietary Medicinal Products of the EU. Also, he is member of more than 40 National and International Scientific Societies, President of the Hellenic Sleep Research Society (1997-2012), President of the World Hellenic Biomedical Association (2000-2006), President of the Hellenic College of Academic Psychiatry (2004-2007), President of the International Neuropsychiatric Association (2006-2008), President of the Hellenic Society for the Advancement of Psychiatry and Related Sciences (2003-present) and Vice President of the World Federation of Societies of Biological Psychiatry (2009-present). Moreover, he is Doctor 'Honoris Causa' of the University of Patras Medical School, Honorary President of the Hellenic Sleep Research Society, which he founded in 1997, and Honorary Member of the World Psychiatric Association, the Mexican Neuropsychiatric Association, the Argentinean Neuropsychiatric Association and the Polish Sleep Research Society. Professor Soldatos is author or co-author of 216 articles in ISI journals and invited author of about 200 chapters in edited books. His ISI papers have received more than 6628 citations (h-index=44 with total impact factor of 1013 and m-factor=120) as of March 2013. He has been Editor or Co-editor of 38 books on psychiatry and/or sleep research, Editor - in- chief of the Archives of Hellenic Medicine and Guest Editor of three international psychiatric journals. Also, he is member of the Editorial/Advisory Boards of a good member of international scientific journals.



Sotiriou, Michael
Director, Psychiatric Adult Unit,
Kavala General Hospital, NHS
Kavala, Greece

Michael J. Sotiriou, is Director of the Psychiatric Adult Unit at Kavala General Hospital in Kavala, East Macedonia, Greece. He earned his medical degree and completed his residency in psychiatry at Aristotelian University, in Thessaloniki, Greece. Then, having awarded a scholarship from Greek State Foundation (IKY) he worked in Great Britain (Department of Psychiatry, Guys Hospital, University of London). In Greece, he worked in Thessaloniki, Serres and Kavala (Psychiatric Units, Day Hospitals, Community Mental Health Centers).



Stahl, Stephen

Professor of Psychiatry, University of California San Diego, Honorary Fellow, University of Cambridge, Editor-in-Chief *CNS Spectrums*, Director of Psychopharmacology Services, California Department of State Hospitals, USA

Adjunct Professor of Psychiatry, University of California San Diego

Honorary Visiting Senior Fellow, University of Cambridge, UK
Chairman, Neuroscience Education Institute (NEI)

Editor-in Chief, *CNS Spectrums*

Director of Psychopharmacology Services, California Department of State Hospitals

Dr. Stephen M. Stahl received his undergraduate and medical degrees from Northwestern University in Chicago, as a member of the honors program in Medical Education, and his Ph.D. degree in pharmacology and physiology from the University of Chicago. Dr. Stahl has trained in three specialties: internal medicine at the University of Chicago; neurology at the University of California in San Francisco; and psychiatry at Stanford University. He is board certified in psychiatry.

Dr. Stahl has held faculty positions at Stanford University, the University of California at Los Angeles, the Institute of Psychiatry London, the Institute of Neurology London, and, currently, as professor at the University of California at San Diego and as an Honorary Visiting Senior Fellow in the Department of Psychiatry at the University of Cambridge in the UK. He also directs the psychopharmacology services for the California Department of State Hospitals. Dr. Stahl was formerly Executive Director of Clinical Neurosciences at the Merck Neuroscience Research Center in the UK for several years. Dr. Stahl's major interests are dedicated to producing and disseminating educational information about diseases and their treatments in psychiatry and neurology, with a special emphasis on multimedia, the internet and teaching how to teach.

Dr. Stahl currently serves as editor-in-chief of *CNS Spectrums*. He is also associate editor of *Acta Psychiatrica Scandinavica*, is former clinical field editor for the *International Journal of Neuropsychopharmacology* and is on numerous editorial boards of other leading journals including the ACNP's journal *Neuropsychopharmacology*. He has conducted numerous research projects during his career awarded by the National Institute of Mental Health, by the Veterans Administration and by the pharmaceutical industry. Author of over 500 articles and chapters, and more than 1600 scientific presentations and abstracts, Dr. Stahl is an internationally recognized clinician, researcher and teacher in psychiatry with subspecialty expertise in psychopharmacology. Dr. Stahl has edited ten books and written 31 others, including the best-selling and award winning textbook, *Stahl's Essential Psychopharmacology*, now in its fourth edition, the best selling and award winning clinical manual, *Essential Psychopharmacology Prescriber's Guide*, also in its fourth edition and the recently published series of clinical cases, *Stahl's Essential Psychopharmacology Case Studies*.

