

rs6295, for 2A receptor rs643627, rs594242, rs6311 and rs6313, for 2C receptor rs547536, rs2192372, rs6318, rs2428707, rs4272555 and rs1801412, and for COMT rs737865, rs4680 and rs165599.

Methods: The sample was composed of three groups: two German samples, consisting of a healthy control group of 289 subjects (42.6% males, mean age: 45.2 ± 14.9) and a psychiatric patient group of 111 suicide attempters (38.7% males, mean age: 39.2 ± 13.6), and an Italian sub-sample, composed of 70 mood disorder patients (44.3% males, mean age: 42.9 ± 14.4).

Results: Controlling for sex, age and educational level, single markers and haplotypes were not or only marginally associated with personality dimensions.

Conclusions: Our study does not support 1A, 2A, 2C and COMT role on personality traits.

P0309

Voltammetric determination of neurotransmitters as biochemical markers in psychiatric diseases

A. Ciucu¹, C. Negulescu¹, A. Ciobanu², D. Marinescu³.
¹University of Bucharest, Bucharest, Romania ²University of Medicine and Pharmacy Carol Davila, Bucharest, Romania
³University of Medicine and Pharmacy, Craiova, Romania

In the medical field, the monitoring of the neurotransmitters in depressive patients represents a major demand focusing of course on the health state of the patients, with social and economical effects. The efficient control of the health state cannot be realized with the help of the traditional chemical and/or biochemical methods precise and selective, but expensive and laborious. Traditional methods for identification and detection of neurotransmitters lack the speed and sensitivity to be of real usage since that they are not real time or even typically completed in a single day. One possible solution is represented by the use of the chemically modified electrodes. The compatibility with micro-fabrication technology and the low cost of these devices make them promising tool for the rapid and inexpensive detection on-line of neurotransmitters.

In the study of phthalocyanine (PhC) chemistry, an area of particular interest in recent years has been the formation and characterization of polymeric compounds in various forms and the use of these compounds to carry out well known PhC applications involving catalysis, analysis, etc. Metallophthalocyanine (MPhC) complexes catalyze the detection of neurotransmitters. The catalytic activity of ferophthalocyanine towards different neurotransmitters was compared with those of Co and NiMPhC complexes. The chemically modified electrodes have been tested for the capacity to electrochemically detect dopamine, epinephrine and serotonin (5-HT). Interference of ascorbic acid in the CP modified electrodes response was also investigated. Applications on real samples will be considered.

P0310

Association study for neurocognitive endophenotype and STin2 polymorphism in major depressive disorder

A. Sarosi¹, G. Balogh¹, X. Gonda¹, A. Szekely², K. Hejjas³, M. Sasvari-Szekely³, G. Faludi¹. ¹Department of Psychiatry, Kutvolgyi Clinical Center, Semmelweis University, Budapest, Hungary ²Department of Psychology, Eotvos Lorand University, Budapest, Hungary ³Department of Medical Chemistry, Molecular Biology and Pathobiochemistry, Semmelweis University, Budapest, Hungary

Background: There has been extensive research concerning the role of the serotonin transporter gene (SLC64A) in depression. The STin2 VNTR polymorphism in the second intron has been found to influence the transcriptional activity of the gene, however, its relationship to major depressive disorder (MDD) has so far been less widely investigated.

Methods: 71 MDD patients and 99 healthy controls participated in a case-control study. In case of the two populations STin2 allele frequencies were compared. The subjects also completed several tests to establish neurocognitive endophenotypes related to MDD.

Results: A significantly higher frequency of the STin2 10/10 homozygous genotype in the MDD patients' group was found compared to controls ($X^2=6.01$, $df=2$, $P<0.05$). The results of neurocognitive tests indicated cognitive dysfunctions in case of MDD patients compared to controls. The clinical subgroup with at least one copy of the 10-repeat allele showed a decreased interference threshold in attention and cognitive interference as compared to patients without the 10-repeat allele. Average performance of the clinical subgroup without the 12-repeat allele proved to be significantly weaker in the verbal learning memory and recall tasks compared to patients having at least one copy of the 12-repeat allele.

