

## MASTER OF MOLECULAR BIOLOGY MASTER THESIS AT THE DEPARTMENT OF BIOMEDI- CINE

### Investigating the role of mTORC1 in the supporting cells of the cochlea

#### Project Background

In our laboratory we are interested in inner ear function with a particular focus on hearing loss. We have recently shown that mTORC2 is essential for hearing and regulates auditory sensory hair cell function and structure. Interestingly, mTORC1 disruption in sensory hair cells also accelerated age-related hearing loss. In the present project, we want to further decipher the role of mTORC1 signaling in the sensory epithelium of the inner ear, in both sensory hair cells and surrounding supporting cells. We have generated different knock-out mice as part of the project, which will serve as experimental model.

The Department of Biomedicine brings together basic and clinical scientists with the aim of developing new therapies. The state-of-the-art equipment and the multidisciplinary network of researchers offers ideal research conditions.

#### Link

<https://biomedizin.unibas.ch/en/research/research-groups/bodmer-lab/>

#### Media

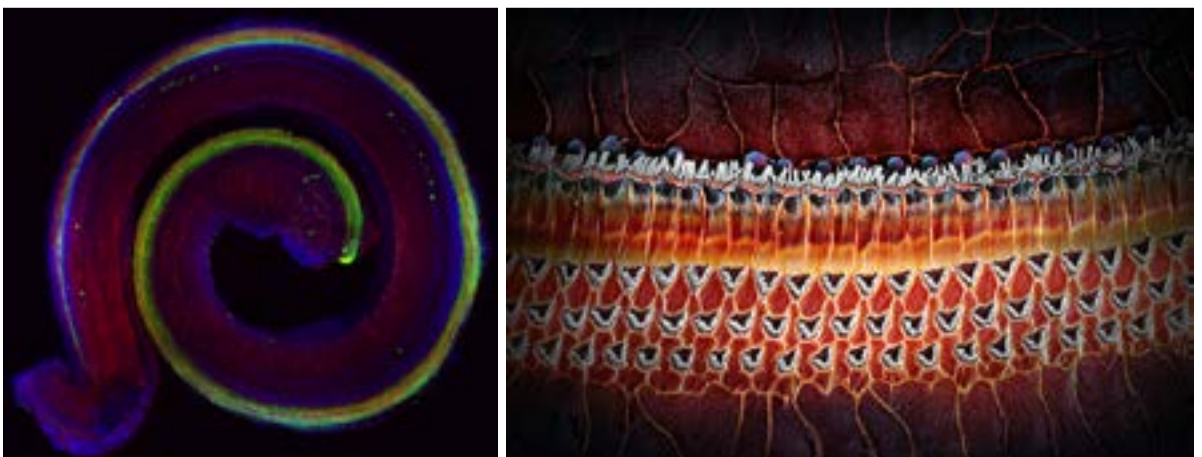
<https://www.unibas.ch/en/News-Events/News/Uni-Research/New-findings-pave-the-way-for-hearing-loss-therapies.html>

#### Supervision

Prof. Dr. med. Dr. sc. nat. Daniel Bodmer, Research group leader  
Dr. med. Dr. phil. Maurizio Cortada, Postdoc

#### Application

Questions and applications with brief motivation directly to: [maurizio.cortada@unibas.ch](mailto:maurizio.cortada@unibas.ch)



Images: Immunofluorescence image of the cochlea and colored electron microscopy image of the auditory sensory epithelium  
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