

down-stream gene expression, and provide a molecular basis for the shared symptoms of SCZ and BD. Hence, down regulation of COMT activity is a useful target for therapeutic intervention.

### P0325

Biochemical pathways linked to schizophrenia

C.L. Smith, A.D. Bolton, H.M. Abdolmalkey, R. Shafa. *Molecular Biotech, Research Laboratory, Boston University, Boston, MA, USA*

**Background:** A paradox of genetic and environmental factors are linked to schizophrenia. For example, cases may be familial or spontaneous. Extensive studies have failed to identify a single gene or small group of genes that accounts for the majority of cases. The complex inheritance pattern suggests a strong environmental component even for those who are predisposed to disease. Environmental factors linked to disease occur early in development. Our goal is to identify common biochemical pathways affected by factors linked to schizophrenia.

**Method:** Our studies included DNA comparisons between monozygotic twins discordant for schizophrenia, computational evaluations of genomic positions of candidate genes using Genbank resources, and molecular genetic/epigenetic studies on dopamine metabolism in the synaptic cleft.

**Results:** Twins studies linked schizophrenia to somatic DNA instability ( $p = <0.01$ ). Genomic studies linked schizophrenia to interspersed fragile site regions ( $p = 0.001$ ) of the genome that are hot spots for mutation and epigenetics changes. The molecular studies on dopamine metabolism linked schizophrenia to aberrant genetic and epigenetic changes.

**Conclusions:** These, and other results, point to the confluence of DNA stability (i.e. DNA replication/repair) and epigenetic modification. DNA replication/repair and epigenetic modification are linked at both the macromolecular and biochemical level, require folate, methionine, and cobalamine, and compete for intermediates important for the cellular response to oxidative stress. Mutations in these pathways are linked to schizophrenia, as have deficits in the essential nutrients. The consequences of genetic and/or environmental perturbations to these pathways are complex because many essential pathways and processes are affected.

### P0326

The distinct effect of valence and arousal on subjective and objective measurements of emotional regulation

E. Stefanopoulou, S. Argyropoulos, S. Frangou. *Section of Neurobiology of Psychosis, Division of Psychological Medicine, Institute of Psychiatry, King's College London, London, UK*

**Background:** This study investigated the duration of emotional responses to emotionally valenced stimuli and explored the relationship between objective [as assessed by skin conductance activity (SC)] and subjective measurements of emotional reactivity.

**Methods:** A sample of 100 healthy volunteers, stratified for age and gender, viewed 54 images from the International Affective Picture System equally split in positive, negative and neutral categories. Subjects pressed a button to view the next image when they judged that their response had subsided (time to emotional resolution, TTR) and then rated the intensity of their response on a scale from 1 to 9 (highest). The number of skin conductance responses (SCRs) and the maximum amplitude ( $\mu\text{S}$ ) were also acquired and averaged for each condition (mean  $\pm$  SD).

**Results:** Picture valence had a significant effect on all measures ( $p < 0.001$ ). TTR (sec) was  $11.01 \pm 6.57$ ,  $14.74 \pm 7.82$  and  $5.27 \pm 3.57$  while arousal ratings were  $5.65 \pm 1.80$ ,  $7.46 \pm 1.78$  and  $1.77 \pm 0.87$  for positive, negative and neutral images, respectively. Maximum amplitude was  $0.19 \pm 0.14$ ,  $0.22 \pm 0.17$  and  $0.16 \pm 0.12$  while SCRs were  $23.76 \pm 14.06$ ,  $29.67 \pm 19.04$  and  $18.52 \pm 10.81$  for positive, negative and neutral images, respectively. A correlation matrix of all measures showed significant association between TTR and SCRs ( $p < 0.001$ ) only.

**Conclusions:** TTR correlated with SCRs indicating that participants viewed the next image when their level of arousal subsided. However, the poor correlation between SC and arousal ratings suggests that when appraising the intensity of their responses, participants were accessing other aspects of emotional processing than arousal alone.

