XI ANNUAL Ri.MED SCIENTIFIC SYMPOSIUM

RESTORATION OF VISION

Recent advances in basic and clinical vision research have made ophthalmology one of the most exciting fields of technological and therapeutic innovations. This 11th annual Ri.MED Symposium will bring together renowned academic and industry experts to discuss recent breakthroughs in vision restoration therapies. The symposium will provide an overview of the latest advances in gene therapy, neuroprotection, visual prostheses, and stem cell treatments for currently incurable eye diseases.

Special emphasis will be given to novel pathophysiological mechanisms and therapeutic targets for age-related macular degeneration.

We are hopeful that this symposium, which brings together some of the best and brightest minds in vision restoration, will catalyze new collaborations that advance integrative multidisciplinary research and expedites the evolution of laboratory discoveries into new diagnostic tools, medical devices, and therapies for patients.

Jointly organized by

FONDAZIONE Ri.MED

Ri.MED Foundation was founded by the Italian Government as an international public-private partnership, with the mission to develop and translate the progress of biomedical research into patient care and to have a socio-economic impact in southern Italy.

Thanks to its strategic alliances with its founding partners and with ISMETT IRCCS, Ri.MED Foundation is focused on advancing drug discovery, regenerative medicine and tissue engineering programs towards preclinical development.

UNIVERSITY OF PITTSBURGH

The University of Pittsburgh, one of the top 10 recipients of research support from the US National Institutes of Health (NIH), is a leader in cutting-edge biomedical research that better the human condition and advances the fundamental understanding of medical science. Among the University’s premier specialized research centers are those within the Department of Ophthalmology and the Ophthalmology and Visual Sciences Research Center, which, along with the UPMC Eye Center, share the goal of understanding the visual system and improving quality of life through the preservation and restoration of vision.

INSTITUT DE LA VISION

The Institut de la Vision is one of the most important research centers in Europe on eye diseases. It brings together in a single building researchers, clinicians and industrial partners in order to discover, test and develop treatments and technological innovations for the benefit of visually impaired patients.

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**PROGRAM**

**SESSION 1: REGENERATIVE THERAPIES FOR RESTORING VISION**

Welcome and Introduction

**SESSION 2: VISUAL INFORMATION PROCESSING AND VISUAL PROSTHESSES**

Serge Picaud, Ph.D.
Visual Restoration by Retinal Prostheses and Optogenetic Therapy: Preclinical Validation in Non-Human Primates

Matthew A. Smith, Ph.D.
A Brain-Computer Interface for Visual Attention

**SESSION 3: AGE-RELATED MACULAR DEGENERATION**

Floriano Sennlaub, M.D., Ph.D.
The Family-Related Role of Chronic Inflammation in Age-Related Macular Degeneration

Michel Paques, M.D., Ph.D.
Cellular-Scale Time Lapse In Vivo Imaging in the Human Eye

Chiara M. Eandi, M.D., Ph.D.
Biomarkers and New Treatments for AMD

**SESSION 4: DEGENERATIVE EYE DISEASES**

Debasish Sinha, M.S., Ph.D.
The Crucial Impact of Lysosomes in Age-Related Macular Degeneration

Gian Marco Tosí, M.D., Ph.D.
Age-Related Macular Degeneration: Biomarkers in the Aqueous Humor

Stephen Moss, Ph.D.
Novel Approaches to the Treatment of Retinal Vascular Disease

**SESSION 5: CORNEA**

Flavio Mantelli, M.D., Ph.D.
Structural And Cellular-Cycle In Vivo Imaging in the Human Eye

Vishal Jhanji, M.D.
The Pathogenic Role of Chronic Inflammation in Age-Related Macular Degeneration

**COFFEE BREAK**

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**FINAL DISCUSSION & SYMPOSIUM CONCLUSION**

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**Friday, 27 October**

Symposium Registration

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**FINAL DISCUSSION & SYMPOSIUM CONCLUSION**

**Speakers**

Alberto Auriolli, M.D.
Principal Investigator, TIGEM; Molecular Therapy Program Coordinator, TIGEM; Head of Vector Core, TIGEM; Associate Professor of Medical Genetics, Department of Translational Medicine, University of Naples Federico II.

Fabio Benfenati, M.D.
Director, Center for Synaptic Neuroscience and Technology; Italian Institute of Technology; Professor of Neurophysiology and Head, Laboratory of Molecular and Cellular Neurouphysiology, University of Genova Medical School.

Chiara M. Eandi, M.D., Ph.D.
Professor of Ophthalmology, Department of Surgical Sciences, Eye Clinic, University of Torino.

Olivier Goureau, Ph.D.
Group Leader, Retinal development and repair: use of pluripotent stem cells, Institut de la Vision.

Bruno Griddelli, M.D.
Vice-President, Ri.MED Foundation; Executive Vice-President, UPMC International; Director, UPMC Italy; Professor of Surgery, University of Pittsburgh.

Vishal Jhanji, M.D.
Professor of Ophthalmology, University of Pittsburgh School of Medicine.

Arthur S. Levine, M.D.
Professor of Ophthalmology, Group Leader, Retinal Degeneration and Microvascular Research, Institute of the Vision.

Alessandro Padova, Ph.D.
President, Ri.MED Foundation; Stacy J. Goodman Professor of Surgery; Distnguished Professor of Medicine, Professor of Biomedical Engineering, and Technology, Italian Institute of Technology; Professor of Cell Biology, University of Modena and Reggio Emilia.

Serge Picaud, Ph.D.
Group Leader, Visual Information Processing, Institute of the Vision.

Camillo Ricordi, M.D.
Professor of Ophthalmology, University of Pittsburgh School of Medicine; Director, UPMC Eye and Ear Foundation Professor and Chair of Ophthalmology, University of Pittsburgh School of Medicine; Distinguished Professor of Surgery, University of Pittsburgh; Executive Vice President, UPMC International; Vice President, Ri.MED Foundation; CEO, Ri.MED Foundation.

Masayo Takahashi, M.D., Ph.D.
Director, Cell Therapy Program; Center for Regenerative Medicine; Stefano Farina, Professor of Cell Biology, University of Modena and Reggio Emilia.

**Speakers**

Masayo Takahashi, M.D., Ph.D.
Project Leader, RIKEN Center for Developmental Biology; Kobe City Medical Center General Hospital.

Gian Marco Tosì, M.D., Ph.D.
Ophthalmology Unit, Department of Medicine, Surgery and Neuroscience, University of Siena.

Alessandro Padova, Ph.D.
CEO, Ri.MED Foundation.

Michel Paques, M.D., Ph.D.
Professor of Ophthalmology, Group Leader, Retinal Degeneration and Microvascular Research, Institute of the Vision.

Grazia Pellegrini, Ph.D.
Professor of Ophthalmology, Department of Translational Medicine, University of Naples Federico II.

Flavio Mantelli, M.D., Ph.D.
Professor of Ophthalmology, University of Pittsburgh School of Medicine; Director, Diabetes Research Institute and Technology, Italian Institute of Technology; Associate Professor of Medicine, University of Modena and Reggio Emilia.

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