

Appendix
Proposers' short CV

- **Prof. José-Alain Sahel** is the chairman of the Institut de la Vision, a translational research centre (Quinze-Vingts National Eye Hospital, Université Pierre et Marie Curie, Inserm, CNRS) with several hundred academic scientists, clinicians and industry partners. After managing the EVI-GENORET FP6 project (60 European groups), he and Prof. Mathias Fink were awarded the ERC Synergy grant, HELMHOLTZ. Prof. Sahel chairs clinical departments at the Quinze-Vingts National Eye Hospital, the Rothschild Foundation, and a network of more than 90 European clinical trial centers in ophthalmology.
- **Prof. Robin Ali** is the Head of the Department of Genetics at the Institute of Ophthalmology, University College London. The main focus of his research is the development of gene and stem-cell therapies with the primary aim of developing novel treatments for eye disease. Over the past ten years his group has been optimising gene transfer to the eye. While conducting leading programs in stem-cell therapy, he is also engaged in a comprehensive program of work to develop gene therapy for eye disease and, in particular, for disorders affecting the retina, including inherited retinal degeneration as well as complex diseases such as those associated with retinal and choroidal neovascularisation and posterior uveitis.
- **Prof. Amir Amedi** is an internationally acclaimed brain scientist with 15 years of experience in the field of brain plasticity and multisensory integration. His main contribution to these fields is the suggestion that the brain comprises innate biases, presumably due to both local organization and connectivity, and that the function of so-called sensory cortices may be much more abstract than was previously envisaged. Prof. Amedi has developed those statements into a full-blown theory in several published papers and reviews. He has also used these insights for improving visual rehabilitation, especially from a multisensory angle combining sensory substitution with invasive approaches, the process of learning to see the new visual information and the plastic changes the brain undergoes throughout this process. He is an Associate Professor in the Department of Medical Neurobiology at the Hebrew University and the ELSC Brain Centre.
- **Prof. Alim-Louis Benabid** is a world-renowned French scientist and pioneer in the treatment of Parkinson's disease. He is Chairman of the Board of the French biomedical research centre, Clinatec and received the 2014 LaskerDeBaakey Clinical Medical Research Award from the Lasker Foundation. He is a Professor Emeritus of biophysics at Université Joseph Fourier and has focused on neurosurgical pathologies throughout his career, particularly brain tumours and movement disorders. In 2009, he founded Clinatec – The Edmond J. Safra Biomedical Research Center – at CEA in Grenoble. He won a Breakthrough Prize in Life Sciences in 2015 for his pioneering work in developing deep-brain stimulation to relieve symptoms in Parkinson's disease patients.
- **Prof. Robert MacLaren** is the Chair of Ophthalmology at the University of Oxford where he leads cutting-edge translational programs in retinal prosthetics, gene and cell therapy. He is Consultant Ophthalmologist at the Oxford Eye Hospital, Honorary Professor of Ophthalmology at the UCL Institute of Ophthalmology, Honorary Consultant Vitreoretinal Surgeon at Moorfields Eye Hospital, Faculty Member and Founding Theme Leader of the Moorfields-UCL Institute of Ophthalmology Biomedical Research Centre and an NIHR Senior Investigator. He has been a recipient of the ARVO Camras Award for Translational Research, the RP Fighting Blindness Scientist of the Year Award and the Euretina Innovation Award. Together with the University of Oxford in 2014 he co-founded Nightstar, a biotechnology company based at the Wellcome Trust in London and which has been established to develop further gene therapy treatments for patients with retinal diseases.

