BOSCH INSTITUTE DISTINGUISHED LECTURE

Date	Friday, 4 December 2015
Time	1.00 - 2.00 pm
Venue	New Law LT 104 New Law School Building University of Sydney

THE UNIVERSITY OF SYDNEY

Speaker	Professor Ron Grunstein
Title	Integrated Sleep Health is Not a Dream
Date	Friday, 4 December 2015
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Venue	New law LT 104, New Law School Building

Ron Grunstein is Professor of Sleep Medicine, Woolcock Institute of Medical Research, University of Sydney and senior staff physician in Respiratory and Sleep Medicine at Royal Prince Alfred Hospital, Sydney. He heads the NHMRC Centre of Clinical Research Excellence (NHMRC CRE) for Translational Research in Sleep and Circadian Neurobiology ('NeuroSleep") and has been a Practitioner Fellow of the NHMRC since 2002. He leads the Sleep and Circadian Research Group, Woolcock Institute of Medical Research and has been lead investigator for three successive NHMRC CREs since 2004 and is currently a program leader in the CRC for Alertness, Safety and Productivity. Professor Grunstein was the President of the World Sleep Federation (2007-11) which represents over 12,000 researchers and sleep clinicians globally and was President of the Australasian Sleep Association 1994-1997. Prof. Grunstein has a strong interest in translational clinical research in sleep health.

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Today's Research - Tomorrow's Medicine

INTEGRATED SLEEP HEALTH IS NOT A DREAM

Ron Grunstein, Professor of Sleep Medicine, Woolcock Institute of Medical Research, University of Sydney and Royal Prince Alfred Hospital, Head, Sleep and Circadian Research Group, Woolcock Institute of Medical Research and NHMRC Practitioner Fellow.

Sleep is a complex behaviour that is pivotal to good health and survival. Sleep medicine is a relatively new field driven by the science of sleep measurement and understanding of the biological basis of many sleep disorders and their treatments. Current data suggests 20% of people have insufficient sleep length, 5-10% have chronic insomnia with major daytime dysfunction and up to 40% of middle-aged men and 20% of women have moderate to severe sleep apnea. Sleep loss in animals results in impairment of the glymphatic system's ability to clear the brain of "toxins" and there is increasing evidence of the impact of sleep loss on neurodegeneration in humans. Restricted sleep hours or sleep apnea accelerate cardio-metabolic dysfunction and results in human error and crashes.

Through collaborative networks including three successive NHMRC centres of excellence grants, our team has been translating knowledge of respiratory and sleep pathophysiology into new treatments for sleep apnea, integrating psychology into implementing better management of sleep disorders and determining impact of sleep loss on chronic disease such as cardiovascular disorders obesity and insulin resistance. We have established new research tracks into the neurobiology of insomnia and sleep apnea, molecular chronobiology, sleep and pain and sleep in neurodegenerative disease.

Integrating clinical discovery into clinical practice is a major challenge to the sleep medicine field and this is being addressed by a range of clinical care models including integrated sleep health clinics. Future research will need to focus on targeted treatments (precision or personalised sleep medicine) and implementation science in order to maximise patient care.

Many sleep disorders involve neurodegenerative process including narcolepsy (occurs in 1 in 2000 people) and REM sleep behaviour disorder which almost always is a precursor for synucleinopathy. Poor sleep in general increases risk and worsens prognosis for neurogenerative diseases. To treat these conditions, a workforce of clinicians is required that operate in an integrated "hub" linked to primary and secondary health "spokes" requiring new approaches in healthcare delivery and some modification of traditional "healthcare silos".