

that high empathisers may be more sensitive to MS involvement in emotional processing.

### P0315

Interaction between health behaviour, mental distress and the polymorphism of the serotonin transporter gene among adolescents in Oslo, Norway

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**Background and Aim:** We have recently found an association between smoking and mental distress in a three year follow up study among Norwegian adolescents. Earlier studies have demonstrated that the serotonin transporter gene interact on the association between negative life events and depression.

The aim of this study is, in stratified analyses by sex, to investigate whether there is a similar interaction of the serotonin transporter genotype on the relationship between smoking and mental distress.

**Method:** All 10th graders in Oslo in 2000 and 2001 (n=7343, 88%) filled in questionnaires during school classes. The 2001 cohort (n = 3811) constituted the baseline. Of the participants in the baseline study 2489 (65%) participated in the follow-up. The response rate was 58% in boys and 74% in girls. The Hopkin's Symptom Checklist-10 was used to measure mental distress. At follow up almost all participants provided genetic material using a cyto-brush on the buccal mucosa. The tag SNPs were analysed with Taqman MGB.

**Results:** There was a significant interaction effect between the different genotype alleles and smoking among girls (F=4.0, p=0.019), but not among boys (F=0.8, p=0.44). Girls that are smoking daily with the long gene allele variant had lower mental distress scores than those with the short allele variant. Those with the heterozygote variant had scores that were between those with the short and long variant.

**Conclusion:** There is an interaction effect for the serotonin transporter genotype among adolescent girls, but not in boys in the relationship between smoking and mental distress.

### P0316

Psychophysiological markers of the patrimonial dominant

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**Objects:** One of the most often reasons of anomalies development of patrimonial activity is absence of the generated patrimonial dominant.

**Methods:** The study has been carried out on the basis of a maternity hospital of Chelyabinsk city. Group of 38 pregnant females sorts on term (38-40 weeks). It was lead monopolar electroencephalography on 11 channels with epsilateral ear referent electrodes. Record EEG was carried out on standard procedure. The correlation analysis was carried out with the help of statistical package SPSS version 11.0.

**Results:** Epy interrelation between anomalies of patrimonial activity and average frequency of a beta-rhythm is established at opening eyes (r = 0,450 at p=0,005), an index of a teta-rhythm (r =-0,419 at p=0,009) at closing eyes in left frontal assignment F1.

**Conclusions:** The revealed direct interrelation of increase of average frequency of a beta-rhythm in the left frontal assignment and increases in probability of occurrence of anomalies of patrimonial activity allows to specify a hypothesis about connection of expressiveness of high-frequency activity in frontal zones of a brain with formation of a patrimonial dominant.

### P0317

Serotonin transporter gene and adverse life events in adult ADHD

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Childhood Attention deficit hyperactivity disorder (ADHD) symptomatology persists in a substantial proportion of cases into adult life. ADHD is highly heritable but the etiology of ADHD is complex and heterogeneous, involving both genetic and non-genetic factors. In the present paper we analyzed the influence of both genetics and adverse life events on severity of ADHD symptoms in 110 adult ADHD patients. Subjects were genotyped for the norepinephrine transporter (NET), the Catechol-O-methyltransferase (COMT), the serotonin transporter promoter polymorphism (SERTPR) and the more rare A/G variant within SERTPR. Three main outcomes were obtained: (1) adverse events showed a small but positive correlation with current ADHD severity; (2) NET, COMT and the A/G variant within SERTPR were not associated with ADHD severity; (3) taking into account stressors, the long (L) SERTPR variant showed a mild effect on ADHD, being associated with an increased severity, particularly as regard affective dysregulations; on the other hand, in subjects exposed to early stressors, it showed a protective effect, as compared to the S variant (see table). In conclusion, our data support the role of environmental factors in adult ADHD symptomatology. SERTPR may be involved in some features of the illness and act as a moderator of environmental influences in ADHD.

Total BADDs scores	$\beta$	p
Nr. of childhood adverse life events	1.63	0.022
Presence of the SERTPR*S allele	0.34	n.s.
Presence of the SERTPR*L allele	0.68	0.024
Nr. of life events x presence of the SERTPR*S allele	-0.68	n.s.
Nr. of life events x presence of the SERTPR*L allele	-1.19	0.037

Table. The effect of number of childhood stressors and SERTPR on total BADDs scores (multiple regression analysis). SERTPR =serotonin transporter promoter polymorphism; BADDs= Brown Attention Deficit Disorder Scale.

### P0318

Depression trajectories and medication treatment during pregnancy: Impact on neonatal outcomes

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**Aims:** This study explores the interplay of maternal depressive symptoms and use of antidepressant medication during gestation on the intranatal development of the infant limbic-hypothalamic-pituitary axis (LHPA). Infant neurologic markers at two weeks of