

## S06-01

### EXPLORING THE CAUSAL RELATIONSHIP BETWEEN CANNABIS AND SCHIZOPHRENIA: WHAT IS THE ROLE OF GENES AND ENVIRONMENT?

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Frequent use of cannabis has been associated with poor outcome in patients with psychosis or schizophrenia, and research has become more and more interested in the question whether cannabis may actually cause psychosis or schizophrenia. Since only a minority of cannabis users eventually develops psychosis or schizophrenia, cannabis is suggested to be a component cause, potentially interacting with environmental as well as genetic factors. However, little is known about this putative interaction. Recent research in our group has therefore focused on differential sensitivity to cannabis and its psychosis-inducing effects. Experimental and observational work for instance showed that a functional polymorphism within the COMT gene moderates the acute effects of cannabis on psychosis outcome. In this presentation new evidence from epidemiological work is presented, showing gene-environment interactions within the cannabis-psychosis association. These results point to a moderating role for both age of onset of cannabis use and childhood trauma. Also a certain haplotype within the COMT gene was found to increase the risk of developing schizophrenia after adolescent cannabis use. Complex gene-environment interactions as well as interactions between cannabis and other environmental risk factors seem to underlie the cannabis-psychosis relationship. Possible biological mechanisms such as sensitization processes that may underlie these interactions will be discussed.