Conclusion: After further confirmation our results suggest that the presence of STin2.10 and absence of STin2.12 allele may be considered a possible genetic endophenotype for cognitive dysfunctions detected in MDD.

P0311

Orexigenic and anorexigenic peptides do not differentiate two types of anorexia nervosa. The preliminary study

M. Janas-Kozik^{1,2}, M. Stachowicz³, A. Zajdel⁴, A. Wilczok⁴, K. Krysta¹, I. Krupka-Matuszczyk¹, U. Mazurek³. ¹Department and Clinic of Psychiatry and Psychotherapy, Medical University of Silesia, Katowice, Poland ²Child and Adolescent Psychiatry and Psychotherapy Ward, John Paul II Pediatric Center, Sosnowiec, Poland ³Department of Molecular Biology, Medical University of Silesia, Katowice, Poland ⁴Department of Biopharmacy, Medical University of Silesia, Katowice, Poland

Background and Aims: Anorexia nervosa is a serious eating disorder with highest mortality among psychiatric disorders. DSM-IV classification differentiates two type of Anorexia Nervosa (AN): the restricting type (AN-R) and the binge-eating/purging type (AN-BP). Orexigenic and anorexigenic peptides and cytokines are involved in mechanism of food intake and energy balance. Four young women suffered from Anorexia Nervosa (two with AN-BP and two with AN-R) took part in the study. Three girls were our reference group. The aim of our study was to estimate of differentiates genes between two types of Anorexia Nervosa: AN-R and AN-BP.

Methods: The total RNA was extracted from peripheral blood mononuclears. The oligonucleotide microarray method (HG-U133A, Affymetrix) was used to determine the expression profile of 161 transcripts for genes connected with AN. The oligonucleotide microarray method analyzes genes expression by using the phenomenon of hybridization of single-thread RNA fragments with complementary DNA probes. The results were normalized using RMAExpress. The Bland Altman method was used to examine transcripts of genes which differentiate two types of AN.

Results: Among 161 transcripts (cytokines, orexigenic and anorexigenic peptides) only cytokines have differentiated two type of

AN, IL6R, IL6ST, IL1B, IL2RB and TGFB1 differentiate two type of AN: the restrictive type of AN and binge-eating type of AN. IL1B differentiates the restrictive type of AN and the reference group and TGFB1, IL6ST and IL1B differentiate the binge-eating type of AN and the reference group.

Conclusion: Orexigenic and anorexigenic peptides are responsible for eating behavior but not for food intake.

P0312

Animal models: Possible avenue to understanding schizophrenia

L.B. Jones¹, N. Marmalejo², J. Paez¹, J.B. Levitt³. ¹ *Biological Sciences, Lehman College, Bronx, NY, USA* ² *Pharmacology Department, City College, New York, NY, USA* ³ *Biology Department, City College, New York, NY, USA*

Schizophrenia is one of the most devastating neuropsychiatric disorders. One of the most consistent findings in schizophrenia is a decrease in cell number and volume of the medial dorsal nucleus (MD) of the thalamus which has reciprocal connections to the prefrontal cortex, another region affected in schizophrenia. During development, the MD aids in the differentiation and maturation of pyramidal cells in the prefrontal cortex. To better understand the role of the MD in schizophrenia we lesioned the MD of postnatal day 4 rats and examined their prefrontal cortex as adults. In rats, the MD projects to dorsolateral anterior (human area 9), medial pre- limbic (human area 32) and Cg-1 (human area 24). We hypothesized that a lesion of the MD would lead to morphological changes in all three regions similar to that observed in humans. Using a Golgi stain we counted the number of primary and secondary dendrites and determined spine density in the three regions. Analysis of layers III and V pyramidal cells showed a significant reduction in primary dendrites III/V (Cg-1 25%/23%, pre- limbic 25%/25% and dorsolateral 24%/15%) and secondary dendrites (Cg-1 40%/34%, pre- limbic 40%/32% and dorsolateral 41%/30%). Using two different counting methods we observed that spines on primary and secondary dendrites were significantly reduced for both laminae for all three regions. These current data suggest that a lesion of the MD early in development affects dendritic morphology in the prefrontal cortex similar to that observed in schizophrenia making this model a good candidate for better understanding of schizophrenia.

