ECNP neuroscience applied

ECNP SEMINAR

IN NEUROPSYCHOPHARMACOLOGY

22-24. 04. 2016.
VRDNIK, SERBIA

ECNP neuroscience applied

ECNP is an independent, non-governmental, scientific association dedicated to the science and treatment of disorders of the brain. Founded in 1987, its goal is to bring together scientists and clinicians to facilitate information-sharing and spur new discoveries.
The objective of ECNP is to serve the public good by stimulating high-quality experimental and clinical research and education in applied and translational neuroscience. It seeks to do this by:

- Co-ordinating and promoting scientific activities and consistently high-quality standards between countries in Europe.
- Bringing together all those involved in or interested in the scientific study of applied and translational neuroscience by arranging scientific meetings, seminars, and study groups.
- Providing guidance and information to the public on matters relevant to the field.
- Providing a format for the co-ordination and for development of common standards in Europe.

To fulfil this aim ECNP organises, amongst others, yearly the ECNP Congress that comprises of 6 plenary lectures, 28 symposia and 7 educational update sessions. The annual meeting attracts around 6,000 psychiatrists, neuroscientists, neurologists and psychologists from around the world and is considered to be the larges congress on applied and translational neuroscience.

ECNP organises seminars, as the one you have been invited to participate, in areas of Europe where there are less opportunities for psychiatrists to participate in international meetings. Interaction is the keyword at these meetings and they have proved very successful both for the participants and for the experts. During the seminar we discuss clinical and research issues that the local organisers feel that are needed to be covered and using these topics as a model for teaching how to ask a research question and how to plan an effective study. Leading ECNP experts that are also talented speakers will facilitate mutual discussion in small groups allowing you to present your abstract and get feedback from your colleagues and local mentors.

So far, ECNP has organised this meeting in Poland, Estonia, Turkey, Bulgaria, Slovak Republic, Hungary, Czech Republic, Moldova, Romania, Greece, Russia, Latvia and recently in Macedonia, Armenia, Georgia, Serbia and Lithuania. In some countries we have organised it more than once.

ECNP also supports on an annual basis participation of 100 junior scientists and researchers in an intensive three-day Workshop in Nice. Other educational activities of ECNP include the journal European Neuropsychopharmacology that promotes scientific knowledge along with publishing consensus statements. In addition, since 2009 ECNP organises a summer school of neuropsychopharmacology in Oxford, since 2012 a school of child and adolescent neuropsychopharmacology in Venice and since 2013 a school of old age neuropsychopharmacology in Venice.

ECNP will also continue the successful pilot of the ECNP Research Internships. A selected group of senior researchers will offer a short two week exploratory experience in their institutions. The hosting scientist is encouraged to establish a long term relationships with the applicant and teach a basic translational research method that the participant can use at home when he/she returns.

Please see the ECNP website (www.ecnp.eu) where you can find information about all the above initiatives and additional information and look for the activity that fits you.

I hope you have a fruitful and inspiring meeting in Serbia!

Gil Zalsman
Chair ECNP Educational Committee

ECNP Seminar in Neuropsychopharmacology
22-24 April 2016, Serbia (Hotel Aqua-Vrdnik)

FRIDAY 22 APRIL 2016

Arrival of participants and experts
19.00 Welcome and dinner at the Hotel

SATURDAY 23 APRIL 2016

09.00 – 09.15 What is ECNP?
Introductions to the programme
Speaker: Celso Arango, Seminar leader, Spain

09.15 – 10.00 Principles of research in mental health
Speaker: Philip K. McGuire, United Kingdom

10.00 – 10.45 Child Psychiatry research as a model for research plan and design
Speaker: Alan Apter, Israel

10.45 – 11.30 Coffee break

11.30 – 12.15 How to write a scientific paper
Speaker: Celso Arango, Spain

12.15 – 12.30 How to give a talk
Speaker: Celso Arango, Spain

12.30 – 13.30 Lunch

PRESENTATION PARTICIPANTS IN 3 GROUPS IN 3 PARALLEL WORKSHOPS			
Round 1 13.30 – 15.00	Celso Arango and Slobodanka Pejovic **Group 1**	Philip K. McGuire and Zorana Pavlovic **Group 2**	Alan Apter and Jasminka Markovic **Group 3**

15.00 – 15.15 Break

15.15 – 15.45 Panel discussion: How to prepare a clinical research project and how to publish it
Chair: Celso Arango, Spain
Panel members: Philip K. McGuire, United Kingdom Alan Apter, Israel

16:00 – 21.00 Social activity (Fruska Gora's Monastery, Sremski Karlovci and surroundings), group photo and dinner (Kovacevic winery, Irig)

SUNDAY 24 APRIL 2016

Presentations participants in 3 groups in 3 parallel workshops (Experts rotate between the groups)

PRESENTATIONS PARTICIPANTS IN 3 GROUPS IN 3 PARALLEL WORKSHOPS (EXPERTS ROTATE BETWEEN THE GROUPS)			
Round 2 08.30 – 10.00	Celso Arango and Slobodanka Pejovic **Group 2**	Philip K. McGuire and Zorana Pavlovic **Group 3**	Alan Apter and Jasminka Markovic **Group 1**
10.00 – 10.20 COFFEE BREAK			
Round 3 10.20 – 11.50	Celso Arango and Slobodanka Pejovic **Group 3**	Philip K. McGuire and Zorana Pavlovic **Group 1**	Alan Apter and Jasminka Markovic **Group 2**
11.50 – 13.15 LUNCH AND PREPARATION FOR PLENARY SESSION			
Plenary 13.15 – 14.15	**13.15 – 13.35** **13.35 – 13.55** **13.55 – 14.15**	**Group 1 Presentation** **Group 2 Presentation** **Group 3 Presentation**	

14.15 – 14.40 Break and faculty selection of awards winners. Completion of feedback forms

14.40 – 15.00 Awards ceremony, concluding remark and thanks
Celso Arango and Nadja Maric

CELSO ARAGNO

MD, PhD is a psychiatrist and Adjunct Professor of Psychiatry at the University of Maryland in Baltimore and Full Professor of Psychiatry at the Universidad Complutense in Madrid. He is also Head of the Child and Adolescent Department of Psychiatry at Hospital General Universitario Gregorio Marañón. Dr. Arango is the Scientific Director of the Spanish Psychiatric Research Network with 25 centers and more than 400 researchers. He is also Coordinator of the Child and Adolescent First Episode Psychosis Study (CAFEPS) funded by the Spanish Ministry of Health (with eight centers in Spain) and the Child and Adolescent Neuropsychiatry Network funded by the European College of Neuropsychopharmacology (ECNP). He has written more than 280 peer-reviewed articles, 7 books, and more than 40 book chapters. Many of his articles and book chapters have focused on the neurobiology of early-onset and first-episode psychoses as well as the safety of psychiatric medications in pediatric patients. In addition, his group has shown how patients with a first psychotic episode experience greater losses of gray matter than expected and a correlation of gray matter loss with antioxidant status. Dr. Arango has participated in more than 69 competitively funded research projects, as Principal Investigator in 55 of them, including projects with international funding (Stanley Foundation, NARSAD, European Commission, etc.) and several clinical drug trials. He is also coordinator of several multicenter projects that assess multiple prognostic factors and treatment in early-onset psychosis, and is currently participating in eight EU projects funded by the VII Framework.

PHILIP K MCGUIRE

Philip McGuire is Head of the Department of Psychosis Studies at the Institute of Psychiatry Psychology & Neuroscience, London; Joint Leader & Academic Director of the Psychosis Clinical Academic Group, King's Health Partners; Lead of the Stratified Medicine Cluster, NIHR Maudsley Biomedical Research Centre; and Director of OASIS, an early intervention service for people at high risk for psychosis. He is a Fellow of the Academy of Medical Sciences, the Royal College of Psychi-

atrists, the European Psychiatric Association, and is Associate Editor of the British Journal of Psychiatry. He studied physiology and medicine at the University of Edinburgh, then worked as a post-doctoral fellow in neuroscience at Yale University. After training in psychiatry at the Maudsley hospital, he was a Wellcome Clinical Research Fellow at the MRC Cyclotron Unit, Hammersmith Hospital, and completed a PhD. He was subsequently appointed as Senior Lecturer, Reader and Professor at the Institute of Psychiatry in London. He leads a research group that is focused on determining the mechanisms underlying psychosis, and using this knowledge to develop new treatments and improve clinical care. He has authored around 500 scientific publications, and is listed by Thomson Reuters as one of the worlds Most Influential Scientific Minds.

ALAN APTER

Medical Degree: University of Witwatersrand South Africa Adult Psychiatric Training: University of Tel Aviv Israel Child Psychiatric Training: Children's National Medical Center Washington DC Biological Psychiatry Training: Albert Einstein College of Medicine New York Academic Posts: Chairman of Department of Psychiatry Sackler School of Medicine, Tel Aviv; Director Feinberg Child Study Center Schneider's Children's Medical Center of Israel; Awards: Distinguished Investigator Award Tourette Association of America; Distinguished Research Award, American Foundation for Suicide Research; International Scholar Award, American Academy of Child and Adolescent Psychiatry; Brickell Award Columbia University New York; Fotheringham Award; Hospital for Sick Children Toronto. International recognition: Distinguished Adjunct Professor Karolinska Institute, Stockholm; Visiting Professor: Yale University, University of Pittsburgh.

JASMINKA MARKOVIC

Child Psychiatrist at Department for Child and Adolescent Psychiatry, Clinic for Psychiatry, Clinical Center of Vojvodina, Novi Sad, Serbia Dr Marković completed her MD, MSc and PhD degrees at Medical Faculty ,University of Novi Sad, Novi Sad, Serbia. She completed her Child Psychiatry residency at the Department of Child and Adolescent Psychiatry, Clinical Center of Vojvodina and Medical Faculty Novi Sad, Serbia. She worked as Teaching Assistant and Assistant Professor at the Department for Psychiatry and Medical Psychology, Medical Faculty, University of Novi Sad, Novi Sad, Serbia and now she is working at the Department of Child and Adolescent Psychiatry, Psychiatric Clinic, Clinical Center of Vojvodina where she is involved in clinical and research practice as child psychiatrist and family psychotherapist. She has experience as study coordinator in more than 20 clinical trials in child and adolescent pharmacotherapy of depression, schizophrenia and autism. Dr Markovic has been focusing her career on epidemiology of child psychiatric disorder, and recently also on neurodevelopmental disorders.

Dr Marković has authored more than 20 peer-reviewed publications. She is recognized by her studies with Prof T. Achenbach and Prof L.Rescorla from USA about multicultural research and assessment of emotional and behavioral problems in children and adolescents. She was awarded with J-Eunethydis price for young researcher, at the EUNETHYDIS 2nd International ADHD Conference, Barcelona, Spain where she gave presentation “Serbian children are less hyperactive than American children according to the teacher assessment”. She is member of the Serbian Association for Child and Adolescent Psychiatry and allied professions, where she serves in the Membership Committee.

ZORANA PAVLOVIC

PRESENT POSITIONS - Specialist in psychiatry, University Clinical Center of Serbia, Clinic for Psychiatry, Belgrade; Currently working on Dpt. for Research and Early Interventions in Psychiatry
EDUCATIONAL AND PROFESSIONAL TRAINING
2014 Assistant Professor, Belgrade University School of Medicine
2012 Doctor of Science, Belgrade University School of Medicine
The title: “The effects of pharmacological treatment on the occurrence of depressive disorder in patients with chronic hepatitis C ”.
2005 Board exam in psychiatry, with excellent mark
2004 Master of Science, Belgrade University School of medicine - the

title: “New trends in the buse of psychoactive substances among the young and possibilities of their prevention in the social community”.

