

## **Cochlear Implants and Residual Hearing**

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Modern cochlear implants have proven to be such an effective treatment for profoundly deaf individuals, that patients with significant amounts of residual, low frequency, hearing are now being implanted. We have extensive experience in studying the effects of long-term cochlear implant use in a range of models of profound deafness; however, there has been little study of the effects of long-term cochlear implant use on residual hearing. Therefore, in this project we will examine the effects of long-term cochlear implant use on residual low frequency hearing using a range of electrophysiological and anatomical techniques.

Techniques that you will learn:

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