Lectures, courses and preceptorships based upon his textbooks have taken him to dozens of countries on 6 continents to speak to tens of thousands of physicians, mental health professionals



and students at all levels. His lectures and scientific presentations have been distributed as more than a million CD-ROMs, internet educational programs, videotapes, audiotapes and programmed home study texts for continuing medical education to hundreds of thousands of professionals in many different languages. His courses and award-winning multimedia teaching materials are used by psychopharmacology teachers and students throughout the world.

Dr. Stahl serves as a fellow of the ACNP (American College of Neuro-psychopharmacology) of the British Association of Psychopharmacology and of the CINP, where he was formerly vice president. He also serves on numerous medical and scientific advisory boards for the pharmaceutical industry, for the biotechnology and medical information industry, and for various nonprofit and public service organizations, including appointment by the State of California as current Chair of the Medi-Cal Oversight Board for Medicines (Drug Utilization Review Board). His educational research programs are monitoring changes in diagnosing and prescribing behaviors as outcomes from various educational interventions for programs organized by the Neuroscience Education Institute, which he chairs. He also has an active clinical practice specializing in psychopharmacologic treatment of resistant cases.

He has been awarded the International College of Neuropsychopharmacology (CINP) Lundbeck Foundation Award in Education for his contributions to postgraduate education in psychiatry and neurology. His books have won the British Medical Association's Book of the Year Award and Arbor Scientia, an NEI company, has been awarded the business of the year award from the local chamber of commerce. Dr. Stahl is also the winner of the A.E. Bennett Award of the Society of Biological Psychiatry, the American Psychiatric Association/San Diego Psychiatric Society Education Award and has been cited as both one of "America's Top Psychiatrists" and one of the "Best Doctors in America." He has been named to present the Distinguished Psychiatrist Lecturer by the American Psychiatric Association (APA) for 2013.



Steinmann, Saskia

University Medical Center Hamburg-Eppendorf, Department of Psychiatry and Psychotherapy, Psychiatry Neuroimaging Branch, Germany

Membership

German Society for Mountain and Expedition Medicine (BExMed)

University education

11/2004 - 10/2009 Psycholinguistics (Subsidiary subjects: Psychology and Medicine) at Ludwig-Maximilians-University, Munich, Germany

Academic appointments

Since 01/2010 Ph.D.-student at Psychiatry Neuroimaging Branch (PNB, Head: Prof. C. Mulert), Department of Psychiatry and Psychotherapy, University Medical Center Hamburg-Eppendorf (Head: Prof. D. Naber) and at the Faculty of Biological Psychology and Neurophysiology, University Hamburg (Scholarship by Otto Werner Foundation)

10/2009 - 12/2009 Internship at Department of Clinical Neurophysiology and Functional Neuroimaging, Department of Psychiatry and Psychotherapy, Ludwig-Maximilians-University Munich (Head: Prof. H.J. Möller)

03/2009 Completion of master's thesis. Topic: "Psycholinguistic basics for the conception of a manual about high altitude medicine to improve the communication between mountaineers, sherpas and carriers" under the guidance of Prof. G. Kegel (Department of Psycholinguistics, Ludwig-Maximilians-University of Munich) and Prof. S. Noachtar (Department of Neurology, Ludwig-Maximilians-University of Munich) (Grade: 1,0)

01/2007 - 12/2008 Student research assistant at the high altitude research project SCITREX-2008 (Dr. B. Feddersen), Department of Neurology, Ludwig-Maximilians-University of Munich. Topic: "Medical, psychological and psycholinguistic investigations of 30 expedition participants during the ascent of Chulu West Peak (6419m) in Nepal"

04/2008 - 05/2008 Research visit in Nepal, Data acquisition for master's thesis



Tavormina, Giuseppe

President of "Psychiatric Studies Centre" (Cen.Stu.Psi.), Brescia, Italy

Dr G. Tavormina is a Psychiatrist and works exclusively in Private Practice as a clinician since 1998.