2001 State Exam, Ministry of Health, Republic of Serbia
2001 Start of specialization at Institute of Psychiatry, University of Belgrade School of Medicine
2000 Start of postgraduate studies in Social psychiatry
2000 Graduated at University of Belgrade School of Medicine
OTHER ACTIVITIES Member of the Serbian Medical Association. Member of the Serbian Psychiatric Association.

SLOBODANKA PEJOVIC NIKOLIC

Slobodanka Pejović Nikolić, MD, MSc is a psychiatrist at the Department for Schizophrenia and Delusional Disorders, Clinic for Psychiatry, Clinical Center of Serbia, Belgrade, Serbia. She completed her Adult Psychiatry Residency at Clinic for Psychiatry, Clinical Center of Serbia and University of Belgrade School of Medicine, Belgrade, Serbia. She has gained a title of European Expert in Sleep Medicine, after completing the European Sleep Research Society Exam in Sleep Medicine. She worked as a post-doctoral research fellow at the Sleep Research and Treatment Center, Penn State University for 3.5 years under the mentorship of Prof. Alexandros Vgontzas, where she conducted the studies for her master and doctoral thesis (which is in the final stage). During her stay at Penn State University she has been involved in various research projects of the Penn State Sleep Research and Treatment Center including the effects of sleep deprivation on sleepiness, neurobehavioral performance, stress and appetite-regulating hormones and proinflammatory cytokines, insomnia and stress system, sleep apnea and stress hormones and proinflammatory cytokines, epidemiology of sleep disorders. Dr. Pejovic Nikolic has authored 19 peer-reviewed publications and 4 book chapters on sleep physiology and sleep disorders. She is a member of Serbian Psychiatric Association, Serbian Somnology Society, Sleep Research Society and European Sleep Research Society.

PRINCIPLES OF RESEARCH IN MENTAL HEALTH – PHILIP MCGUIRE

Mental health disorders account for a huge proportion of suffering and disability globally, but the causes of these disorders and the mechanisms that underlie them are largely unknown.

The first step in research in mental health is to identify a topic to investigate. This choice might be driven by the importance of the topic, in terms of its clinical or theoretical significance or its impact on society. The selection may also reflect the particular interests of the researcher, or of the research group or centre that they are part of. It is sometimes influenced by the local availability of a particular patient group or of a specific research methodology. In practice the selection of a research topic is often determined by many of these factors.

Once the topic has been identified, the specific objectives of the research project should be specified, and the hypotheses to be tested should be defined. Having simple, clear objectives and hypotheses that are testable is helpful.

The researcher can then decide which methodology is the most appropriate to address the project's objectives. Practical considerations are important here, as the most suitable methods may require technology or personnel that are not locally available. However, it may be possible to obtain these through the acquisition of grant funding, or through collaboration with other research groups. Another consideration is the time needed to complete the project: ideally the methods chosen will allow this to be done within a timeframe that is feasible for the researcher.

The researcher should select the methods that will be used to analyse the data before starting the project, and carry out a power calculation to estimate the sample size that will be required to test the project hypotheses.

Finally, it is useful to plan how to disseminate the findings of the research. This is an area of increasing importance, as it will influence the impact of the research. Many funding bodies place great importance on the impact that research has on society, beyond the scientific community.

Principles of research in mental health

Philip McGuire
Department of Psychosis Studies

KING'S HEALTH PARTNERS
Pioneering better health for all

Institute of Psychiatry, Psychology & Neuroscience
Department of Psychosis Studies

KING'S College LONDON

Outline

- Importance of mental health research
- Choosing a research topic
- Defining objectives & hypotheses
- Using the right methods
- Logistical considerations
- Analyses & power calculations
- Dissemination and Impact

European Neuropsychopharmacology (2011) 21, 655–679

ELSEVIER

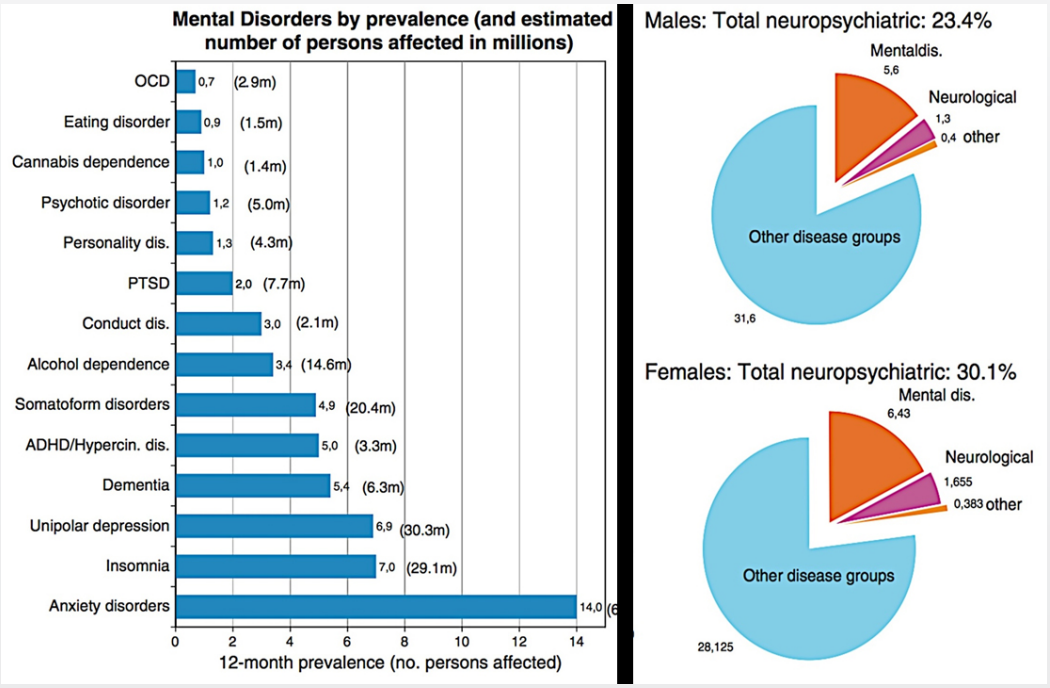
www.elsevier.com/locate/euroneuro

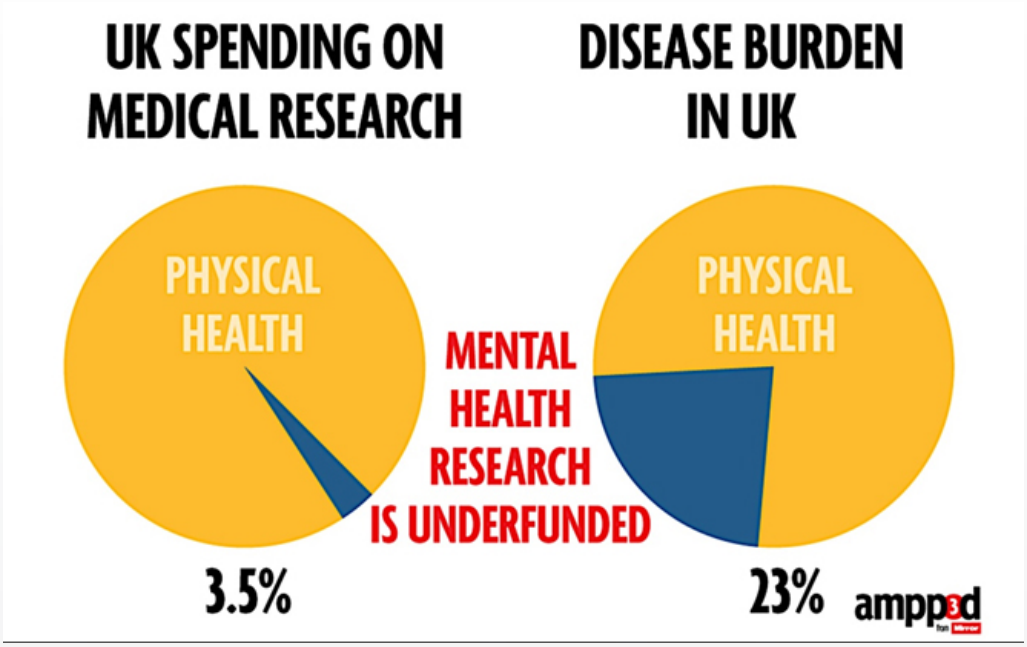
ECNP/EBC REPORT 2011

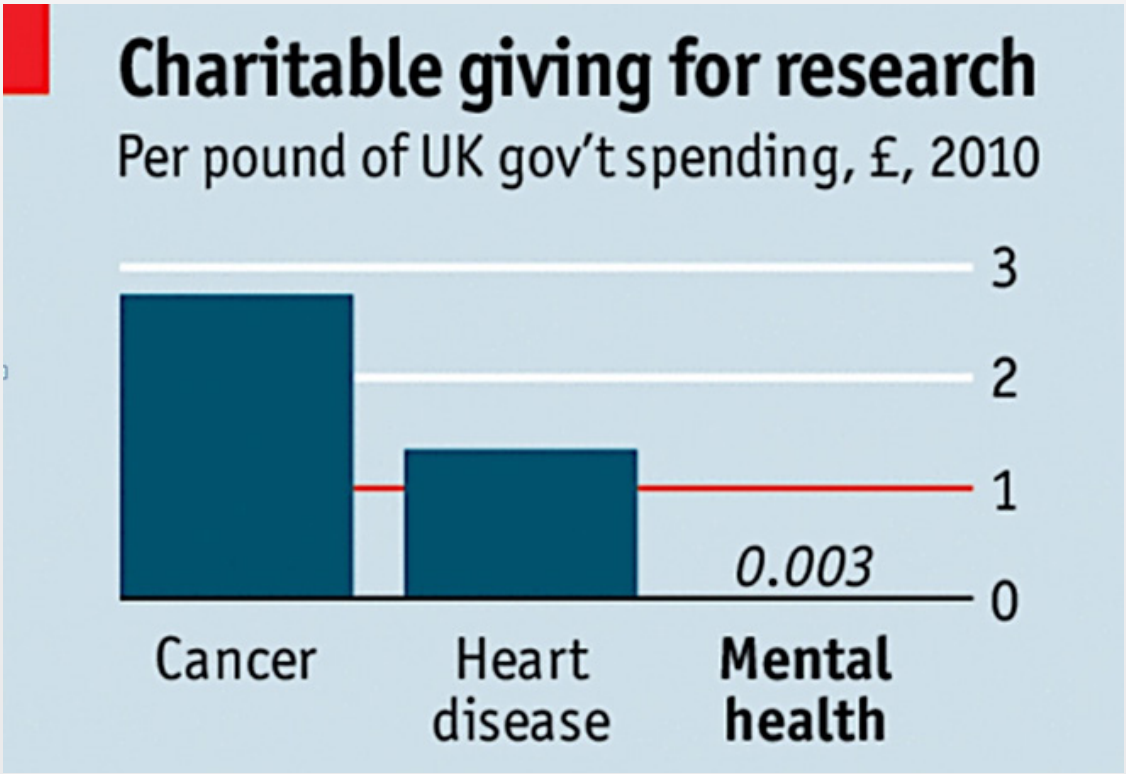
The size and burden of mental disorders and other disorders of the brain in Europe 2010

