PhD. position in Chronobiology: The effect of general anaesthesia on the circadian clock of mice

Department of Anaesthesiology, School of Medicine, University of Auckland, New Zealand.

We are seeking a candidate for a funded three year Ph.D. project (stipend of $25,000 + fees/annum) in our chronobiology research group at the School of Medicine, University of Auckland under the supervision of Dr Guy Warman, and Dr James Cheeseman.

Our current research focuses on the effects of anaesthesia on the circadian clock in animal models and in patient populations. The ultimate aim of this work is to understand how general anaesthesia affects the clock and sleep, and to develop chronotherapeutic strategies to combat sleep and circadian disruption in post-operative patients. Using invertebrate models we have previously demonstrated that general anaesthesia causes large and persistent shifts in the circadian clock (Cheeseman et al. 2012, PNAS 109(18), 7061–7066). We now plan to follow up these findings in mice to determine the effects of general anaesthesia on rhythms in behaviour, physiology and gene expression.

The successful candidate will have an interest anaesthesia and/or circadian rhythms. He / she will conduct experiments on the effect of the anaesthetic agent isoflurane on behavioural and physiological rhythms in mice under the day-to-day supervision of Dr C Leenaars (post-doctoral fellow in our group).

We anticipate the appointment commencing in November / December 2014. Relocation expenses of the candidate are not covered.

Further details about the position can be obtained by emailing Dr. Leenaars (c.leenaars@auckland.ac.nz), Dr Warman (g.warman@auckland.ac.nz) or Dr Cheeseman (j.cheeseman@auckland.ac.nz).