

## S06-05

### DIFFERENTIAL EFFECTS OF THC AND CBD IN CANNABIS SMOKERS

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Cannabis contains a myriad of different chemicals, more than 60 of which are unique to the plant and called cannabinoids. The main psychoactive ingredient is delta<sub>9</sub>-tetrahydrocannabinol (THC) and this produces the effects that users seek (Curran et al., 2002 *Psychopharmacology* 164: 61-70) . When given intravenously to healthy humans, THC produces psychotic-like and anxiogenic effects (D'Souza et al., 2004 *Neuropsychopharmacology* 29: 1558-1572). In contrast, cannabidiol (CBD), another major constituent of most strains of cannabis, appears to have anti-psychotic properties, is anxiolytic (Guimares et al., 1990 *Psychopharmacology* 100: 558-559) and may be neuroprotective in humans (Hermann et al., 2007 *Biol. Psychiatry* 61: 1281-1289). The relative THC/CBD ratio of cannabis varies greatly. Although high THC cannabis has become increasingly available over recent years, little is known on changes in levels of other cannabinoids as these are seldom measured. One study in the U.S. however found that the THC content of cannabis trebled in resin and doubled in leaf, whilst the average level of other cannabinoids, including CBD, remained unchanged. We recently found that users with high levels of THC in hair and little CBD demonstrated greater levels of schizophrenia like symptoms than users with higher levels of CBD (Morgan & Curran, 2008, *Br J. Psychiatry*, 192: 306-307) . We are currently exploring the relationship between cannabinoids in naturalistically smoked cannabis and the acute and chronic effects of the drug. This presentation will focus on the implications of the increased ratio of THC/CBD and the different effects of CBD and THC in cannabis smokers.