### P0327

Ethane as a biomarker of schizophrenia

B.K. Puri<sup>1</sup>, B.M. Ross<sup>2</sup>, I.H. Treasaden<sup>3</sup>. <sup>1</sup>*MRI Unit, Imaging Sciences Department, MRC CSC, Imperial College London, Hammersmith Hospital, London, UK* <sup>2</sup>*Division of Medical Sciences, Northern Ontario School of Medicine, Lakehead University, Ontario, Canada* <sup>3</sup>*Three Bridges Medium Secure Unit, West London Mental Health NHS Trust, Imperial College London, Southall, UK*

**Background and Aims:** This study directly assessed whether there was a change in the level of exhaled ethane, which provides a non-invasive, quantitative, direct measure of n-3 lipid peroxidation, in the breath of patients with schizophrenia.

**Methods:** Samples of alveolar air were obtained from 20 subjects with schizophrenia and 23 age- and sex-matched healthy control subjects. The air samples were analyzed for ethane using mass spectrometry.

**Results:** The mean level of ethane in the schizophrenia sample (5.15 (S.E. 0.56) ppb) was significantly higher than that of the healthy controls (2.63 (S.E. 0.31) ppb;  $p < 0.0005$ ). A further sub-analysis showed that nicotine dependence was unlikely to be the cause of this difference.

**Conclusion:** These results suggest that the measurement of exhaled ethane levels may offer a non-invasive direct marker of increased n-3 lipid peroxidation in schizophrenia.

### P0328

Variations in the serotonin transporter genotype and potential endophenotypes for affective disorder

M. Vinberg<sup>1</sup>, E. Mellerup<sup>2</sup>, P.K. Andersen<sup>3</sup>, B. Bennike<sup>2</sup>, L.V. Kessing<sup>1</sup>. <sup>1</sup>*Department of Psychiatry, University of Copenhagen, Rigshospitalet, Copenhagen, Denmark* <sup>2</sup>*Laboratory of Neuropsychiatry, University of Copenhagen, Rigshospitalet, Copenhagen, Denmark* <sup>3</sup>*Department of Biostatistic, University of Copenhagen, Copenhagen, Denmark*

**Background:** Variations in the serotonin transporter genotype and stressful life events may be associated with affective disorders.

**Aim:** Firstly, to investigate whether the distribution of the alleles of the serotonin transporter gene is associated with a genetic predisposition for bipolar and unipolar disorder. Secondly, to investigate whether variations in the serotonin transporter (5-HTTLPR) genotype

interact with stressful life events in relation to potential endophenotypes for affective disorders.

**Method:** In a cross-sectional high-risk study, healthy monozygotic (MZ) and dizygotic (DZ) twins with (high-risk twins) and without (low-risk twins) a co-twin history of affective disorder were identified through nation wide registers.

**Results:** No differences were found between the 115 high- and 81 low-risk twins with respect to the distribution of the alleles of the serotonin transporter gene. However, the genotype interacted significantly with recent stressful life events on subclinical depressive symptoms and neuroticism score. No relation was found between 5-HTTLPR genotype and salivary cortisol.

**Conclusion:** The distribution of the alleles of the serotonin transporter gene was not associated with a genetic predisposition for affective disorder. The presence of the short allele of the 5-HTTLPR gene and the experience of recent stressful life events seems to be associated with a higher level of subclinical depressive symptoms and higher neuroticism score.

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## Poster Session I: Eating Disorders

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### P0329

Bulimia among female students in Marrakesh

I. Adali, F. Manoudi, L. Essabiri, R. Chagh, S. Bououda, S. Boutabia, F. Asri, I. Tazi. *Academic Unit of Psychiatry Faculty of Medicine, Marrakech, Morocco*

**Introduction:** Bulimia is a public health problem, there are no studies assessing this disorder in the university environment in our country. The aim of the work was to determine the prevalence of bulimia and unusual eating behaviour, to assess their sociocultural and physical profile, and to evaluate the depression as psychiatric comorbidity.

**Population and Methods:** We carried out an epidemiology's investigation among 480 female's students in four universities and one higher education school, using a questionnaire which allows the study of sociodemographic and physical characteristics (BMI), the study of the bulimia (BITE) and the assessment of depression (Beck score).

**Results:** 4% of students had bulimia and 32.2% had an unusual eating behavior. 21.05% had a severe bulimia. The appetite suppressant was the most used ways to lose weight in the two groups and urban origin was predominant among the two groups. The lifestyle had no influence on the two groups. The medical school had most of bulimia and unusual eating behavior. Bulimia was predominant in the middle of university studies and the unusual eating behavior was at the beginning and the end of the studies. Bulimic female students were more over weighted and those with unusual eating behavior were more normal stoutness. Depression was common in both of the groups.