He also worked in a Mental Health Institute for more than five years (Oct 1992→May 1998); before the hospital career, he worked for two years as Penitentiary Physician.

In the month of June 2000 he co-founded a no-profit Scientific Association of which he is the President ("Psychiatric Studies Centre", or "Cen.Stu.Psi." - www.censtupsi.org), that has its first purpose in encouraging and stimulating the scientific, clinical and diagnostic research while carefully gathering current studies of all psychiatric subject matters.

During 2006-2007 years, he has been a Founding Member (and actually its General Secretary) of two NGO association (the "European Depression Association", EDA, headquartered in Brussels, Belgium), and "EDA Italia Onlus - Associazione Italiana sulla Depressione" (headquartered in Provaglio d'Iseo, Italy): their main role and aim is to create and co-ordinate in all European countries and Italian regions the annual event named "European Depression Day".

During October 2007 he has been appointed for scientific merits as "Senior Research Fellow" of the Bedfordshire Center for Mental Health Research in association with the University of Cambridge.

He joined during past 12 years to more than 60 national and international congresses presenting personal scientific papers. He also is a Member of ECNP and EPA (in Europe), and SOPSI and SINPF (in Italy).

He published 50 articles in international scientific magazines, mainly about bipolar spectrum topic, beginning actually one of the European experts in the field of bipolar spectrum mood disorders.



Toni, Christina

Institute of Behavioural Science
"Gianfranco De Lisio", Italy

Cristina Toni graduated at the Medical School of the University of Pisa Italy in 1986 and went on to specialize in Psychiatry, taking her second degree in 1990, and the PhD in clinic psychopharmacology in 1994. She is one of the founders of the Institute of Behavioural Science "Gianfranco De Lisio" where she coordinates the research and teaching programs. She teaches psychopathology and psychopharmacology at the School of Psychiatry organized by the Institute of Behavioral Science De Lisio. She cooperates at the international research program on mood disorders at the South California University of San Diego, developing numerous research projects on different aspects of mood disorders, from mixed states to mania, to atypical depression, and on anxiety disorders, in particular panic disorder, agoraphobia and social phobia. He published more than 150 national and international scientific papers on clinical psychopharmacology, psychiatric clinic, psychopathology and biological psychiatry. She is also author of numerous chapters of books on mood and anxiety disorders.



Touitou, Yvan

Unit of Chronobiology, Rothschild
Foundation, Paris, France

Professor (emeritus) of Biochemistry and Molecular Biology,
Faculté de Médecine Pitié-Salpêtrière, Paris
Head, Dpt of Medical Chronobiology, Pitié-Salpêtrière Hospital,
Paris

Member of the French Academy of Medicine
Former President of the French Academy of Pharmacy

Research

Research field: Mechanisms and Physiopathology of Biological
Rhythms

Research activities: Rhythm desynchronization; Melatonin; Ag-
ing and rhythms; Shiftwork; Chronopharmacology
Around 400 scientific publications in international scientific
journals and book chapters

Published books

Y. Touitou, P. Pevet, J. Arendt, eds. Melatonin and the Pineal
Gland: From Basic Science to Clinical Application. Excerpta
Medica, Elsevier Ed., 393 pages, 1993.

Y. Touitou. Biological Clocks. Mechanisms and Applications. Ex-
cerpta Medica, Elsevier Ed., 584 pages, 1998.

Y. Touitou. Mécanismes et Physiopathologie des Fonctions
Rythmiques. Vernazobres, Ed., 423 pages, 2003.

Y. Touitou, E. Haus, eds. Biologic Rhythms in Clinical and Labo-
ratory Medicine, 1 volume, Springer-Verlag Ed., 730 pages, 2°
édition, 1994.