H.U. Wittchen [a,*,1], F. Jacobi [a,1,2], J. Rehm [a,b], A. Gustavsson [c], M. Svensson [d], B. Jönsson [e], J. Olesen [f], C. Allgulander [g], J. Alonso [h], C. Faravelli [i], L. Fratiglioni [j], P. Jennum [k], R. Lieb [l], A. Maercker [m], J. van Os [n], M. Preisig [o], L. Salvador-Carulla [p], R. Simon [q], H.-C. Steinhausen [l,r,s]

- 38% of EC population have a mental health disorder each year
- 165 million people
- Increase from 2005 estimate of 27%




UK SPENDING ON MEDICAL RESEARCH
DISEASE BURDEN IN UK
PHYSICAL HEALTH
MENTAL HEALTH RESEARCH IS UNDERFUNDED
PHYSICAL HEALTH
3.5%
23%
ampp3d


Charitable giving for research
Per pound of UK gov't spending, £, 2010
3
2
1
0
0.003
Cancer
Heart disease
Mental health

Choosing a research topic

- Which disorder?
- What type of research?
- Important clinical question?
- Important theoretical question?
- Important issue for society?
- Local expertise & technology
- Access to clinical subjects

Choosing a research topic – my experience

• Which disorder?	*Schizophrenia*
• What type of research?	*Neuroimaging*
• Important clinical question?	*Treatment of hallucinations*
• Important theoretical question?	*Pathophysiology of hallucinations*
• Local expertise & technology	*SPET scanner*
• Access to clinical subjects	*Large local patient population*

Choosing a research topic

- Work on more than one project
- Risky to stake everything on one study
- Avoids down time when one project goes quiet
- Can devote time to one project when fed up with another
- Exposure to greater variety of techniques, collaborators, topics

Objectives

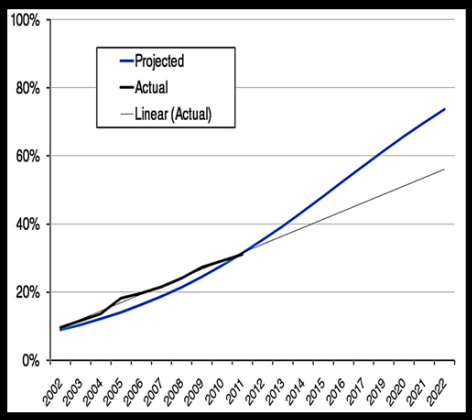
- What issues does the project seek to address?
- Should be clear, realistic and acheiveable

Hypotheses

- What hypotheses will the project test?
- Can the project really test them?
- Simple & important

Logistics

- How long will it take?
- How many research staff are required?
- How much will it cost?
- Is it logistically feasible?

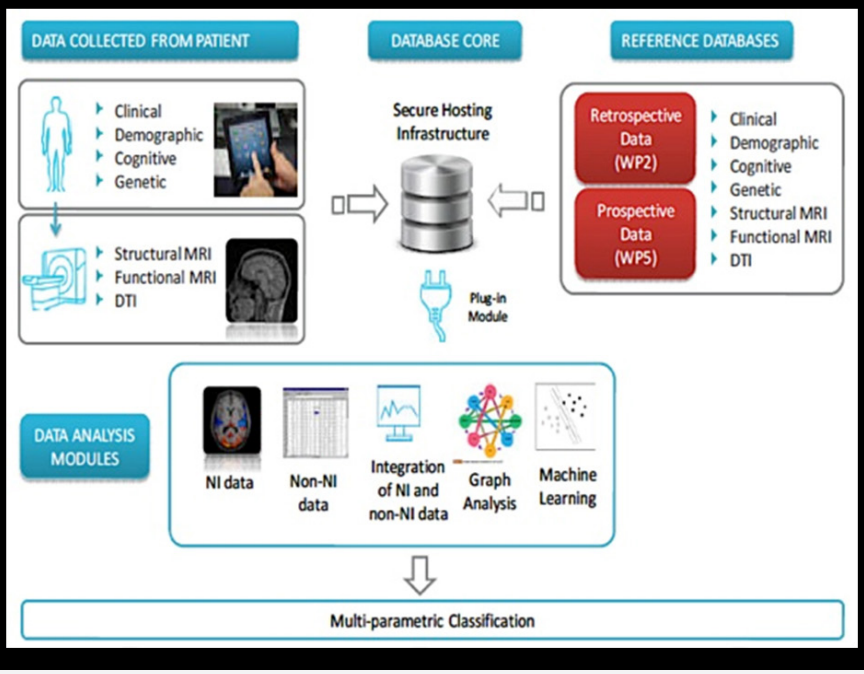


Which methodology?

- Depends on the project's objectives & hypotheses

- Epidemiology
- Genetics
- Peripheral biomarkers
- Psychopathology
- Cognition
- Neuroimaging & electrophysiology
- Endocrinology
- Psychopharmacology
- Clinical trials
- Health service research
- Health Economics

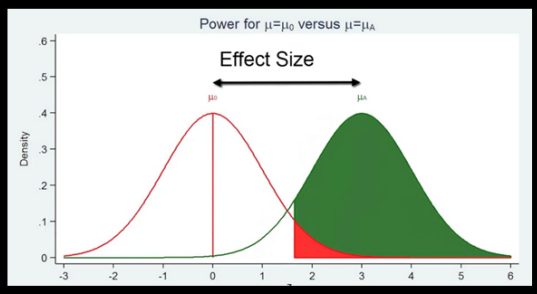
Multi-modal research methods



Multi-centre research projects

Power Calculations

- Essential !
- Allows estimation of sample size needed to test study hypothesis
- Failure to include power calculation is most common single reason for non-funding of grants



Analyses

- Focus on analyses that test the project's hypotheses
- Distinguish between these and exploratory analyses
- Seek statistical advice before starting the project

Psychological Medicine (2009), **39**, 1617–1626. © Cambridge University Press 2009
doi:10.1017/S0033291709005613 Printed in the United Kingdom

ORIGINAL ARTICLE

Economic impact of early intervention in people at high risk of psychosis

L. R. Valmaggia[1,2*], P. McCrone[3], M. Knapp[3,4], J. B. Woolley[1], M. R. Broome[1], P. Tabraham[1], L. C. Johns[1], C. Prescott[1], E. Bramon[1,5], J. Lappin[1], P. Power[5] and P. K. McGuire[1]

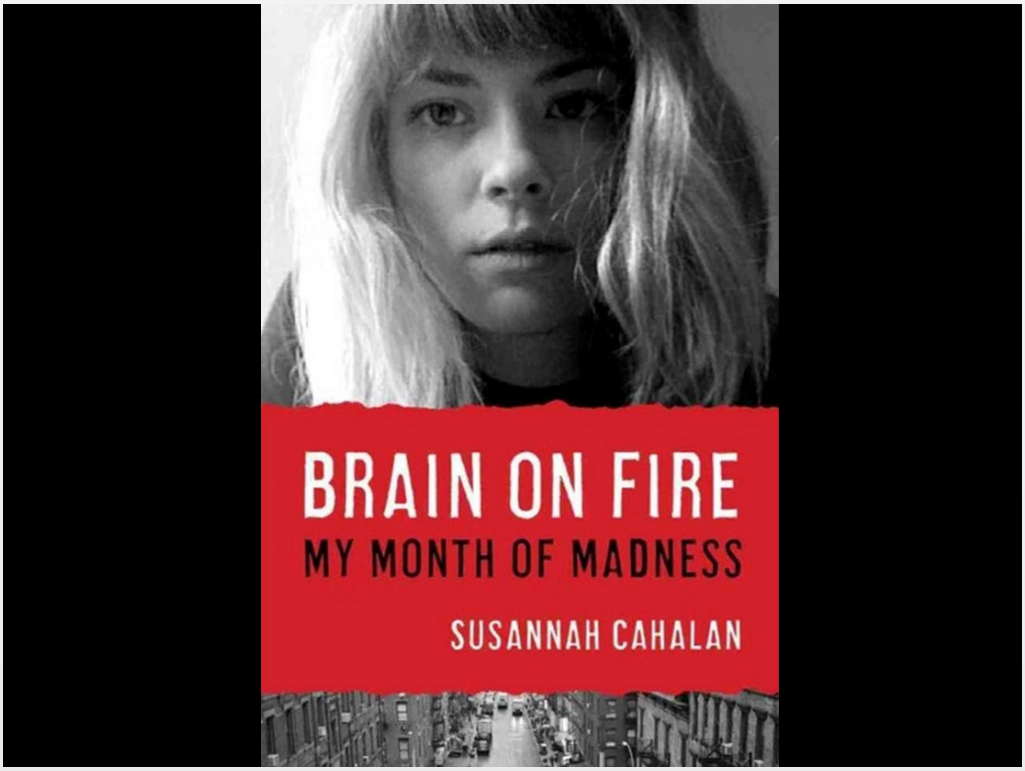
[1] *OASIS and Department of Psychological Medicine, Institute of Psychiatry, King's College London, UK*
[2] *Department of Psychiatry and Neuropsychology, Maastricht University, The Netherlands*
[3] *Centre for the Economics of Mental Health, Health Service and Population Research Department, Institute of Psychiatry, King's College London, UK*
[4] *Personal Social Services Research Unit, London School of Economics, UK*
[5] *Lambeth Early Onset Service, South London and Maudsley Trust, UK*

Background. Despite the increasing development of early intervention services for psychosis, little is known about their cost-effectiveness. We assessed the cost-effectiveness of Outreach and Support in South London (OASIS), a service for people with an at-risk mental state (ARMS) for psychosis.

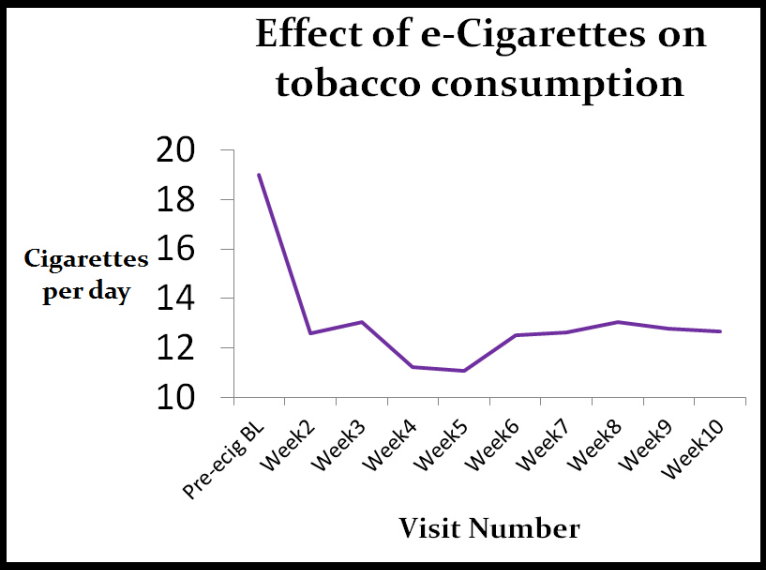
Method. The costs of OASIS compared to care as usual (CAU) were entered in a decision model and examined for 12- and 24-month periods, using the duration of untreated psychosis (DUP) and rate of transition to psychosis as key parameters. The costs were calculated on the basis of services used following referral and the impact on employment. Sensitivity analysis was used to test the robustness of all the assumptions made in the model.