**Conclusion:** this study demonstrates that bulimia and unusual eating behavior exist in Marrakech and similar surveys in other towns are necessary to better determine the prevalence of this disorder in our society and seek risk factors.

### P0330

Personality and psychopathological traits in spanish eating disorder males: A comparative study

Z.P. Aguera<sup>1</sup>, A. Nunez-Navarro<sup>2</sup>, I. Krug<sup>1,2</sup>, S. Jimenez-Murcia<sup>1,2</sup>, R. Granero<sup>3</sup>, E. Penelo<sup>3</sup>, A. Karwautz<sup>4</sup>, D. Collier<sup>5</sup>, J. Treasure<sup>5</sup>, F. Fernandez-Aranda<sup>1,2</sup>. <sup>1</sup>*Ciber Fisiopatologia Obesidad Y Nutricion (CIBEROBN), Instituto Salud Carlos III, Madrid, Spain* <sup>2</sup>*Department of Psychiatry, University Hospital of Bellvitge, Barcelona, Spain* <sup>3</sup>*Methodology Department, University Autonoma of Barcelona, Barcelona, Spain* <sup>4</sup>*University Clinic of Neuropsychiatry of Childhood and Adolescence, Vienna, Austria* <sup>5</sup>*Eating Disorders Unit and SGDP Research Centre, Institute of Psychiatry, London, UK*

**Objective:** To explore gender differences on personality and clinical features in patients with eating disorders (ED) and a healthy control sample.

**Methods:** 60 ED males and 60 ED females, consecutively admitted to our Hospital and diagnosed according to DSM-IV-R criteria, were matched for age and diagnosis. A comparison group of 120 non clinical people (60 males, 60 females) were also collected. Measures: TCI-R, SCL-90-R, EDI-2.

**Results:** Female ED patients scored significantly higher than males on Drive for Thinness, Body Dissatisfaction, Interoceptive Awareness and total EDI ( $p < 0.002$ ). However, these differences were not significant when compared with controls. ED women exhibited higher SCL-90-R Somatization, Interpersonal Sensitivity, Depression, Anxiety, Hostility, GSI, PSDI and PST scores ( $p < 0.002$ ). Regarding personality traits, high Harm Avoidance, Persistence, Cooperativeness ( $p < 0.018$ ) and low Self-Directedness ( $p = 0.001$ ) were associated with an ED diagnosis in males. Significant differences across ED subdiagnoses were also observed. Lifetime obesity was significantly associated with ED in males ( $p = 0.008$ ). However, when specific ED diagnosis was entered, the gender effect of obesity disappeared ( $p = 0.081$ ).

**Conclusions:** Although gender specific differences in clinical and psychopathological features across ED patients have been observed, there are important similarities in current ED features between ED males and females, suggesting that, in spite of having some gender-specific associated traits, EDs are not different with regard to gender. These data encourage our continued efforts toward using similar strategies to detect and treat EDs among men and women.

### P0331

Levels of cytokines (TNF- $\alpha$  & IL-6) and personality in patients with eating disorders

J. Ahrén-Moonga<sup>1,2,3</sup>, N. von Blixen<sup>1</sup>, J. Ronnelid<sup>4</sup>, B. af Klinteberg<sup>2,3,5</sup>. <sup>1</sup>*Department of Neuroscience, Psychiatry, Uppsala University Hospital, Uppsala, Sweden* <sup>2</sup>*Department of Woman and Child Health, Karolinska Institute, Stockholm, Sweden* <sup>3</sup>*CHES – Centre for Health Equity Studies, Karolinska Institute, Stockholm University, Stockholm, Sweden* <sup>4</sup>*Unit of Clinical Immunology, Uppsala University, Uppsala, Sweden* <sup>5</sup>*Department of Psychology, Stockholm University, Stockholm, Sweden*

**Background:** The underlying pathophysiology of Eating Disorders (EDs) is dependent on complex interactions between psychological and neuroendocrine factors. Pro-inflammatory cytokines are known to decrease food intake and increase risk of depression. Psychological