Editorial functions

Editor-in-Chief of Chronobiology International (IF : 4.28)

Associate editor: Neuroendocrinology Letters

Editorial board member of several scientific journals



Touloumis, Charalampos

NHS Director, Psychiatric Hospital of
Attiki, Athens Greece

Dr Touloumis was born in Chalkis of Evia, in Greece. He gradu-
ated from Medical School of Athens University and received his
specialty in Psychiatry from Psychiatric Hospital of Athens and
Evangelismos Hospital.

Since 1987, he has been working as Psychiatrist in Psychiatric
Hospital of Athens (nowadays in the position of Deputy Clinic
Director in the 10th Psychiatric Department). He has published
more than 50 scientific publications through greek and inter-
national biomedical magazines. He has made more than 70 sci-
entific presentations in medical conferences. He is interested
specifically in Clinical Psychiatry and Psychopharmacology.



Treasaden, Ian H.
West London Mental Health NHS
Trust, UK

Dr I H Treasaden M.B., B.S., LRCP, MRCS., FRCPsych., LL.M. Honorary Senior Clinical Lecturer in Psychiatry at Imperial College London and Honorary Consultant in Imaging Department, Hammersmith Hospital, England and, since 1984, he has been Consultant Forensic Psychiatrist at The Three Bridges Medium Secure Unit, West London Mental Health NHS Trust, where he has also been Clinical Director.

He qualified in medicine from the London Hospital Medical College, University of London, in 1975 where he was awarded the James Anderson Prize in Clinical Medicine, and trained in forensic psychiatry at the Maudsley & Bethlem Royal Hospitals in London. Author of papers on forensic and general psychiatry, he is co-author of the books Textbook of Psychiatry, Mental Health Law: A Practical Guide, Emergencies in Psychiatry and Psychiatry: An Evidence-based Text.

His current research interests include associated lipid and neuro-imaging abnormalities in psychiatric disorders.



Tsaluchidu, Sofia
University of Bologna, Italy

Dr. Sofia Tsaluchidu received her degree from the University of Bologna IT (Alma Mater Studiorum Università di Bologna) based on her thesis "New Therapeutic Approaches to the Pathology of Parkinson's Disease", involving a detailed study of adenosine A2 antagonists, neuroprotective drugs and neuromelanin inhibitors.

She has a particular expertise in fatty acids and oxidative stress and her postgraduate work has included published studies in: comparing oxidative stress in smokers and non-smokers (an *in vivo* human quantitative study of *n*-3 lipid peroxidation); the use of artificial neural networks to study fatty acids in neuropsychiatric disorders; and fatty acids and oxidative stress in psychiatric disorders.

She is the co-author of the following major paper that is in press in the World Review of Nutrition and Dietetics: The application of serial structural magnetic resonance imaging analysis and proton and 31-phosphorus magnetic resonance spectroscopy to the investigation of cerebral fatty acids in major depressive disorder, Huntington's disease (chorea), and myalgic encephalomyelitis (chronic fatigue syndrome), and in forensic patients with schizophrenia who have seriously and violently offended.

In addition to her academic commitments, including research studies, acting as a journal peer reviewer and presenting papers at major international scientific conferences, Dr. Tsaluchidu is a keen poet who has won several major international prizes for her poetry in both Italian and Greek.

She is a researcher collaborator of Dimorfipa Department University of Bologna IT and has been a visiting researcher at the Medical Research Council. She is also the scientific coordinator of the Academy of Nutritional Medicine UK and a member of the Brain and Heart International Group which honours leading researchers including Professor Cary Mullis, Nobel Laureate in Chemistry, USA.



Tsametis, Christos P.