Results. Over the initial 12 months from presentation, the costs of the OASIS intervention were £1872 higher than CAU. However, after 24 months they were £961 less than CAU.

Conclusions. This model suggests that services that permit early detection of people at high risk of psychosis may be cost saving.



New physical health treatments



Hickling et al, Scz Bull (2016)

CHILD PSYCHIATRY RESEARCH AS A MODEL FOR RESEARCH PLAN AND DESIGN - ALAN APTER

ABSTRACT

This lecture will address two research projects in different areas of study in child psychiatry. The first part will describe a youth suicide prevention project carried out in schools in Israel. Three interventions were compared. Gate keeper training focused on teachers' ability to recognize students at risk for suicide; Awareness training focused on students' ability to recognize warning signs of suicide in their peers and student screening focused on questionnaire assessment. The study was prospective in nature. The results in Israel found that screening was most efficient in recognizing new cases of students vulnerable for suicide.

The second study focused on the use of immunological markers to predict the ability of SSRI medications to treat adolescent depression. The inflammatory theory of depression will be discussed and the results of a preliminary study will be described. We will then develop a hypothesis regarding the treatment of SSRI resistant depression with anti-inflammatory agents

WHAT IS THE BEST CASE-FINDING OPTION?

Saving and Empowering Young Lives in Europe

SEYLE

The SEYLE Project Participating Countries

WHY START IN SCHOOLS?

- Highest likelihood of exposure to a prevention program for adolescents
- Effects larger community connected to the school
- Teachers are inadequately trained on issues regarding adolescent suicide

Lazear, Roggenbaum & Blase, 2003

Study Design

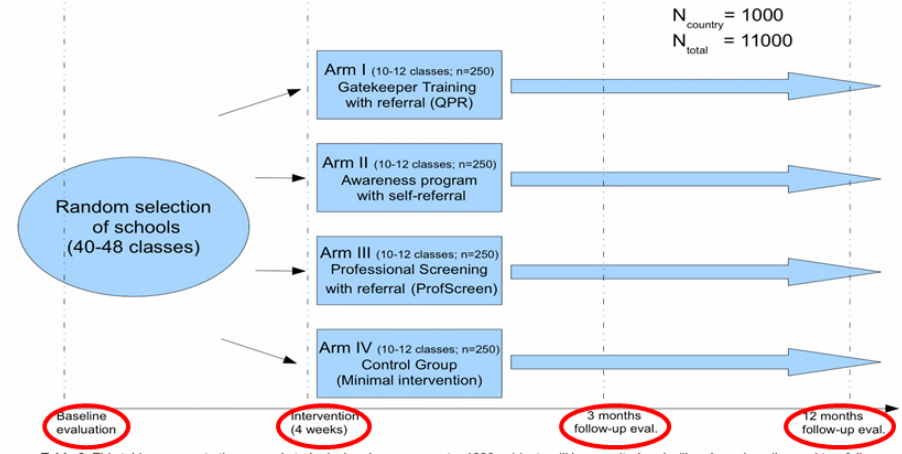


Table 3. This table represents the general study design. In every country 1000 subjects will be recruited and will undergo baseline and two follow-up evaluations. Subjects will be randomised into four arms (250 subjects in each arm). Subjects in the first three arms will undergo different kinds of interventions evaluated in the research project. Subjects in the fourth arm will undergo a minimal intervention and will be considered as control group. For randomization procedures please see the corresponding section of the procedures manual.
Only one type of intervention will be performed in one school in order to avoid confounding effects.

EDUCATIONAL APPROACH TO CASE-FINDING

— SUICIDE-AWARENESS PROGRAMS —

PROS

1. Popular and well-liked by normal kids

CONS

1. Can reduce help-seeking for self and others in most vulnerable youth
2. Changes/normalises model of suicide
3. Dysphoric reactions in suicidal teens

Shaffer et al. 1991, Vieland 1991

EDUCATIONAL APPROACH

— PROBLEMS —

- Very few attempters ever told a friend
- Many suicidal teens do not show warning signs
- Stress situations and symptoms are common and not specific for suicidality
- Programs upset students who have made a previous attempt

Shaffer & Craft 1999

#1444 P47

A Gatekeeper

Is anyone in a position to recognize a crisis and warning signs that someone may be contemplating suicide.

EDUCATE TEACHERS AS GATE KEEPRES BY:

QPR

Question, Persuade, Refer

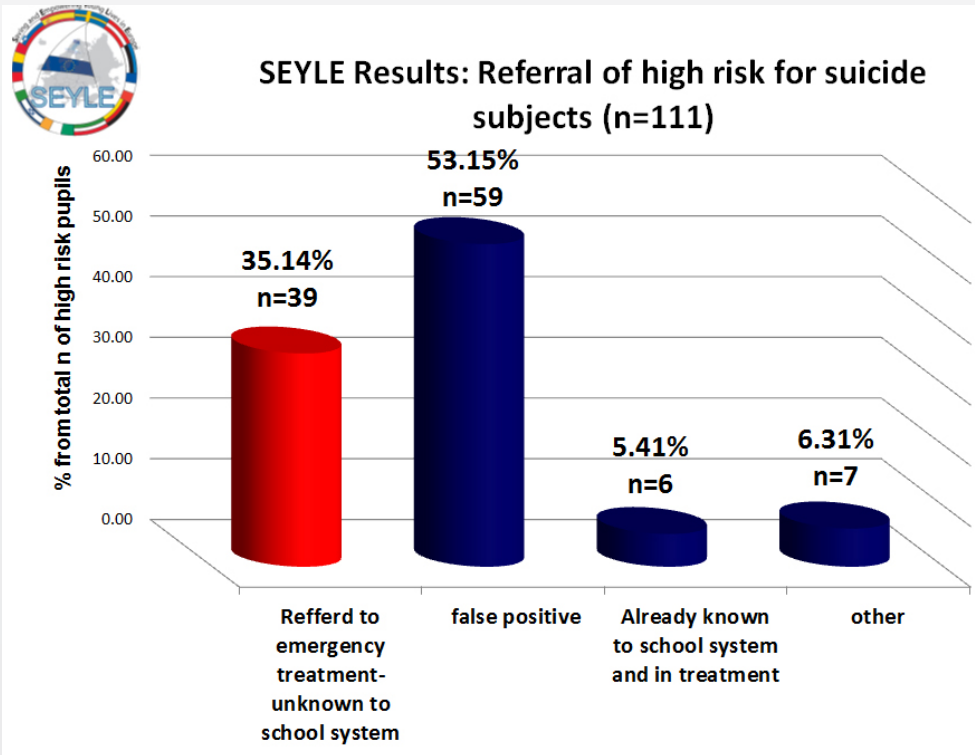
Ask A Question, Save A Life

Assessing Prevention Strategies

1. Educational program

2. Gatekeepers training

3. Screening



Conclusions

- Proactive screening in schools is a best method of prevention.
- SEYLE study is feasible and practical in Israel.
- Determine sensitivity vs. specificity balance by direct interviewing and by follow up at 12 months (ROC statistics).
- Use TWO-QUESTION APPROACH or EMERGENCY CASES.

Introduction

- SSRIs most commonly used psychotropic in children
- Pitfalls:

❑ Delayed onset

❑ 30–40 % of the patients do not show a significant response

❑ Side effects (SE)

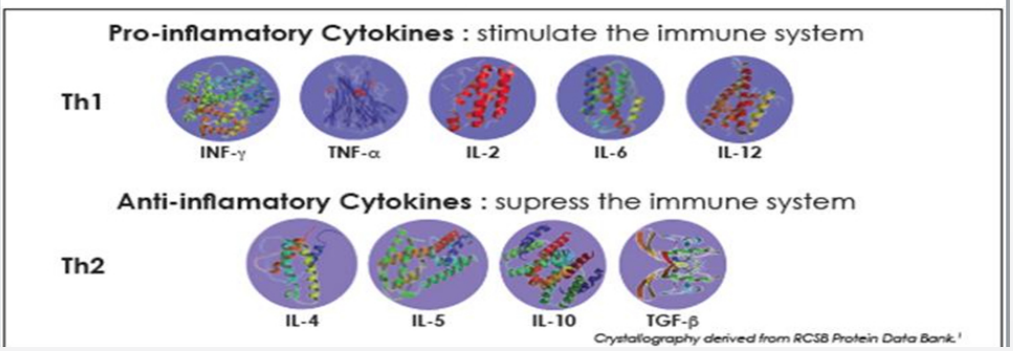
❑ Children and adolescents at higher risk for SE

Ctokine-depression Hypothesis-II

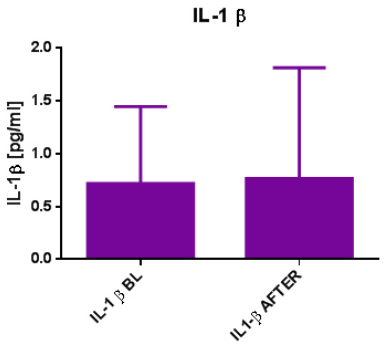
Click to add title

1. T-helper 1 cytokines induce cellular mediated immunity (IL-12, IFN-γ)
2. T-helper 2 cytokines promote humoral immunity (IL-4 , IL-10)

- Cytokines are also characterized as



Results

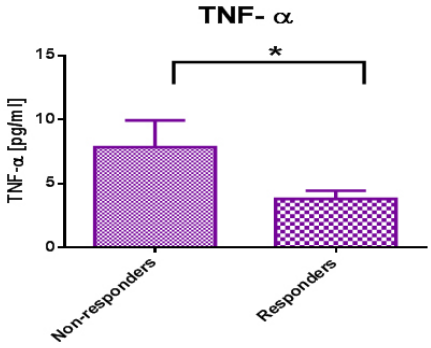


Amitai et al, 2015

Results – TNF-α

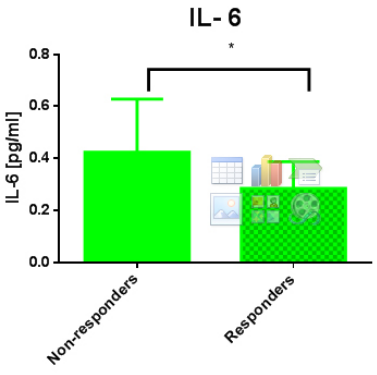
Higher pre-treatment cytokine levels in non-responders

Post-treatment cytokine levels remained higher in the non-response group in TNF-α



Results: IL-6

- Click to add text

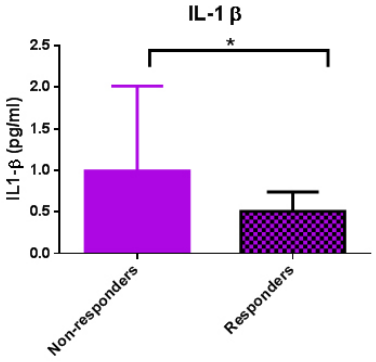


Higher pre-treatment cytokine levels in non-responders

Post-treatment cytokine levels remained higher in the non-response group in IL-6.

