

PERSONAL STATEMENT DR GERRIT R.J. MELLES

Dr. Melles is a cornea specialist and founder of the Netherlands Institute for Innovative Ocular Surgery (NIIOS), the Melles Cornea Clinic Rotterdam, and Amnitrans EyeBank Rotterdam. His clinical work focuses on the management of corneal disorders and he is actively involved in research and development of ophthalmic surgical techniques. He has invented and is refining several advanced lamellar keratoplasty techniques, among others Descemet membrane endothelial keratoplasty (DMEK) and Bowman layer transplantation. Furthermore, he has developed instruments and medical devices required for the invented techniques, pioneered the use of staining solutions such as VisionBlue[®], MembraneBlue[®] for ophthalmic surgeries and developed the Surgicube[®] for performing ophthalmic surgeries under sterile conditions in any clinical setting. In 2016 he founded NIIOS-USA, a NIIOS branch office that offers post-academic education in advanced lamellar keratoplasty and works with leading American partners to advance our R&D goals. In 2020, he developed in collaboration with the UCSD/CMRR the e-device, an ophthalmic device for slit-lamp self-imaging by the patient which allows remote eye exams.

ABOUT NIIOS

NIIOS is an independent organization that furthers innovation in ophthalmic surgery. The primary focus is developing and refining corneal transplantation techniques for diseases such as Fuchs endothelial dystrophy, keratoconus and bullous keratopathy. Specialists worldwide are increasingly adopting these NIIOS-pioneered techniques.

NIIOS comprises four organizations that work closely together and complement each other:

- **NIIOS Research & Development** – develops and refines corneal transplantation techniques that are minimally invasive.
- **NIIOS Academy** – trains surgeons and technicians in NIIOS techniques through fellowships, courses, symposia, conference lectures and more.
- **Amnitrans EyeBank Rotterdam** – recovers corneal tissue from donors, prepares it and then delivers it to medical specialists. We also develop our own innovative tissue preparation techniques.
- **Melles Cornea Clinic Rotterdam** – provides ophthalmic care to patients with primarily corneal disorders based on the techniques developed at NIIOS.

Together, these four organizations cover the whole corneal transplant chain, from the donor tissue at the eye bank to the patient. The short lines of communication inspire us to innovate and improve cornea transplant procedures. NIIOS is the only organization in the world that has these four disciplines in-house and under one roof.

WORLDWIDE IMPACT

Since its founding in 2000, an estimated >20.000.000 people around the world have been successfully treated with NIIOS-developed surgeries and products. More than 900 surgeons were trained in our wet-lab courses.

AWARDS AND PRIZES

Dr. Melles has received several awards in recognition of his contribution to ophthalmology. Dr. Melles is the 2017 Helen Keller Award Laureate. In 2019, he received the Dutch Tilanus Medal, which is only awarded every 10 years to persons who made an extraordinary contribution to medical science and surgery. In 2020, Dr. Melles received the Sir Harold Ridley Distinguished Visiting Professor Award at the Hamilton Eye Institute at the University of Tennessee Health Science Center. In October 2021, he was awarded and handed out the Bressler Prize at the Lighthouse Guild in New York. In 2022, he received two awards in September. First in Lisbon, Portugal, Dr. Melles was given the world's largest award in the field of vision, which recognizes fundamental work on the treatment of diseases of the cornea: the Champalimaud Vision Award. Second in Chicago, US, he gave the prestigious Jackson Memorial Lecture at the opening session of the American Academy of Ophthalmology. Dr. Melles shared his thoughts and vision on "How would nature see our corneal triumphs?".

PUBLICATIONS AND PRESENTATIONS

Dr. Melles has authored more than 300 peer-reviewed scientific publications and book chapters, as well as more than 800 oral presentations and lectures at ophthalmic meetings.

BRIEF OVERVIEW EDUCATION AND POSITIONS

Dr. Melles received his medical degree at the Medical School, University of Leyden, The Netherlands. During his studies he was also a research fellow at Sharp Cabrillo Hospital, San Diego, U.S.A. (head: P.S. Binder, MD, MS). He completed his residency in Ophthalmology at the University of Nijmegen, The Netherlands (head: A.F. Deutman, MD, PhD), where he also defended his PhD thesis in 1995 titled "Keratotomy incision dimensions and wound healing". After being a corneal fellow and staff member at the Rotterdam Eye Hospital, The Netherlands, he founded the Netherlands Institute for Innovative Ocular Surgery (NIIOS) in the year 2000.

OTHER

In his free time, Dr. Melles is an amateur composer and founded the Melles Classical Music Foundation (MCMF), that organizes concerts with the MCMF orchestra directed by Martin Haunhorst, concert master of a German orchestra. The Melles Classical Music Foundation (MCMF) was initiated after Mr. Haunhorst and Dr. Melles met each other in 2010. In that year, Mr. Haunhorst received bilateral DMEK in the Melles Cornea Clinic Rotterdam. Their mutual interest in classical music initially led to several projects, for which the music was written by Dr. Melles and the performances were directed by Mr. Haunhorst. For the solo parts during the concerts, preferably young, starting musicians (< 21 years of age) are invited, to enable them to get public exposure and to gain experience in playing with an orchestra.