Unit of Reproductive Endocrinology,
First Department of Obstetrics and
Gynecology, Medical School, Aristotle
University of Thessaloniki, Greece

Dr. Christos P. Tsametis was born in Grevena, Greece. He completed his basic medical training (M.D.) and received his Ph.D. degree from the Aristotle University of Thessaloniki (A.U.Th.). He worked as a specialist registrar at "AHEPA" University Hospital and "Panagia" General Hospital in Thessaloniki, acquiring the specialty of Endocrinology and Metabolism. During the last six months of his training, he worked as a clinical and research fellow at the Oxford Centre of Diabetes, Endocrinology and Metabolism (OCDEM), Churchill Hospital, Oxford, UK, under the supervision of professor John AH Wass. Currently, he is a scientific collaborator at the Unit of Reproductive Endocrinology in the First Department of Obstetrics and Gynecology, A.U.Th. (Head: Prof. Basil Tarlatzis) and practices private medicine in the city of Thessaloniki. Dr. Tsametis' main research interests include reproductive endocrinology and male subfertility in particular, obesity and neuroendocrinology.



Tsopelas, Christos

Consultant Psychiatrist in Adult Psy-
chiatry, Psychiatric Hospital of Attica,
Athens, Greece

Dr Tsopelas is a graduate of the Medical School of Athens. His psychiatric training was completed in Aeginition Hospital, Athens, and Charring Cross Psychiatric training Scheme, London, UK. He has worked in London in various posts, like Community Drug and Alcohol Teams and Crisis Resolution Home Treatment team. The last post was as Consultant psychiatrist in Community Mental Health Team at South London and Maudsley Trust before he returned to Greece in late 2005. Since then he has been part of Greek National Health system and worked for the last 5 years at the Psychiatric Hospital of Attica.

He completed his MSc in Psychiatric Research at Institute of Psychiatry, London, UK. He is in the process of finishing his PhD. He has training in Brief Solution Focused Therapy and Interpersonal Psychotherapy.

His special interests include Epidemiology, Forensic Psychiatry, patients' rights and community psychiatry. He has been secretary of Forensic Psychiatric Section of Hellenic Psychiatric Association and actively involved in organizing and teaching at European co-funded educational programs about de-institutionalization, community psychiatry and forensic psychiatry. Now he is also member of the Board of the Hellenic Psychiatric Association and Secretary of the newly formed Greek Forensic Psychiatric Association.



Tsotsi, Stella

Laboratory of Cognitive Neuroscience, School of Psychology, Aristotle University of Thessaloniki, Greece

Stella Tsotsi (MSc) is a PhD student at the Department of Psychology, Aristotle University of Thessaloniki, Greece, and a Research Assistant at the 1st University Psychiatry Clinic (GPH Papageorgiou), Aristotle University of Thessaloniki, Greece. Stella Tsotsi obtained her MSc on Clinical Neuropsychology at the University of Leiden, the Netherlands, and is a licenced clinical neuropsychologist. While conducting her PhD research on facial emotion perception in schizophrenia, she has been working as a research assistant in various projects both in Greece and abroad. Since 2009, she has been working as a part-time lecturer, teaching undergraduate courses. She has presented her work in many national and international conferences. She is a member of the Greek Psychology Association, of the Psychology Association of Northern Greece and of the Hellenic Society for Neurosciences.



Vidalis, Athanasios

Former NHS Director, Greece

Dr Vidalis graduated from the Faculty of Medicine, Aristotle University of Thessaloniki in 1972, completed his specialization in Neurology and Psychiatry in 1980 and his doctorate from the Aristotle University of Thessaloniki in 1983. He had postdoctoral training at the Queen Mary's University Hospital, London (Biennial official government owned program Psychoanalytic Psychotherapy, Queen Mary's University Hospital) in 1985-87. He served as Senior Research Fellow, Psychiatric Department Queen Mary's University Hospital, London-England in 1985-88, as Associate Specialist, Psychiatric Department Goodmayes' Hospital, London in 1986 and held various clinical psychiatric posts at Queen Mary's University Hospital during 1983-88. He was Ex. Lecturer in Psychiatry, 3rd Department of Psychiatry, Aristotle University of Thessaloniki, University Hospital AHEPA, Thessaloniki, Greece in 1990 and served as director, Psychiatric Department of Hippokratio General Hospital Thessaloniki-Greece, since 1990. He held important of positions in several scientific societies and currently is vice-President of the, "Hellenic Association of Professional Psychiatrists". He is Editor, "Hellenic General Hospital Psychiatry" and Associate Editor, "Hippokratia" Journal. He has authored or edited a number of books and monographs and participated in the authoring of more than 160 research papers announced in congresses and published in local or international journals.