Amitai et al, 2015

Results: IL1-β

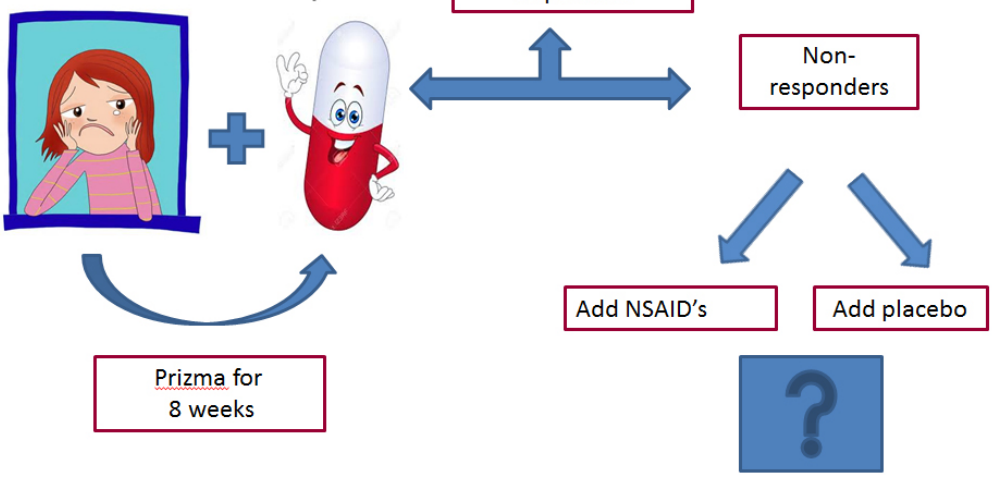


Higher pre-treatment cytokine levels in non-responders

Amitai et al, 2015

Future plans…

- Can anti-inflammatory agents improve treatment response?



LIST OF THE SELECTED PARTICIPANTS

●	Aleksic Dejan	Kragujevac
●	Aleksić Dubravka	Belgrade
●	Andrić Sanja	Belgrade
●	Banjac Visnja	Banjaluka
●	Barac Aleksandra	Belgrade
●	Batinić Bojan	Belgrade
●	Čelojević Saša	Belgrade
●	Crnić Katarina	Belgrade
●	Djuric Vedrana	Belgrade
●	Đurić Vladimir	Belgrade
●	Gašić Marija	Kikinda
●	Jevtić Gordana	Belgrade
●	Jovicic Milica	Belgrade
●	Katanic Marija	Belgrade
●	Lazarevic Milos	Belgrade
●	Medic Branislava	Belgrade
●	Mihaljevic Marina	Belgrade
●	Milanović Milena	Belgrade

	Minic Janicijevic Slavica	Kragujevac
	Munjiza Ana	Belgrade
	Nikolić Tatjana	Belgrade
	Okanović Milana	Novi Sad
	Pavicevic Dragana	Belgrade
	Pešić Vesna	Belgrade
	Petek Erić Anamarija	Osijek
	Petrović Jelena	Belgrade
	Rabijac Jelena	Vršac
	Ristovski Bojana	Kovin
	Simović Snežana	Kragujevac
	Stanić Dušanka	Belgrade
	Stojanovic Zvezdana	Belgrade
	Stupar Dusko	Belgrade
	Stupar Sanja	Belgrade
	Vesic Katarina	Kragujevac
	Vojvodić Petar	Belgrade
	Vrakela-Mitrović Marija	Belgrade
	Vujinovic Lena	Rotterdam
	Vuković Vuk	Belgrade
	Zorić Katarina Aleksic	Belgrade

ABSTRACTS OF THE SELECTED PARTICIPANTS

DEJAN, KRAGUJEVAC / SERBIA: UNUSUALL CASE OF STROKE RELATED TO KOCURIA KRISTINAE ENDOCARDITIS CURED BY SURGERY TREATMENT

Background-We report a case of 35-year-old man with stroke as a consequence of infective endocarditis caused by Kocuria kristinae. Case description-Patients with chronic hepatitis C and former non intravenous drug user after three months of the febrile condition and adynamia suffered a stroke confirmed by brain MRI. Duplex ultrasonography of the carotid arteries direct attention to cardiac valve pathology and endocarditis (definitely confirmed by transesophageal echocardiography). Kocuria kristinae was isolated from blood culture. Without responding to the applied antibiotic therapy the patient is submitted to replacement of damaged heart valves. The patient was completely recovered.

Conclusion-To our knowledge, this is the first case of stroke related to infective endocarditis caused by Kocuria kristinae. To our knowledge, there is no patient with Kocuria kristinae infective endocarditis who was cured with surgery treatment.

ALEKSIĆ DUBRAVKA, BELGRADE / SERBIA: LONG-TERM EFFECTS OF MATERNAL DEPRIVATION ON THE VOLUME, NUMBER AND SIZE OF NEURONS IN THE RAT AMYGDALA AND NUCLEUS ACCUMBENS

(Dubravka Aleksić, Milan Aksić, Branka Markovic,Vidosava Radonjic, Miloš Mališ, Miljana Aksić,Joko Poleksić, Branislav Filipovic) Maternal deprivation (MD) in rodents is an important neurodevelopmental model for studying a variety of behavioral changes which closely resemble the symptoms of schizophrenia in humans. To determine whether early-life stress leads to changes in the limbic system structures: the amygdala and the nucleus accumbens, 9-day-old Wistar rats were exposed to 24 hour MD. On P60 the rats were sacrificed for morphometric analysis and their brains were compared to the control group. Results show that MD affected important limbic system structures: the amygdala and the nucleus accumbens, whose volume was decreased (17 % of the control value for the amygdala and 9% of the control value for the nucleus accumbens), as well as the number of neurons (41 % of the control value for the amygdala and 43% of the control value for the nucleus accumbens) and the size of their cells soma (12% of the control value

for the amygdala and 33% of the control value for the nucleus accumbens). This study indicates that early stress in life leads to changes in the morphology of the limbic areas of the brain, most probably due to the loss of neurons during postnatal development, and it further contributes to our understanding of the effects of maternal deprivation on brain development.

ANDRIĆ SANJA, BELGRADE / SERBIA: THE ASSOCIATIONS BETWEEN PATERNAL AGE, AGE AT ONSET OF PSYCHOSIS IN PATIENTS AND SCHIZOTYPAL TRAITS IN GENERAL POPULATION (ANDRIC S, MIHALJEVIC M, MIRJANIC T, MARIC NP)

Advanced paternal age (PA) is associated with schizophrenia susceptibility in offspring and younger age at the illness onset (AIO). However, little is known about its relation to schizotypal traits (ST) in the general population.

In collaboration with the EU-GEI research network, we evaluated the association of PA with the AIO in patients with schizophrenia, and with subclinical ST in control group. PA showed significant negative correlation with the AIO in patients, and with subclinical ST 'hypersensitivity', 'depersonalization' and 'poverty of content of speech' in controls.

Advanced PA substantially contributes to the schizophrenia risk, possibly through certain genetic and/or epigenetic alterations. Our findings should encourage research concerning largely unknown mechanisms underlying the association of advanced PA with subclinical schizotypy in the general population.

BANJAC VISNJA, BANJALUKA / BOSNIA AND HERZEGOVINA: HYPERPROLACTINEMIA AS A SIDE EFFECT OF LONG - ACTING INJECTABLE RISPERIDONE THERAPY OR A SYMPTOM OF KLINEFELTER SYNDROME – A DIAGNOSTIC AND THERAPEUTIC DILEMMA

Case report: A male, aged 28, during the psychiatric examination showed symptoms of unspecified psychotic disorder. Also, the first examination showed signs of gynecomastia and less body hair. Given the fact that the patient had already started therapy with long - acting injectable Risperidone, which can result in gynecomastia due to oversecretion of prolactin, the psychiatrist decided to examine the hormonal balance of the patient and agree upon whether to continue or discon-

tinue therapy. The patient was then referred to an endocrinologist who decided that the patient needed to complete Diagnostics. The MRI of the pituitary gland showed an adenoma with a permanent hypersecretion of prolactin. The karyotype test of the patient was 47, XXY and he was diagnoses with Klinefelter syndrome. After that, testosterone was administered, which the patient responded well to, bromocriptine and the therapy prescribed by a psychiatrist. Since his discharge from the hospital the patient has kept regular appointments with a psychiatrist and an endocrinologist. His psychological status is satisfactory and he continues to receive the same therapy. This case study reviews the dilemma the author encountered during the treatment of psychotic disorder. Was hyperprolactinemia caused by long active injectable Risperidone or was it a symptom of Klinefelter syndrome?

BARAC ALEKSANDRA, BELGRADE / SERBIA: INTESTINAL CANDIDA AND PSYCHIATRIC DISORDERS: IS THERE A RELATIONSHIP?

This study would be among the first surveys on the composition and differences in the microbiome of schizophrenia patients and healthy controls using shotgun metagenomic sequencing, and first for the Balkan region. The oropharyngeal microbiome is particularly attractive for microbiome-associated biomarker development because biological samples can be collected and processed in an identical and non-traumatic manner from both individuals with psychiatric disorders and controls. Participants will be individuals with schizophrenia and non-psychiatric controls. The methods for identification and recruitment of individuals with schizophrenia and controls have been previously described (Dickerson et al., 2013). Expected outcomes: 1. Yeasts density and species communities in the oropharynx of schizophrenia patients differ significantly from those in controls. 2. Microbial species commonly inhabiting the oropharynx are differentially more abundant in schizophrenia patients than in controls. 3. Intestinal Candida metabolic pathways differ between schizophrenics and controls these cyclic dipeptides are considered in pathology of neurotransmission and neurophysiology.

BATINIĆ BOJAN, BELGRADE / SERBIA: ESTIMATING IN VIVO EFFICACY OF GABAA RECEPTOR AGONISTS HELPS ELUCIDATE THEIR PUTATIVE ANXIOSELECTIVITY

Anxiolytic and sedative actions of benzodiazepines are mediated via α2/3- and α1-subunit-containing $GABA_A$ receptors, respectively. We investigated whether YT-III-31, declared as an *in vitro* α3-subunit efficacy-selective agonist, can act as an anxioselective anxiolytic *in vivo* in rats. A high dose of YT-III-31 (10 mg/kg) exerted sedative effects demonstrating non-selectivity, while doses of YT-III-31 devoid of sedative properties (0.5; 1 and 2 mg/kg), induced no significant anxiolytic-like effects in elevated plus maze. On the other hand, the 1.5 mg/kg dose of diazepam estimated to induce a mild sedation which can be observed in non-aversive paradigms, here elicited a reliable anxiolytic-like effect. The estimated degrees of *in vivo* activation of α1 and α2/3$GABA_A$ receptors elucidate these behavioral effects and thus help perceiving the true extent of anxioselectivity of these ligands.

ČELOJEVIĆ SAŠA, BELGRADE/ SERBIA: DEVELOPMENTAL DIAGNOSIS CONCEPT WITHIN OBSESSIVE COMPULSIVE SPECTRUM

In this paper, case report of 27 years old female patient initially diagnosed as obsessive compulsive disorder (OCD) for a year and a half before admission to Day hospital is presented. After comprehensive psychiatric exploration (personal and disease history, full psychological examination, brain MRI, Boston scale) Body Dysmorphic Disorder(BDD) was evidenced as initial diagnosis complicated with development of OCD after Aesthetic breast surgery.

Beside clinical presentation developmental characteristics of psychopathology will be presented, as well as applied diagnostic and therapeutical procedures.

