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**Bio:** **Nadia Solowij**, PhD, is an Associate Professor and ARC Future Fellow in the School of Psychology, University of Wollongong. She has been actively researching the effects of long term cannabis use for more than 20 years and is now the most published researcher in the world on the topic of cannabis and the brain. Nadia spent 15 years at the National Drug and Alcohol Research Centre, University of New South Wales, Sydney, establishing her primary area of expertise on the long-term cognitive effects of cannabis. She has used neuropsychological, psychophysiological and brain imaging techniques in her investigations, has over 90 scientific publications including her book *Cannabis and Cognitive Functioning* (Cambridge University Press), and has held over \$4 million in grant funding. Her recent research has focused on memory, cognition and brain structure and function in adult and adolescent cannabis users and people with schizophrenia and comorbid cannabis use. Her current research examines the effects of different cannabinoids on vulnerability markers for psychosis.

**Title:** Cannabis, the brain, cognition and psychosis: the good, the bad and the unknown

**Abstract:** Debates about the relative harms of cannabis, the most popular illicit drug, continue to polarise the lay, medical and scientific communities. Alongside a push toward medical marijuana for a range of ailments, evidence for an association between cannabis use and schizophrenia has strengthened, and studies show that long-term or heavy exposure to cannabis results in cognitive impairment, especially in the domains of memory, attention and executive functions. There is evidence that these adverse effects are greater when cannabis use commences during adolescence when the brain is maturing. There is also evidence from neuroimaging studies for alteration to the structure and function of the brain. Some of these changes are similar to those observed in schizophrenia, and are associated with the development of subclinical psychotic-like symptoms in otherwise healthy

cannabis users. Most of the adverse effects of cannabis on the brain and its function are associated with THC, the primary psychoactive constituent of cannabis. But another compound in cannabis plant matter, cannabidiol or CBD, has been shown to have anxiolytic and antipsychotic properties and to ameliorate some of the adverse effects of THC. This talk will provide an overview of the program of research from my team that has used neuropsychological, psychophysiological and brain imaging methods to address the above topics.