Yargic, Ilhan
Professor of Psychiatry at the
Istanbul University, Turkey

Prof. Dr. Ilhan Yargic is the head of the Addiction Unit and the Adult ADHD Program at the Istanbul University Istanbul Medical School Psychiatry Department. He is also working at the National Institute of Forensic Medicine. He is member of the advisory board for the Alcohol Control Program at the Ministry of Health. He was born in 1966. He was graduated from Hacettepe University Medical School in 1990. He completed residency training in Psychiatry at the Istanbul University and fellowship in addiction medicine at the University of Minnesota. He became associate professor in 2008 and professor in 2005. He was awarded with David Caul Memorial Award by the International Society for the Study of Dissociation twice (in 1995 and 1999). He also received an award for his research project from the International Ciba Foundation in 1992. He prepared and presented a TV program about addiction on the national TV channel (TRT). This TV program received 2 different awards. He is married and has 2 children.



Yasar, Umit
Hacettepe University, Faculty of
Medicine, Department of Pharmacology,
Turkey

Professional Details:

Education:

Medical License: 1987 - 1994 Hacettepe University, Faculty of Medicine, Ankara, Turkey

PhD degree: 1997 - 2002 Karolinska Institute, Department of Clinical Pharmacology, Stockholm, Sweden

Work Experience:

9/1994 - 06/1995 Ankara State Hospital, Anaesthesiology Clinics (Resident)

06/1995 - 09/1997 Hacettepe University, Faculty of Medicine, Department of Pharmacology (Research student)

09/1997 - 02/2002 Karolinska Institute, Department of Clinical Pharmacology (PhD student)

02/2002 - 08/2002 Karolinska Institute, Department of Clinical Pharmacology (Postdoctoral fellow)

09/2002 - 10/2004 Hacettepe University, Faculty of Medicine, Department of Pharmacology (Instructor)

10/2004 - 05/2005 Hacettepe University, Faculty of Medicine, Department of Pharmacology (Assistant Professor)

05/2005 - 12/2010 Hacettepe University, Faculty of Medicine, Department of Pharmacology (Associate Professor)

01/2011 - Hacettepe University, Faculty of Medicine, Department of Pharmacology (Professor)

08/2012 - Tufts University, School of Medicine, Department of Molecular Physiology and Pharmacology (Visiting Professor)

Awards

Awards from Turkish Academy of Sciences, The Scientific and Technical Research Council of Turkey, Turkish Higher Education Council, different Universities, Institutes, in Turkey.

Scientific Participations:

About 50 national/international meetings.

Publications

58 articles published in journals indexed by SCI-expanded

Total number of total citations:

1560 (January 2013)

Editorial Board Membership of Scientific Journals:

European Journal of Clinical Pharmacology

Current Pharmacogenomics and Personalized Medicine

Bulletin of Clinical Psychopharmacology (Turkish/English)

Acta Medica (Editor in Chief)



Yehuda, Shlomo

Psychopharmacology Lab., Dept.
of Psychology, Bar Ilan University,
Ramat Gan, Israel

Shlomo Yehuda received his Ph.D. degree in Psychology and Brain Sciences from M.I.T. He is an emeritus professor at the Department of Psychology and he was Ginsburg professor for Aging Research and was the Director of the Psychopharmacology Laboratory at Bar Ilan University. He held the position of Rosenstat Professor at Toronto University Medical School. He was the President of Shaari Mishpat College. He published over 180 scientific papers and 7 books in the following fields: Brain Biochemistry and behavior, Effects of nutrients on Brain and behavior (mainly brain iron and essential fatty acids), Sleep, Stress ADHD children and aging of the brain, He was a member of several Israeli and international scientific committees and editorial boards.



