

to compare craving scores at each time of observation, with allelic status as a covariate.

Results: At each time of observation, craving scores were significantly higher in type II alcoholics. The difference was even more significant in the obsessive component of craving.

However, the presence of the A1 allele of the DRD2 did not influence the difference in craving scores between type I and type II alcoholics.

Conclusions: Craving for alcohol after withdrawal seems to be higher in type II alcoholics, which is in line with a more severe form of alcohol dependence in this population and may lead to higher risk of relapse. However, even though craving may be influenced by genetic differences (3), the A1 allele of the DRD2 does not account for the observed difference in craving intensity between type I and type 2 alcoholics.

References:

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Posters (P1–P99)

P1

Converging evidence for CDH13 as a candidate gene for ADHD

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The atypical cadherin 13 (CDH13) has mainly gained attention regarding its peripheral functions. However, it is also expressed in the brain with a remarkable expression pattern with transcripts found in the prefrontal cortex, thalamus, the raphe nuclei and the locus coeruleus.

CDH13 thus is in the center of monoaminergic neurotransmission. In the last year, several genome-wide association studies (GWAS) provided evidence that CDH13 is associated with substance abuse disorders and quite interestingly, CDH13 was also amongst the top hits of two GWAS in ADHD. Further evidence for a role of CDH13 in ADHD was provided by a meta-analysis of ADHD linkage studies, where the locus containing CDH13 was the only one to reach genome-wide significance. As CDH13 therefore is a highly relevant candidate gene for ADHD and related conditions, we have tested an association of CDH13 with adult ADHD (aADHD) interrogating 86 tagging SNPs in a sample of 624 aADHD cases and 422 controls.

Thereby, several SNPs scattered across the gene were found to be associated with disease and co-morbid conditions as well as personality traits. To replicate this finding, we additionally tested a family-based sample consisting of 170 families with at least one child affected with ADHD. Again, seven SNPs in this sample were associated with disease. Joint analysis revealed that five SNPs and two

haplotypes, each including one of the risk alleles, were associated with disease in both samples. Taken these findings together, CDH13 appears to be a highly relevant gene for disorders with the shared feature of impaired impulse control, such as ADHD and substance abuse. The corresponding pathomechanism might include defective monoaminergic neurotransmission, which might provide a rationale for further studies.

P2

Impulsivity in adults attention disorders

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Impulsivity is a main clinical feature in adults Attention Deficit/Hyperactivity Disorder (ADHD) and has led to a wide range of techniques for measuring but with still discussion on better operant methodology for various neuropsychological components in distinct behaviours in ADHD. The aim of the study was to evaluate relationship between ADHD and impulsivity and to assess impulsivity in adults ADHD with regards to lifetime prevalence of impulse control disorders.

We therefore conducted a clinical study in 50 adults in an adult ADHD out-patient program. Using ADHD rating scales (ASRS, CAARS:S–V, BADDS) and impulsivity scales (BIS, FIDI, SSS), correlation between ADHD severity and impulsivity scores were explored and significant results with the ASRS-18 and general score of the BIS-11 were found ($r:0.69$, $p:0.05$). High prevalence for Intermittent Explosive disorder (IED) were found using the IED integrated research criteria and the Minnesota Impulse Disorders Interview (26% for lifetime and 16% for the last 12 months). Pathological Buying and Kleptomania were also found with higher prevalence than in general population.

Attention deficit as executive function, inhibition deficit have been largely explored in ADHD. High comorbidity with impulse control disorder and clinical features with emotional dysregulation and outburst may underlie specific ADHD endophenotypes in adults.

P3

Response inhibition, working memory and response time variability as attention-deficit/hyperactivity endophenotypes—an event-related potentials study

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Introduction: ADHD is among the most common psychiatric disorders with a high prevalence in childhood and adolescence (3–5%) and a strong tendency to persist into adulthood (50%). Research into the genetics of ADHD has left us with a multitude of associated genes with small effects. In combination with an extremely heterogeneous phenotype, this makes diagnosis as well as choice of medication difficult. Endophenotypes like response inhibition, working memory deficits and response time variability as a link between genotype and phenotype (Doyle et al., 2005) might help uncover its genetic and neurobiological bases.