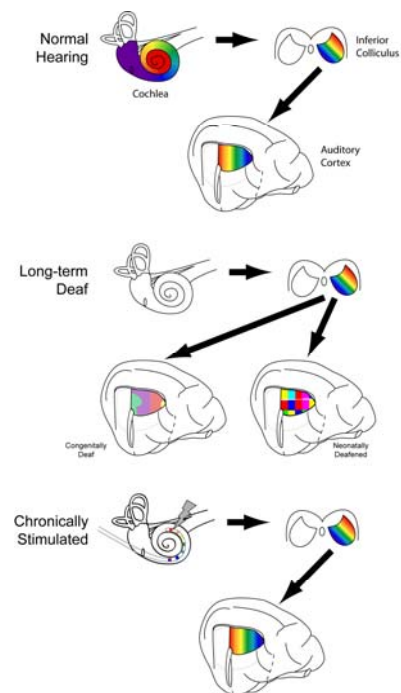


Directed Training for Improved Cochlear Implant Performance

Supervisor: Dr James Fallon, Prof Dexter Irvine and Prof Rob Shepherd

Prolonged periods of profound deafness from a young age result in the central auditory pathway developing in an abnormal way. We have previously shown that long-term cochlear implant use can ameliorate many of these deafness induced changes ([Fallon et al., 2009](#)). We are now interested in the effects of different types of training with cochlear implants on the development of the central auditory pathway. This project will develop techniques to provide directed training, in a model of cochlear implant use, aimed to further ameliorate the deafness induced changes. The effectiveness of the training will be assessed using behavioural, electrophysiological and anatomical techniques.



Techniques that you will learn:

- General surgical skills including sterile techniques
- Behavioural training
- Electrophysiological recordings
- Immunofluorescent staining
- Fluorescent and light microscopy
- Imaging and analysis
- Statistical analysis of results