# Project Title: Cognitive dysfunction in neuro-otology patients

**Code:** CCS6

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<th>Host School / Institute: Central Clinical School</th>
<th>Address: Neurology Department, Royal Prince Alfred Hospital</th>
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**Certificates & Clearances required:** Yes. *Vaccination Certificate* *Police clearance*

*Information on how to obtain certificates, where necessary, will be given to successful applicants.*

**Primary Supervisor:** [Dr Sally Rosengren](mailto:sally.rosengren@sydney.edu.au)

**Phone:** 0409 206 948

**Email:** sally.rosengren@sydney.edu.au

**Co-Supervisor/team:** The research team consists of Dr Rosengren, based at Sydney Local Health District, RPA Hospital, and [A/Prof Miriam Welgampola](mailto:miriam.welgampola@sydney.edu.au) a consultant neurologist at RPA Hospital.

**Project Type:** Clinical; Survey

**Project Category:** Neuroscience; Mental Health

**Skills / Attributes of a successful student:** The successful student should have excellent verbal communication skills, a willingness to approach and talk to patients and good attention to detail.

**Project Keywords:** Cognition; Vestibular function; Psychology

**Project Description:**

Our balance (vestibular) organs tell us about the movement and position of our head in space and are critical for maintaining balance and holding gaze steady during movement. In addition, vestibular signals are used by the brain to create mental representations of ourselves in space and help us with navigation and spatial memory. We are largely unaware of our vestibular system until it malfunctions, causing vertigo, dizziness and nausea. Given the importance of the vestibular system to spatial cognition, there are increasing reports of cognitive dysfunction in patients with vestibular disease. However, our understanding of the impact of vestibular disease on cognitive dysfunction is limited.

To improve our knowledge of the aspects of cognition that patients may have difficulty with, this project will investigate the perceived impact of vestibular disease on several aspects of cognition, including spatial memory, attention and navigation. For the successful student, the project will involve recruiting patients and controls (accompanying relatives) from a neuro-otology clinic waiting room, asking the participants about their subjective experience of cognitive difficulty and then administering several questionnaires. Patients will be asked whether they have difficulties in thinking, memory or concentration as a result of dizziness/vertigo and to describe any difficulties in their own words. They will then be asked to complete questionnaires about their symptoms. The student would then record the data in a spreadsheet and assist in analysis and writing for eventual publication.

The project will help us to characterise the subjective deficits in cognitive function in detail for the first time in patients with vestibular disease. The project has ethics approval.