Yildiz, Ayşegül

Professor of Psychiatry, Department
of Psychiatry, Dokuz Eylül University,
Izmir, Turkey and Harvard Medical
School International Consortium for
Bipolar Disorder Research, Boston,
USA

Dr. Yildiz completed her medical training at the Hacettepe University, Medical School (Eng) and her psychiatric residency at the Dokuz Eylül University in Turkey. After completing research fellowships at the Center for Magnetic Resonance Research, University of Minnesota; McLean Hospital Brain Imaging Center and Massachusetts General Hospital Bipolar Clinic, Harvard Medical School, she returned to Turkey and started first adequately powered proof-of-concept study in bipolar acute mania. This study, published at the Archives of General Psychiatry in 2008, represents a rare example of how basic neuroscience can lead to the hypothesis-driven investigation of a novel treatment principle in a psychiatric disorder. After completing this project in 2006 she returned to United States and worked as a faculty at the Harvard Medical School Brain Imaging Center and International Consortium for Bipolar Disorder Research Program.

Dr. Yildiz is the recipient of the American Psychiatric Association/Astra Zeneca Young Minds in Psychiatry Award (2004) and Fellowship Award from the European College of Neuropsychopharmacology-ECNP (2002). She is also recipient of research grants from the Stanley Medical Research Institute (2002, 2003), Pfizer-USA (Independent Investigator Award, 2002), Harvard Medical School, Stanley Foundation Bipolar Research Center (2003), and International Sleep Research Foundation (2004). Dr. Yildiz has authored more than eighty articles in peer-reviewed journals and has been an invited speaker at

numerous national and international scientific meetings. Her areas of clinical and research interest include evaluation of therapeutic effects of putative anti-manic agents; psychopharmacology, neuroimaging, and meta-analytic evidence synthesis of unipolar and bipolar mood disorders.

Dr. Yildiz currently works as a Professor of Psychiatry at the Dokuz Eylül University and Harvard Medical School International Consortium for Bipolar Disorder Research Program. She is a member of the Scientific Advisory Panel at the European College of Neuropsychopharmacology (ECNP), and the President of the Institutional Review Board at the Dokuz Eylül University.



Zdanowicz, Nicolas

Medicine Faculty, Université Catholique de Louvain, Psychopathology and Psychosomatic unit Cliniques de Mont-Godinne, Belgium

Prof N. Zdanowicz obtained his master in Psychiatry in 1993. He performed a part of his fellowship in Switzerland and in France at the "Hopital de la Salpêtrière". He presented his PhD thesis about Adolescent' Health in 2001. He became Professor at the Université Catholique de Louvain (UCL) in 2009 where he is already lecturer since 2003.

After his researches in adolescents and young adults' psychiatry, he was nominated as Senior Research Fellow at the University of Cambridge in 2009.

Author of more than 150 articles, chapters of books and books, he is Currently Head of Clinic of the Psychosomatic and Psychopathologic Department at Mont-Godinne University Hospital (UCL) in Belgium.

He takes part in a lot of Editorial Boards, in the Executive Board of "CenStuPsi" and in the "European Expert Platform on Depression".



Zoumpourlis, Vassilis

Researcher B, PhD, Greece

Vassilis Zoumpourlis obtained his Diploma in Molecular Biology from Faculty of Science, of the university J E Purkyne, Brno, Czech Republic (in 1987) and his PhD from the Medical School of Crete (in 1995). He joined Institute of Biological Research and Biotechnology at the National Hellenic Research Foundation as assistant Researcher in January 1989 and he was promoted to Research Associate Professor in April 2006. From late 2003 onwards he is supervising R&D activities of the Biomedical Applications Unit of Institute of Biological Research and Biotechnology at the National Hellenic Research Foundation. He has been a visitor researcher in leading Cancer Research Institutes in the Europe and USA. Recently, he received a mutual exchange grant from Fulbright Foundation for research in UCSF Comprehensive Cancer Center, University of California, San Francisco, USA. He is expertised in the molecular mechanisms and genetics of cancer. His current scientific interests are expanded to the use of human stem cells in cytotherapy of cancer and the role of microRNAs in cancer and neurogenerative diseases. To this day, he has published 70 original articles, with collectively over 1800 citations, in peer-reviewed, well-respected scientific journals (e.g. Nature, EMBO, Cancer Research) and he has made over 90 oral and poster presentations.



