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UCT PhD research provides insights into mood disorders

Three doctoral graduands at the University of Cape Town will receive their degrees at December graduation for their respective research into the relationship between psychopathology and substance use – especially cannabis; mood disorders; the positive effects of feeling guilty; and the impact of early trauma on the brain's natural painkiller system.

Amina Saban's PhD thesis, *The association between psychopathology and substance use in young people*, shows that amongst a study of 1766 young adults aged between 18 and 30 years, substance use was associated with mood and anxiety disorders, with a particularly strong relationship for cannabis use. Her thesis examines the role of co-morbid psychopathology in substance use amongst young adults and adolescents in South Africa through a series of studies examining the epidemiological associations between substance use and psychopathology. One study of 939 Grade 8 and Grade 11 learners at secondary schools in greater Cape Town demonstrated patterns of association between different forms of psychiatric disorders such as post-traumatic stress disorder, depression and anxiety and different types of substance use, partly moderated by grade.

Saban obtained her BSc and BSc (Hons) degrees in Science, and her MA degree in Research Psychology, all from UCT. She has been a research associate of the Medical Research Council's Alcohol and Drug Abuse Research Unit since 1994, and has been involved in the design and execution of several research projects related to substance use. Her supervisor is Professor Leslie London of the School of Public Health and Family Medicine at UCT, and her PhD is in Psychiatry.

Melike Marethe Fourie's PhD thesis, *Guilt in the body and brain: A psychophysiological and neuroimaging investigation*, examines guilt as an important moral emotion that guides and directs behaviour, *in vivo*, in healthy research participants. Her two doctoral studies demonstrated that guilt is not a pleasant emotional experience and that its adaptive nature, therefore, may be associated intimately with its prosocial virtues. These are behaviours

aimed at rectifying the harm caused to another, and they may function to alleviate personal distress and speed cardiovascular recovery.

Fourie has a BSc from the University of the Free State, an Honours degree from UCT, and an MSc from University College London. She registered for a doctoral degree in the UCT Department of Psychology in 2007. She lectured and co-supervised various students while writing her doctoral dissertation. Her supervisor is Dr Kevin Thomas in the Department of Psychology at UCT.

Susan Michelle Malcolm-Smith's PhD thesis, *Social Trauma and the Mu-Opioid System in Depression*, examines the impact of early social trauma on the mu-opioid system (the brain's natural painkiller system) in healthy normal young adults. Her thesis hypothesized that the development of the mu-opioid system would be altered following early social trauma. In a double-blind, placebo controlled trial, two groups of healthy young adults who differed only in terms of exposure to early social trauma were given a low dose of the mu-opioid agonist buprenorphine. Buprenorphine was found to affect the two groups differently, in that it reduced experience of all affect in the trauma group only; it enhanced a positivity bias in social cognition in the control group only; and on functional magnetic resonance imaging, the trauma group showed increased sensitivity to buprenorphine, in that it reduced response to aversive social signals in the anterior insula of the brain.

Malcolm-Smith completed her undergraduate and postgraduate training at UCT. She obtained a BSocSc (Hons), and went on to complete a MA in Psychological Research, with a focus on neuropsychology. She was appointed as a lecturer in the Psychology Department in 2008. Her supervisor is Dr Kevin Thomas of the Department of Psychology.

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Please note: Information in this release is based on the supervisor's citation for the PhD thesis. UCT advises journalists to obtain a copy of the thesis and/or interview the PhD graduate to verify and expand on this information.

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