The concept of obsessive-compulsive spectrum disorders has gained prominence in last 25 years. This formulation has developed in response to observation that a number of separate disorders, including BDD, hypochondriasis, eating and other impulse control disorders, all share obsessive thinking and/or compulsive behavior, the hallmark of symptoms of OCD. These OCDs share similar patient characteristics, course, comorbidity, presumed etiology, familial transmission and treatment response which is recognized in DSM V.

CRNIĆ KATARINA, BELGRADE / SERBIA: BUPRENORPHINE AND / OR NALTREXONE IN OPIATE ADDICTION TREATMENT IN SERBIA

Opiate dependence remains a significant problem in the treatment of drug addiction in general. Notwithstanding any other PAS, whose number is constantly growing, it is still a high percentage of opiate addicts represented in Serbia, and therefore also in the Special Hospital for Addictions number of heroin users still is significant and everyday is necessary to decide on the type of treatment that will be chosen for each of them. As is known, there are two possible directions for the treatment of opiate addiction : detoxification and substitutions, which are not strictly separated, it is often a continuation of the other, or be replaced by another one in the time continuum of the treatment. Which forms of treatment and when they are to be applied depends on many factors. Modern principles of treatment of opiate dependency, when the process of detoxification from opiates is concerned, involve mostly controlled application of opiate agonists, thus avoiding the risk of abstinence syndrome and its complications in order to, at a later stage, apply the opiate receptor antagonist over an extended period of time, with other, a sociotherapy techniques. Substitution treatment means that the patient over an extended period of time to receive one of the opioid agonist in a particular dose, where will be adequately monitored and controlled.

In the process of detoxification and substitution Buprenorphine is increasingly being used as a drug of choice and Naltrexone comes as optional, and often skipped in the treatment by the patients themselves. Buprenorphine, a partial μ receptor agonist / analgesia, euphoria, pupillary construction, respiratory depression / k receptor antagonist and / analgesia, diuresis, dysphoria / an effect more acceptable to patients, while the opiate receptor antagonist Naltrexone blocks the effects of opiates / morphine hydromorphone heroin / so patients decide rarely to accept this kind of treatment. Important aspects that should be paid attention to when assessing whether a patient will be directed to one or another form of treatment are the length and manner of taking opiates and the number of attempts to establish the effective abstinence and the maintenance of the same, with adequate motivation for treatment. Bearing all this in mind dilemma in choosing treatments are always present and represent a challenge for the whole team that participates in the treatment of addicts.

Patient Vignete: Patient OR. JC., 32 years old, unemployed, single, no children, lives with a friend addict. In treatment by order of the court for the crime of theft, heroin addiction for eight years, began with substance abuse when he was eighth years old / glue, marijuana, cocaine, methamp-

hetamine / without significant abstinence until now. The personal history of early emotional deprivation / left by the mother, the father did not even know / lived in the home, criminal record since he was nine years old. In family history, mother a psychiatric patient, committed suicide. The mental status without the disorder of mental functions, a typical figure for heroin addiction, with a light opiate intoxication, poorly motivated for the treatment. Because of the low level of motivation and the necessity of treatment because of court decisions therapeutic plan should move in the direction of detoxification with Buprenorphine and eventual antagonist Naltrexone treatment, and follow-up with the possibility of switching to substitution treatment modality.

DJURIC VEDRANA, BELGRADE /SERBIA: MAGNESIUM AND ACTH AFFECT MEMORY RETRIEVAL IN WISTAR RATS

Since crucial importance of hippocampus in memory function was established and magnesium was implicated in hippocampal NMDA receptors up-regulation, and HPA axis activity, the aim of this study was to investigate the effects of magnesium and ACTH on learning and memory retrieval. Effects of acute and chronic ACTH and magnesium treatments were estimated by Novel object recognition test and quantified by D-scores.

Acute Mg, but not ACTH caused D-score enhancement compared to controls ($p<0.01$). Chronic Mg ($p=0.001$) and ACTH ($p<0.05$) treatment increased D-score compared to controls, while ACTH/Mg group had higher D-score compared to both controls ($p<0.001$) and ACTH group ($p<0.05$).

ĐURIĆ VLADIMIR, BELGRADE /SERBIA: MUSCLE DYSMORPHIA - CASE REPORT

The research is about etiology, neurobiology, symptomatology, diagnosis, differential diagnosis and treatment of a special type of body dysmorphic disorder called muscle dysmorphia. It will be presented as a case report. Patient with a muscle dysmorphia was hospitalised in Clinic for psychiatric disorder “Dr Laza Lazarevic” and was examined with different diagnostic procedures. After careful examination specific treatment guidelines were applied. In this case report we could see how a parallel use of well chosen medical treatment and support of cognitive-behavioural psychotherapy, could lead to a full recovery of the patient.

GAŠIĆ MARIJA, KIKINDA / SERBIA: QUETIAPINE IN THE TREATMENT OF PARANOID SCH PSYCHOSIS

Therapeutic and clinical advantages of quetiapine as monotherapy in the treatment of paranoid sch psychosis. The patient was brought in accompanied by neighbors for positive psychotic symptoms as unsystematic paranoid delusions. Patient suffers from paranoid sch psychosis. Previously attempted therapy Rispolept a 4 mg, which patient declined after one month, due to sedation and the resulting dysfunctionality. During this time, the symptoms were persisting. Quetiapine was introduced, 600 mg per day in the evening dose, but after completition of diagnostics that ruled out the presence of an organic substrate for the change in mental status. Dismissed with 600mg Quetiapine without positive symptoms, controlled model behavior. For two years in a stable remission, at regular checkups.

JEVTIĆ GORDANA. BELGRADE / SERBIA: MITOCHONDRIAL DYSFUNCTION IN THE BRAIN OF RATS PERINATALLY TREATED WITH PHENCYCLIDINE - EFFECTS OF ANTIPSYCHOTIC MEDICATION

My PhD research project is based on phencyclidine (PCP) animal model of schizophrenia – pharmacological model where phencyclidine is administered during first two postnatal weeks when synaptogenesis in rodents is extensive. My current results in this field indicate the tremendous role of mitochondrial disfunction in pathogenesis of schizophrenia. At this moment I'm studying the effects of haloperidol and clozapine on mitochondrial function, and possible alterations of apoptosis and autophagy processes in the brain of rats perinatally treated with PCP. Hopefully, my future work in this field will be based on the role of glial cells alterations in the pathogenesis of schizophrenia.

JOVANOVIC NIKOLA, BELGRADE /SERBIA: INTERNATIONAL PREVALENCE AND TREATMENT OF DIABETES AND DEPRESSION – REPORT ON THE STUDY PROTOCOL

It is the multicentic prospective study with 15 countries involved. One of the study centres is in Serbia, Belgrade. Some aims of the study are:

• to estimate the prevalence and incidence (over 12 months) of depressive disorders and diabetes

related distress in adults currently receiving care for type 2 diabetes.

• to examine the course and treatment of type 2 diabetes in people with and without depressive disorders over a 12 month follow-up period.

• to compare the collected data among countries applying the same protocol.

The protocol of the study will be reported.

JOVICIC MILICA, BELGRADE / SERBIA: NEUROENDOCRINOLOGY OF DEPRESSION IN WOMEN: IMPLICATIONS FOR A NOVEL TREATMENT OPTION

Major depressive disorder is almost twice as common in women as it is in men. Previous research demonstrated that women respond more favourably to SSRI and men to tricyclic antidepressants. This goes beyond social and cultural aspects of women's vulnerability to depression, implicating that the observed sex differences are, at least in part, biological in nature. Possible interplay of steroid hormone signalling (cortisol, oestrogen and progesterone) and monoaminergic neurotransmission could underlie the sex differences in the etiopathogenesis, course and treatment response in depression. This work will focus on sex differences in the mechanism of glucocorticoid receptor modulation in depression.

KATANIC MARIJA, BELGRADE /SERBIA: MODERATING THE UNFAVOURABLE MEDICAL CONDITIONS TO KEEP OLANZAPINE THE FIRST CHOICE IN PSYCHOSIS TREATMENT?

A female patient admited to the hospital treatment and hyperlipidemia, preglaucoma, hypertension and Body Mass Index>30 were recorded. Psychotic symptoms were predominantly represented by negative scale / PANSS 36/. Hospital tretament was indicated due to a suicide attempt. Being aware of olanzapine`s side effects and contraindications, we decided to prevent some of them, in order to assigne olanzapine to the patient. Cooperating with ophtalmologist iridotomy was done, preventing glaucoma and with the endocrinologist, a balanced diet was conducted to overcome disturbed lipid metabolism. Starting dose was 10 mg Olanzapine pro die and raised up to 20 two weeks later. She was discharged from the hospital six weeks later: at a discharged point PANSS 22, suicidal ideation was present no more, and preexisting medical state was improved: BMI

28, with regular blood pressure, hyperlipidemia was diminished, with significantly decreased values of cholesterol and tryglycerides and she was adviced to keep on hypocaloric diet.

Mechanisms underlaying weight gain, such as strong connection with NPY neurons of the hypothalamus, and as 5-HT2c receptor promoter region polymorphisms have a significant influence towards weight gain, but the molecular basis remained unknown, and thereby a temptting goal to reveal

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LAZAREVIC MILOS, BELGRADE / SERBIA: CNS LUPUS, CORTICOSTEROID INDUCED, OR PSYCHOSIS DE NOVO - CASE REPORT

An 25-year-old patient with history of systemic lupus erythematosus SLE and no history of psychiatric problems was presented with acute onset auditory and visual hallucinations, insomnia, psychomotor agitation, and cognitive disturbances. Differential diagnosis reconsidered SLE psychosis, corticosteroid induced psychosis, and psychosis de novo. A detailed clinical evaluation with appropriate laboratory analyses and interdisciplinary management resulted in diagnosis of neurolupus. Remission was achieved after pulse corticosteroid therapy was administered.

MEDIC BRANISLAVA, BELGRADE /SERBIA: DOES OPIOPHOBIA EXIST AMONG MEDICAL STUDENTS - A CROSS SECTIONAL BELGRADE STUDY

Opiophobia is an irrational fear of using or prescribing opioids. Key barriers included addiction potential, abuse or misuse, side effects etc. The consequence is an inadequate pain management.

We aimed to assess knowledge and attitudes of 3rd and 6th year medical students towards the issue of opiophobia using a self-completed questionnaire. Sixth year students estimated that they were more informed on the issue of opioids ($P < 0,05$). Most of students stated that they do not know or not sure what a term “opiophobia” represents (3rd year 67.86%, 6th year 55.92%). The final year students provided significantly more accurate answers concerning the effects of opioids ($P <0.001$). It is necessary to improve knowledge and attitudes of our medical students towards the issue of opiophobia.

MIHALJEVIC MARINA, BELGRADE /SERBIA: GENETIC INSIGHTS INTO PSYCHOSIS AS A PART OF STRESS-RELATED DISORDERS: THE FKBP5 EXAMPLE

Increased reactivity to stress is observed in patients with psychosis and their healthy siblings. Dysregulation of HPA axis is a potential neurobiological mechanism related to the diathesis-stress model for psychosis. Recent studies highlighted a possible role of the functional genetic variants of FKBP5 gene, which regulate HPA axis activity, in psychosis. We investigated genotype distribution, allele and haplotypes frequencies of FKBP5 in Serbian case-sibling-control sample. Our results revealed strong impact of FKBP5 risk alleles and "risk" haplotype combination on psychosis. We found differences in haplotypes between siblings and controls that warrant further investigation for the possible resilient biological mechanism.

