RUHR-UNIVERSITÄT BOCHUM

RUB

IGSN - SYMPOSIUM

Monday, March 23rd 2026 • 15.00 (3 pm) **FNO – 01 / 117**

Unveiling Insights into Glaucoma: Pathology, Cell Death Mechanisms, and Novel Therapeutic Strategies

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Clinic for Ophthalmology and Optometry, Johannes Kepler University, Linz, Austria

Personalized Glaucoma Surgery: From Bench to Bedside (and back)

In this talk, current concepts and research projects on the regulation of intraocular pressure will be presented. Intraocular pressure is the most important risk factor for glaucoma, yet its regulation is poorly understood. IOP regulation is often modelled using Ohm's law in simplified in-vitro models. Recently, we could demonstrate enhancement of common models: By incorporating the spatial dimension of the eye and treating outflow structures as parallel resistors, the outcome of surgical glaucoma treatment can be improved in-vitro. Furthermore, the hydrostatic simulation of so-called distal outflow resistance (i.e. downstream of Schlemm's canal) has the potential to make in-vitro models resemble the in-vivo situation more closely. The in-vivo application of those principles, however, is challenging as invisible fluids need to be imaged and the pressures and flow in the distal outflow pathways are difficult to assess.

Host:

WANYUN QIN

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Guests are welcome!