P0313

Neurobiological model of unitary psychosis

M.H. Khan¹, H.R. Chaudhary², M.G. Butt², Z. Mukhtar³, M. Haq⁴, A. Bakar⁵. ¹ *Psychiatry Department, Sexual Health Institute of Pakistan, Lahore, Pakistan* ² *Psychiatry Department, Sir Ganga Ram Hospital, Lahore, Pakistan* ³ *Psychiatry Department, AZM Hospital, Sargoda, Pakistan* ⁴ *Public Health, Allenora, Lahore, Pakistan* ⁵ *Pharmacology Department, Remedies International, Lahore, Pakistan*

Background: In psychiatry there exist, parallel trends of splitting and clumping of disorders. Former represents dichotomous Kraepelinian trend and latter stands for integrated approach of unitary psychosis. Advancement of biochemical studies and genetics have provided some evidences in favor of unitary psychosis.

Method: Authors made an internet search at various databases websites including pub med, and Blackwell synergy using, early psychosis, prodrom, neuroprotection, apoptosis as key words. It

was followed by manual and internet study of authentic psychiatric journals.

Results: Anatomical, functional and neurochemical studies of brain reveal structural changes in early psychosis.

In schizophrenia, pathological process is progressive. Brain volume loss continues even after onset of overt symptoms.

Study of subjects in prodromal phase shows 15-point drop in GAD. Significant proportion also met criterion of anxiety 86% depression 76% low energy 62% and, social withdrawal 71%.

Discussion: Unitary psychosis symbolizes concept of unity in diversity. Neurodevelopmental apoptotic process has its own direction that manifests in form of affective symptoms, anxiety symptoms, obsessive symptoms cognitive deficits, positive psychotic symptoms and ends with negative symptoms. It is assumed that neurodevelopmental process move from lower to higher centers of brain. Neuroprotection during emerging phase of psychotic disorder can delay the onset. Neurochemical studies shows that SSRIs atypical anti-psychotic, anticonvulsants, and lithium has antiapoptotic properties which modulate the progression This suggests that apoptotic process is the thread that connects apparently different disorder is unitary psychosis.

Conclusion: Neurobiological model can account for unitary psychosis.

P0314

Empathy and the mirror system: Findings from a novel affective startle study

J. Kinross¹, V. Kumari², S. Frangou¹. ¹ *Section of Neurobiology of Psychosis, Institute of Psychiatry, King's College London, London, UK* ² *Psychology Department, Institute of Psychiatry, King's College London, London, UK*

Background: The Mirror System (MS) may facilitate emotional processing, including the experience of empathy. We explored MS involvement in emotional processing using a novel affective startle paradigm and examined whether results were associated with empathy levels in a group of healthy participants.

Methods: Participants (n=69) viewed pictures that were divided into emotionally positive, neutral and negative categories. Pictures were preceded by emotionally congruent primes: half the primes consisted of a videoclip showing hand-object interaction designed to recruit the MS and half consisted of a control sequence showing static images of the interaction. Acoustic startle probes were presented during picture viewing and startle eyeblink responses were recorded. Participants were divided into high and low empathy groups based on their responses for the empathy subscale of the I7 questionnaire.

Results: Startle amplitude was inhibited during positive picture viewing and potentiated during negative picture viewing when pictures were primed with moving videoclips compared to static controls. The biggest difference between amplitude associated with moving and static primes was found in the positive condition (p=0.009). The high empathy group exhibited a greater difference in startle amplitude between the moving and static conditions than the low empathy group for positive pictures (p=0.04).

Conclusions: Our results suggest that the MS modulates emotional processing, as reflected by enhanced startle reactivity when pictures were primed with moving videoclips designed to recruit the MS. This effect was more marked in the high empathy group, suggesting