



Project Title: Effect of positive pressure on primary nasal epithelial cells		Code: WOOL1
Host School / Institute: Woolcock Institute of Medical Research		Address: Woolcock Institute of Medical Research, 431 Glebe Point Rd, Glebe, NSW
Certificates & Clearances required: Yes *Vaccination Certificate <i>Information on how to obtain certificates, where necessary, will be given to successful applicants.</i>		
Primary Supervisor: Dr Maliheh Ghadiri		
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Co-Supervisor/team: Professor Ron Grunstein		
Project Type: Laboratory based; Laboratory based		
Project Category: Respiratory; Sleep Medicine		
Skills / Attributes of a successful student: Cell culture, Developmental biology, PCR and ELISA		
Project Keywords: Nasal Epithelial cells; Positive pressure; Inflammation; microbiome		
<p>Project Description: Nasal continuous positive airway pressure (CPAP) is considered the standard of care for treating moderate-to-severe obstructive sleep apnoea (OSA). Its use has been convincingly associated with substantial improvement in quality of life and somnolence. The major clinical challenge however is CPAP side effects. Among the side effects caused by CPAP, undesirable nasal symptoms such as congestion, dryness or rhinorrhea are particularly prevalent and can significantly compromise compliance. Therefore, further investigation to elucidate the main mechanism responsible for the nasal side effects of CPAP in OSA patients is important to increase patient compliance.</p> <p>We have shown that positive pressure generated from CPAP is causing inflammation and oxidative stress in airway epithelial cells. In this study, we want to explore underlying mechanisms and inflammatory nature of the nasal side effects of CPAP in OSA patient which is important for implementation of effective treatment.</p>		