- **Prof. Serge Picaud** is the Head of the Department “Visual Information Processing”. He received his PhD from the University of Marseille in 1990 after visiting the Max-Planck Institute for Brain Research in Frankfurt (Germany) for almost 2 years. He then joined the Department of Molecular and Cellular Biology at the University of California Berkeley where he showed that glutamate transporters can act as presynaptic receptors with a ligand-gated channel activity (Picaud et al., 1995). Returning to Strasbourg, he obtained a Research permanent position at INSERM in 1997 while pursuing his studies on photoreceptor function and investigating in parallel the mechanisms of photoreceptor degeneration in different animal models (Frasson et al., 1999). Extending further his field of investigation, he has recently moved to visual restoration by retinal prostheses (Lorach et al., 2012; Bendali et al., 2015) or optogenetic therapy (Busskamp et al., 2010; Mace et al., 2015). He is one founder of the companies Fovea pharmaceuticals, Pixium Vision and Gensight Biologics. He published more than 97 publications and filled more than 12 patents.
- **Prof. Botond Roska** is a Group Leader at the Friedrich Miescher Institute (FMI) and Professor at the Medical Faculty of the University of Basel. His group combines physiological, molecular, imaging, viral and computational approaches to reveal the structure and function of visual circuits in the retina, thalamus and cortex. He is also interested in cell-type-specific retinal diseases and repair. His group pioneered cell-type-targeted optogenetic therapy.
- **Prof. Christine Petit** is currently the head of the Genetics and Physiology of Hearing laboratory (Inserm Unit UMRS 1120) at the Institut Pasteur. She is Professor at the Collège de France where she holds the chair of Genetics and Cellular Physiology and Professor at the Institut Pasteur. She has been awarded the European Jeantet Prize, the Unesco-L'Oréal Prize and the International Brain Prize. She pioneered research on hereditary human deafness, deciphered their pathogenesis and uncovered cellular and molecular mechanisms of acoustic signal processing by the auditory system and of protection of the system against sound harmful effects. She was awarded the ERC grant ‘hair bundle’. She is the chairwoman of the building Institut de l’Audition, coupled with the Institut de la Vision.
- **Dr. Ingeborg Hochmair-Desoyer** is the founder, CEO and CTO of the Austrian company MED-EL (medel.com), which is a leading hearing implant company with exceptionally strong research activity. Being an electrical engineer by training, she developed the first microelectronic multichannel cochlear implant. For her pioneering work she has received numerous awards, including the 2013 Lasker-DeBakey Clinical Medical Research Award.
- **Prof. Andrew King** is a Wellcome Trust Principal Research Fellow and Professor of Neurophysiology at the University of Oxford, who heads the Auditory Neuroscience Group in the Department of Physiology, Anatomy and Genetics. He is a winner of the Wellcome Prize Medal in Physiology and a Fellow of the UK Academy of Medical Sciences. His research employs an interdisciplinary approach to investigate the neural basis of auditory perception and multisensory integration. He is particularly interested in the adaptive processes that take place in the brain to allow accurate hearing to be maintained in different acoustic conditions. This involves studying both short-term changes that help to compensate for the presence of background sounds, and the longer-term plasticity induced at higher levels of the auditory system as a result of learning or by hearing loss.
- **Prof. Andrej Kral** holds a Chair in Auditory Neurophysiology at the Medical University Hannover, Germany, and is Adjunct Professor of Neuroscience and Cognition at the University of Texas at Dallas, USA. He is the director of the Dept. of Experimental Otology and co-director of the Institute of AudioNeuroTechnology at the Medical University Hannover. His interests include the neuroscience of deafness, cochlear implants,

auditory development, brain plasticity, cross-modal reorganization, binaural hearing and principles of neuroprosthetic stimulation of the brain. He has contributed to the understanding of the mechanisms of sensitive (critical) periods in cochlear implantation, cross-modal reorganization and cortical development of the brain, but also to effects of current focusing and steering in cochlear implants and electroacoustic stimulation.

- **Prof. Tobias Moser** heads the Institute of Auditory Neuroscience of the University of Goettingen, and is MaxPlanck Fellow and Group Leader at the German Primate Center. His work focuses on the physiology and pathophysiology of sound encoding and the restoration of hearing by gene replacement therapy and optogenetic stimulation. He has contributed to the understanding of structure and function of auditory synapses and has initiated the concept of auditory synaptopathy. With the ultimate aim of restoring hearing, he is pioneering optogenetic stimulation of the auditory nerve in order to improve the performance of cochlear implants.