MILANOVIĆ MILENA, BELGRADE / SERBIA: HIPPOCAMPAL CHANGES IN PSYCHIATRIC DISORDER

The study is about neurophysiological structure of hippocampus and his smaller volume in patients with chronic post-traumatic stress disorder (PTSD) and patients with comorbidity conditions such as major depression or alcohol abuse. Hippocampal volumes of this patients we will compare with hippocampal volumes of patients with other psychiatric disorders, such as bipolar affective disorder and schizophrenic disorder. We expect that hippocampal volume of this patients would stay unchanged from normal once. Patterns would be from patients that were hospitalised at Clinic for Psychiatric Illness "dr Laza Lazarević" and we will use magnetic resonance imaging (MRI) to mesure hippocampal volumes of this patients. Work on hippocampal tissue is important for neurophysiological dicsoveries: indetification of excitatory and inhibitory synapses, transmitters and receptors, discovery of long-term potentiation and long-term depression, role of oscillations in neuronal networks, underlying mechanisms of memory disorders.

MINIC JANICIJEVIC SLAVICA, KRAGUJEVAC /SERBIA: INTERPLAY OF BRAIN DERIVED NEUROTROPHIC FACTOR AND CYTOKINES IN SCHIZOPHRENIA

The Brain Derived Neurotrophic Factor (BDNF) plays an important role in neuronal survival and growth and participates like a crucial mediator in neuroplasticity. It was previously discussed that BDNF can be a bridge between inflammation and neuroplasticity and that the effects of the immu-

ne/inflammatory system on BDNF result from the integration of multiple mechanisms. Aim of our study is to measure serum levels of BDNF and type-1, type-2, type-17 and regulatory cytokines, in patients with acute psychotic reaction and schizophrenia in relapse (before and after treatment), schizophrenia in remission and healthy volunteers. We will also determine whether these BDNF levels are correlated with levels of representative cytokines and clinical parameters.

MUNJIZA ANA, BELGRADE /SERBIA: GENETIC AND CLINICAL PREDICTORS OF BRAINSTEM RAPHE ABNORMALITY IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER

Hypo/anechogenicity of the brainstem raphe (BR) structures has been suggested as a possible transcranial parenchymal sonography (TCS) marker associated with depression. In this research TCS detected BR abnormalities were significantly more frequent in MDD patients in comparison to matched controls. Comparing MDD patients with and without BR abnormalities we have found statistically significant separation between groups based on the four predictors combined: HAMD item 5 („difficulty in concentration"), presence of social phobia and generalized anxiety disorders, and s allele homozygocity of the 5-HTTLPR polymorphism. Reduced BR echogenicity in at least a subgroup of MDD patients may reflect a particular phenotype.

NIKOLIĆ TATJANA, BELGRADE / SERBIA: EFFECTS OF ANTIPSYCHOTICS ON BONE MASS AND HYPOTHALAMO–PITUITARY–ADRENAL AXIS IN PHENCYCLIDINE ANIMAL MODEL OF SCHIZOPHRENIA

My PhD project is based on exploration of the antipsychotics influence on bone mass and hypothalamo–pituitary–adrenal (HPA) axis in phencyclidine animal model of schizophrenia. Changes of bone mass, metabolic parameters, impaired HPA axis activity are found in schizophrenic patients. There is a lack of evidence about the effects of antipsychotics on these parameters in experimental animal model of SCH. Therefore, my investigation will be focused on antipsychotics influence on bone density and structure, body composition, the activity of HPA axis and the concentration of prolactin, glucose, cholesterol and triglycerides in animals perinatally treated with phencyclidine.

OKANOVIĆ MILANA, NOVI SAD /SERBIA: RELATIONSHIP BETWEEN AFFECTIVE TEMPERAMENTS AND AGGRESSION IN EUTHYMIC PATIENTS WITH BIPOLAR MOOD DISORDER AND MAJOR DEPRESSIVE DISORDER

Idea is to give two self-assessment questionnaires (short version of Serbian TEMPS-A Scale and Aggression Questionnaire) to dertemine relationship between different aspects of aggressive behaviour and affective temperaments among various mood disorders.

Plan is to include outpatients in euthymic phase of mood disorders (bipolar disorder type I and II and major depressive disorder).

The aim would be to examine is it truth that distinct temperamental profile could serve as a good dignostic and prognostic value for non-motor aspects of aggressive behaviour.

TEMPS-A Scale (Temperament Evaluation of Memphis, Pisa, Paris and San Diego- Autoqustionnaire, Akiskal et al., 2005) / Aggression Questionnaire (Buss and Perry,1992)

PAVICEVIC DRAGANA, BELGRADE / SERBIA: IS THERE ANY DIFFERENCE IN EFFECT OF ADJUVANT ANTI-INFLAMMATORY THERAPY IN FEMALE AND MALE PATIENTS WITH SCHIZOPHRENIA SPECTRUM DISORDERS?

Hypothesized role of the activation of the immune system in the etiopathogenesis of psychosis is now more than two decades old and there is more evidence every day which support it.

Cytokines have been shown to influence brain biological pathways relevant to psychosis, including neurotransmitter metabolism, neuroendocrine function and neural plasticity (1).

Sex hormones as well as changes which are directly related to the HPA axis may play relevant role in etiopathogenesis of schizophrenia (2).

According to the Laan and colleagues adding aspirin to antipsychotic treatment reduces the symptoms of schizophrenia spectrum disorders more than adding placebo (3).

I would like to investigate is there any difference in effect of adjuvant Aspirin therapy between male and female psychotic patients.

PEŠIĆ VESNA, BELGRADE /SERBIA: OXYTOCIN INFLUENCES BEHAVIOR, BDNF AND KI-67 EXPRESSION IN DENTATE GYRUS, ALTERED BY CHRONIC CORTICOSTERONE TREATMENT

We investigated if/how oxytocin affects behavioral changes induced by chronic corticosterone treatment, and its correlation with BDNF and Ki-67 expression in neurons of Dentate gyrus.

Rats from CORT ($p<0.01$) but not CORT+OXY group spent more time immobile in Porsolt test, CORT+OXY animals had higher ($p<0.05$) percentage time in central zone of Open Field and higher ($p<0.01$) percentage of entries in open arms of EPM then CORT group. Immunohistochemical analysis showed that CORT animals had lower and OXY animals higher expression of BDNF and Ki-67+ neurons in DG compared to controls; difference between CORT+OXY and CORT group was noted for BDNF expression.

PETEK ERIĆ ANAMARIJA, OSIJEK /CROATIA: HOW HEALTHY ARE SCHIZOPHRENIC PATIENTS?

This research focuses on general health condition of patients suffering from schizophrenia (according to ICD-10 diagnostic criteria) and who are undergoing therapy with atypical antipsychotics (olanzapine, risperidon, quetiapine, ziprasidone and clozapine) for 10 years and with no prior somatic comorbidity. The screening is based on standard laboratory findings: hepatogram (AST, ALT, GGT), cholesterol, fasting triglycerides, fasting glucose, BMI, W-H ratio and thyroid hormones with equal distribution among male and females. Also short questionnaire about patients lifestyle has been administred. Unfortunaltely, first results show disappointing results regarding patients overall health

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PETROVIĆ JELENA, BELGRADE /SERBIA: CHRONIC OXYTOCIN TREATMENT INCREASES THE EXPRESSION OF ITGB3 IN ANIMAL MODEL OF DEPRESSION

Recent findings implicate ITGB3, coding for integrin beta-3, in remission from depression. Experiment was set to determine whether chronic oxytocin treatment modifies the level of ITGB3 in animal model of depression induced by corticosterone administration. Male Wistar rats were used and expression of ITGB3 in prefrontal cortex was assessed using qPCR. Group that received corticosterone had significantly lower level of ITGB3 compared to controls ($p=0.013$), while oxytocin abolished this effect and corticosterone+oxytocin group had significantly higher level of ITGB3 compa-

red to corticosterone group (p=0.032). Accordingly, oxytocin was effective in elevating ITGB3 in rats chronically treated with corticosterone.

RABIJAC JELENA, VRŠAC / SERBIA: MOOD STABILIZERS IN TREATMENT OF AGGRESSIVE BEHAVIOUR

Aggressive behavior, being a goal directed motor action that has a deliberate intent to harm or injure another object or person, is a common symptom in psychiatric practice. Although aggression without comorbid psychopathology can be subjected to behavioral control, this agitated state may be due to neuron hyperexcitability. The proposed research module is a randomized double blind study of drugs known to reduce neuronal excitability: carbamazepine or gabapentin in comparison to placebo. Impulsiveness would be measured with Barratt Impulsiveness Scale. The results are expected to yield the more effective drug regarding this problem and minimize future costs of the therapy.

RISTOVSKI BOJANA, KOVIN /SERBIA: NEUROLEPTIC MALIGNANT SYNDROME: DIAGNOSTIC DILEMA

We present here a young women with postpartum acute psychotic episode who was treated with depot preparation of antipsychotics. Next day she became diaphoretic with generalized rigidity and tremulousness in all extremities and her mental status was consistent with delirium. We assumed that this patient had neuroleptic malignant syndrome. Questions that need to be answer are: what are the risk factors for NMS? What are the most sensitive diagnostic criteria? What is known about the patopsysiology of this condition? What treatment strategies are available and what treatments should be initiated?

SIMOVIĆ SNEŽANA, KRAGUJEVAC /SERBIA: TEMPORAL VARIATIONS OF STROKE OCCURRENCE IN DISTRICT OF ŠUMADIJA

Stroke is one of leading causes of death worldwide. Different frequency of stroke occurence is observed in days of the week and months in the year. We analyzed 516 patients who had acute stroke and were treated in Clinic of Neurology, Clinical Center Kragujevac in 2013.

Friday is day we found the most IS and all stroke types occurences, and Wednesday is day we found the most IS in men. We found the most strokes in women younger than 65years on Wednesday, but in women older than 65 years on Friday. Monday is day with the most admissions to hospital for patients with IS. We observed that there is average delay in the refering to the doctor for 1.80±1.44 days. Friday is the day with the most ICH symptom beginings and the most admissions to the hospital, and Saturday is the day with the least symptom beginings and admissions to the hospital for IS and ICH. We confirmed that there is a significant weekly variability in the IS symptom onset day.

STANIĆ DUŠANKA, BELGRADE /SERBIA: OXYTOCIN CHANGES CATECHOLAMINE STORES AND ADRENALINE PLASMA LEVELS IN EXPERIMENTAL MODEL OF DEPRESSION

The aim of this study was to investigate if two-week long oxytocin treatment affected catecholamine and corticosterone plasma levels and amounts of VMAT2 and NET transporters in adrenal medulla of rats treated with corticosterone for 21 days.

Oxytocin treatment in CORT+OXY group increased adrenaline plasma level ($p<0.01$) and amount of VMAT2 transporter ($p<0.001$) compared to corticosterone treatment only and had no effect on noradrenaline and corticosterone levels.

The results of this study suggest that in terms of chronically elevated corticosterone levels oxytocin can modulate HPA axis activity by changing catecholamine stores in adrenal medulla as well as adrenaline plasma levels.

STOJANOVIC ZVEZDANA, BELGRADE/ SERBIA: DO CONCOMITANT MEDICATIONS EFFECT ON THE EFFICIENCY OF ECT IN TREATMENT RESISTANT DEPRESSION?