Acknowledgements

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ύπνου, τριγμοί των οδόντων, αποπροσανατολισμός, απάθεια, μυόκλωνος, ακαθάρσια, νευρική διαταραχή στην προσοχή, δυσγευσία, δυσκίνησία, σύνδρομο ανήσυχων ποδιών, κακή ποιότητα ύπνου, μυδρίαση, οπτική δυσλειτουργία, λιγγος, ωταλία, ταχυκαρδία, υπερκοιλιακή αρρυθμία κυρίως κολπική μαρμαρυγή, υπέρταση, περιφερική νευροπάθεια, ορθοστατική υπόταση, συγκοπή, συσφιγκτικό, αίσθημα λαϊμού, ερίσταση, αιμορραγία του γαστρεντερικού συστήματος, γαστρεντερίτιδα, ερυγί, γαστρίτιδα, αυξημένα ηπατικά ένζυμα (alt, ast, αλκαλική φωσφατάση), ηπατίτιδα, οξεία ηπατική βλάβη, νυκτερινού ιδρώτες, κνίδωση, δερματίτιδα από επαφή, κνίδος ιδρώτας, αντιδράσεις φωτοευαισθησίας, αυξημένη τάση εκχυμώσεων, μυϊκό σπείζμο, μυϊκές δεσμωδύσεις, κατακράτηση ούρων, δυσκολία στην ούρηση, νυκτουρία, πολουρία, μειωμένη ροή των ούρων, γυναικολογική αιμορραγία, διαταραχές εμμήνου ρύσης, σεξουαλική δυσλειτουργία, θωρακικό άλγος, αδυναμία να σταθεί όρθιος (πτώσεις), αίσθηση μη-φυσιολογική, αίσθηση ψυχρού, δίαια, ρίγη, αίσθημα κακουχίας, αίσθηση θερμού, διαταραχές στη βάδιση, σωματικό βάρος αυξημένο, κρεατινοφωσφοκινάση αίματος αυξημένη, κάλιο αίματος αυξημένο. Σπάνιες ανεπιθύμητες ενέργειες (≥ 1/10.000 και < 1/1.000): αναφυλακτική αντίδραση διαταραχή υπερευαίσθησίας, υποθυρεοειδισμός, αφυδάτωση, υπονατρίαση, SIADH, αυτοκτονική συμπεριφορά, μανία, ψευδοσθησεις, επιθετικότητα και οργη, σύνδρομο σεροτονίνης, σπασμοί, ψυχοκινητική ανησυχία, εξοπυραμικά συμπτώματα, γλαυκωμα, υπέρταση κρίση, στοματίτιδα, δυσοσμία του στόματος, αιματογεία, ηπατική ανεπάρκεια, ίκτερος, σύνδρομο Stevens-Johnson, αγγειονευρωτικό οίδημα, τρισμός, μη φυσιολογική οσμή ούρων, συμπτώματα εμμηνόπασης, γαλακτορία, υπερπρωλακτιναιμία, γολιστερόλη αίματος αυξημένη, ΚΑΤΟΧΟΣ ΑΔΕΙΑΣ ΚΥΚΛΟΦΟΡΙΑΣ: Eli Lilly Nederland BV, Grootslag 1-5, NL-3991 RA Houten, Ολλανδία. ΑΡΙΘΜΟΙ ΑΔΕΙΑΣ ΚΥΚΛΟΦΟΡΙΑΣ. 30mg: EU/1/04/296/006. 60mg: EU/1/04/296/002. ΗΜΕΡΟΜΗΝΙΑ ΠΡΩΤΗΣ ΕΓΚΡΙΣΗΣ: 17 Δεκεμβρίου 2004. ΗΜΕΡΟΜΗΝΙΑ ΑΝΑΘΕΩΡΗΣΗΣ ΚΕΙΜΕΝΟΥ: Ιούλιος 2011. ΤΡΟΠΟΣ ΔΙΑΘΕΣΗΣ: Χορηγείται με ιατρική συνταγή. ΛΙΑΝΚΗΣ ΤΙΜΕΣ: Κάψουλες των 30mg σε κοτύ των 28, €20,76. Κάψουλες των 60mg σε κοτύ των 28, €33,02.



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