The aim of this study was to evaluate the effect of concomitant medications on treatment outcomes in a patients with treatment resistant depression treated with bitemporal ECT. Methods: Thirty patients treated with ECT were analysed. Clinical evaluation was done using by the HAMD, DASS-42 at baseline and a month after the ECT. Resultas: The total HAMD and DASS score was significantly reduced at T2 compared to baseline. Benzodiazepine and antidepressant dose was not

associated with a change in HAMD and DASS. Conclusion. Benzodiazepines, anidepressant did not affect the efficacy of ECT. However, these results may not generalise.

STUPAR DUSKO, BELGRADE /SERBIA: EARLY SCREENING FOR AUTISM SPECTRUM DISORDER IN SEBIA: A PILOT STUDY OF SCREENING INSTRUMENTS FOR PARENTS AND CHILD CARE WORKERS

Early diagnosis of autism spectrum disorder (ASD) can lead to early interventions, which may improve developmental and academic outcomes in children with ASD. Early screening is thus of significant importance. This study had two aims. First, it was aimed to translate into Serbian five screening instruments for ASD: Modified Checklist for Autism in Toddlers - Revised, (M-CHAT-R), Quantitative Checklist for Autism in Toddlers (Q-CHAT), Infant–Toddler Checklist (ITC), and Early Screening Autistic Traits Questionnaire (ESAT) for parents and the Checklist for Early Signs of Developmental Disorders (CESDD) for child care workers. Second, it was aimed to test the feasibility of including data from parents and child care workers in early ASD screening. All five screening instruments are targeting ASD symptoms at early stage of life in our population. It is feasible to include reports from parents and child care workers in early ASD screening and there is an added value of combining data from the two.

STUPAR SANJA, BELGRADE /SERBIA: AVAILABILITY OF PSYCHIATRIC MEDICINES LABELED FOR CHILDREN AND ADOLESCENTS USE IN THE REPUBLIC OF SERBIA

A lack of psychiatric evaluated formulations and medicines for children and adolescents has led to extensive use of off label and unlicensed medicine, resulting in decreased efficacy, safety and quality of therapy. Therefore, the aim of this study would be to investigate the availability of psychiatric formulations and medicines labelled for children and adolescents in the Republic of Serbia, compared with the Essential list of medicines provided by the World Health Organization.

VESIC KATARINA, KRAGUJEVAC /SERBIA: THE IMPACT OF SERUM URIC ACID LEVELS ON FATIGUE IN PATIENTS WITH MULTIPLE SCLEROSIS

Multiple sclerosis is an inflammatory chronic disorder of the central nervous system with fatigue as a very frequent symptom. The concentrations of reactive oxygen and nitrogen species in brain are

dramatically increased in inflammation. Nitric oxide reacts quickly with superoxide and makes very potent oxidant peroxynitrite. Peroxynitrite is believed to be involved in the inflammation, demyelination and axonal injury that occur in multiple sclerosis. The uric acid is the first-line defence in these settings and it is a strong peroxynitrite scavenger. It has previously shown that the multiple sclerosis patients have lower serum levels of uric acid than controls. The aim of our study is to measure the serum uric acid levels (using a quantitative enzymatic assay-ELITECH) and the degree of fatigue (assessed by Fatigue Severity scale), before and after the administration of corticosteroid therapy, in patients with clinically isolated syndrome, relapsing-remitting and with secondary-progressive form of illnes and compared it with healthy subjects. We will exam the possible correlation of serum uric acid levels and fatigue in patients with multiple sclerosis.

VOJVODIĆ PETAR, BELGRADE / SERBIA: PSYCHOPHARMACOLOGICAL APPROACH TO THE TREATMENT OF ADOLESCENTS IN THE FIRST PSYCHOTIC EPISODE

The aim of the study was to assess, analyse and present data on psychopharmacologic treatment of first psychotic episodes in adolescents. The research was conducted as a retrospective naturalistic study. The sample consisted of 60 hospitalized patients. The survey instrument was a closed questionnaire. Out of 60 patient's incidence of those treated with typical antipsychotic was 40 %, atypical 33.33 %, while the incidence of combined therapy with typical and atypical was 26.67 %. Hallucinations show a better response to typical antipsychotics, while delusions respond about the same in both drug groups.

VRAKELA-MITROVIĆ MARIJA, BELGRADE /SERBIA: INTERNET ADDICTION- DIAGNOSTIC AND THERAPEUTIC DILEMMAS

Internet addiction is described as overuse of internet content and is recognized as a non-chemical dependence, with their clinical manifestations and social disfunctioning. It is believed that it causes changes in the the brain function, similar to those in drug addicts, and as well similar behavioral disorders. A considerable number of epidemiological studies in various European countries indicates the prevalence of this disorder of 1-10% in the general population, especially among adolescents, as well as in the population of psychiatric patients. Nonetheless, there are still no defined diagnostic criteria for this disorder and official classification not recognized as a separate diagnostic category. Given the high prevalence of harmful and excessive use of the Internet in the adolescent population, it is necessary to refine the diagnostic criteria, to assess the possible comorbidity and implement an appropriate, personalized treatment.

Patient vignete BT, patient aged 30 , employed in petrochemical complex, single, no children, lives with his parents. In treatment on parents demand, because of excessive mobile phone bills and use of the Internet. Excessive use of the Internet through mobile phones starting in year 2009, while increasing spending hours on the Internet until the situation that both at work and outside of working hours is constantly on the internet concentrating mainly on activities on social networks and playing games online. Constantly increasing the amounts to be paid for internet costs , and family is no longer able to assist in the payment of debts. Personal history - inconspicuous, dysfunctional family with father, an alcoholic, possesive mother and a brother who is occasionally getting drunk. In the mental status highlights the anxiety, depressive affect, reduced impulse control, motivation for treatment is superficial and declarative.

The proposed treatment was the combination of Naltrexone and antidepressant that gave results in the initial stage of treatment, when it started to be compromised by deteriorating family relationships and non-cooperation of family members and the tretment was abandoned by patient himself. Was the excessive internet use just a mask for more serious dissorder and is the family the only reason for leaving the treatment that was going well in the beggining cuz of the psychofarmacs we used in this case.

VUJINOVIC LENA, ROTTERDAM / THE NETHERLANDS: THE ASSOCIATION BETWEEN SENSITIVITY OF THE FATHER AND EMOTIONAL AND BEHAVIORAL OUTCOMES OF CHILDREN

Objectives: Aim of our study is to explore if there is an association between sensitivity of the father and emotional and behavioral outcomes of the child. Sensitivity is defined as the ability of a parent to recognize and interpret the meaning of messages conveyed through child's acts and behaviors and to respond to them promptly and appropriately.[4] The association between mother's sensitivity and outcomes of children such as aggression, ADHD and anxiety has already been demonstrated in previous studies. We aim to put more emphasis on the role of the father's sensitivity independently as well as in interaction with mother's sensitivity. Results of this study should offer new insight on fathers as parenting figures and the consequences of their sensitivity on children's cognitive and emotional wellbeing. A better understanding of parenting as a shared commitment of both parents and family as a dynamic system could provide a different approach in prevention and treatment of some childhood disorders. Data analysis: Possible association between sensitivity of the father and different behavioral and emotional outcomes of the child, valuation of independence\dependence of father's and mother's sensitivity impacts, and valuation of interaction between influences of father's and mother's sensitivity will be assessed. This will be achieved by fitting a multiple linear regression model and using a generalized estimated equation (GEE). Child internalizing and externalizing problem scores at age of 6 and 9 are outcome variables corrected for the baseline level at age of 3. The determinants are mother's and father's sensitivity measured at child's age of 4. Repeated measures design will be applied. Possible covariates are: child's gender and parity, education of the mother and father, parental depression (ascertained using BSI). This study aims to give further insight into the complex family system, with a special emphasize on the less investigated role of fathers.

VUKOVIĆ VUK, BELGRADE /SERBIA: ANTIHISTAMINES AS ANTIMANIC AGENTS - A RANDOMISED CONTROLLED TRIAL

It is well established that the addition of both quetiapine and olanzapine to a mood stabilizer shows efficacy in the treatment of mania, and both of these antipsychotics show strong antagonistic effects at H1 receptors. The proposed randomized control trial would compare the effici-

ency off classic antihistaminic drug diphenhydramine to quetiapine, and olanzapine when given in addition to lithium or valproate. The primary outcome would be the reduction of mania symptoms (rated on the Young Mania Ratings Scale), while the secondary outcomes would include adverse effects and Montgomery Asberg Depression Rating Scale score.

ZORIĆ KATARINA, BELGRADE / SERBIA: DIAGNOSTIC CHALLENGE IN A CHILD WITH ATYPICAL BEHAVIOR, HALLUCINATIONS AND PSYCHOMOTOR RETARDATION

A twelve years old child was hospitalized on a child psychiatry word because of his fears, agitation, communication and school problems. At the time of admission he had visual, audial and tactile hallucinations. He didn't use cutlery for eating, he used both hands for drawing and he was sitting in his mother's lap. The boy had a fear of cars because of its eyes and evilness, of other children in the school and he never learned to read and write. He is attending fifth degree of regular school.

NOTES

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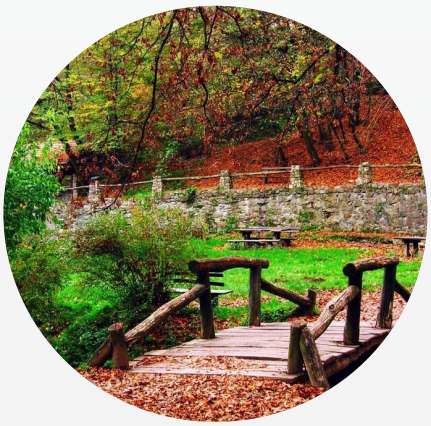
ABOUT DESTINATION

As far as the citizens of Vojvodina are concerned, Fruška Gora is a mountain despite the fact that its highest peak, Crveni Čot, is only 539 meters high. This geologically very old mountain stretches along the south-east periphery of the Pannonian flatland in the length of 80 km. With its northern parts, Fruška Gora descends mildly towards the Danube.



Since pre-historic times, the area of Fruška Gora has been inhabited by many nations. Multi-ethnic population living here today cherishes historic memory about its origin, national values, rich folk heritage, folk beliefs, literature, music and poems of local communities, traditional way of life, which makes an important tourist potential. This is also the area of important concentration of attractive tourist resources such as spatial cultural-historical units, monastery complexes, significant sites, works with monumental and artistic properties, ethnological heritage, events, and cultural institutions.

Serbian Orthodox monasteries Krušedol, Grgeteg, Staro and Novo Hopovo, Vrdnik, Jazak, Velika Remeta, Mala Remeta, Beočin, Rakovac, Djipša, Privina Glava, Kuveždin, Petkovica, Bešenovo, and Šišatovac belong among most important cultural heritage units.

Richness of nature: animal and plant wildlife, thermal springs – spas, and lakes make the basis for tourism of special interest, as well as for recreational and picnic programmes, schools in nature, nautical, health-spa/wellness tourism. Fruška Gora is the region of good wines. There are three famous centres for wine production: Irig, Sremski Karlovci, and Šid. The following wines are the most famous: Riesling, Bermet, Frankovka, Merlot, Game, Vranac, Portuguiser, Augsburg...

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