



11th Optic Nerve Meeting
12-14 December 2023
Obergurgl, Austria

20 minute slot: 12 minute talk and 8 minute discussion
10 minute slot: 6 minute talk and 4 minute discussion

Tuesday 12th December

8:30 - 8:50 Jonathan Keith & Franz *Welcome and Introduction*

Session 1: Axon Degeneration

Chairs: Keith Martin, Franz Grus

8:50 - 9:10 Nick Marsh Armstrong Optineurin mutations effect on transcellular degradation of axonal mitochondria
9:10 - 9:30 Lukas Neukomm Wallerian degeneration in Drosophila
9:30 - 9:50 Lies De Groef Preventing optic nerve degeneration in Wolfram syndrome: proof-of-concept study of base editing in mouse and iPSC models
9:50 - 10:00 Caroline Manicam Cell Signalling and (patho)physiological implications of ocular neurovascular adaptive mechanisms

Morning Tea

Session 2: Glia

Chairs: Elena Vecchio, Andras Lakatos

10:30 - 10:50 Gloria Cimaglia Microglia inhibition in glaucoma – be careful what you wish for
10:50 - 11:10 Andras Lakatos Loss of astrocyte function in neurodegeneration – novel aspects emerging from 2D/3D human models
11:10 - 11:30 Tatjana Jakobs Astrocyte-derived factors for neuroprotection in age and glaucoma
11:30 - 11:50 Daniel Sun Optic nerve astrocytes exhibit a region-specific and temporally distinct response to ocular hypertension
11:50 - 12:00 Xandra Pereira Müller glia as neuroprotector in the retina

Lunch Break

Session 3: Physiology

Chairs: Tom Reh, Sara Thomasy

17:30 - 17:50 Chris Girkin Impact of acute and prolonged IOP elevation in the living human eye
17:50 - 18:10 Crawford Downs Intraocular and cerebrospinal pressure dynamics: Implications for ocular health and disease
18:10 - 18:30 Leo Schmetterer Structure-function relationships
18:30 - 18:50 Luis Alarcon-Martinez Interpericyte tunneling nanotubes as regulators of the blood flow distribution in the retina and optic nerve head
18:50 - 19:00 Steffi Jonk Metabolic analysis of mouse sarcopenic skeletal muscle identifies new strategies to increase lifespan in C. elegans

Wednesday 13th December

Session 4: Repair & Replacement

Chairs: Jonathan Crowston, Claire Mitchell

8:30 - 8:50 Ben Siver Towards RGC replacement for treating glaucoma
8:50 - 9:10 Richard Eva ER and Golgi as targets for repair and protection
9:10 - 9:30 Claire Mitchell Piezo channels, pressure and inflammation in RGCs and glia
9:30 - 9:40 James Tribble B-vitamin treatment provides neuroprotection in glaucoma by mitigating homocysteine and one-carbon metabolism disruption
9:40 - 9:50 Christian van Oterendorp Mechanosensitivity of retinal ganglion cells

Group Photo + Morning Tea

Session 5: Regeneration

Chairs: Nick Marsh-Armstrong, Michael Kapiloff

10:30 - 10:50 Tom Reh Reprogramming Muller glia to regenerate ganglion cells: improving differentiation and integration
10:50 - 11:10 Michel Cayouette Transcriptional control of contralateral retinal ganglion cell projections
11:10 - 11:30 Britta Eickholt Coordinating Axon Growth with Axon Branching
11:30 - 11:50 Steven Bergmans Atypical response to optic nerve injury in a unique fast ageing animal model
11:50 - 12:10 Gerhard Garhofer Pearls for early phase neuroprotection studies

Lunch Break

Session 6: Ageing and Degeneration

Chairs: Marcela Votruba, Michel Cayouette

17:30 - 17:50 Oliver Gramlich Antibody-mediated optic neuropathies
17:50 - 18:10 David Mackey Assessing the risk of vision loss in LHON mutation carriers for enrollment in prevention trials
18:10 - 18:30 Andrea Loreto NMN in axon degeneration and ageing
18:30 - 18:40 Andrew White Angiotensin receptor blockers confer neuroprotection in a rodent optic nerve crush model
18:40 - 18:50 Melissa Jöe Development of neuroprotective small molecular drugs targeting NMNAT2

Thursday 14th December

Session 7: Neuroprotection

Chairs: Britta Eickholt, Katharina Bell

8:30 - 8:50 Pete Williams NMNAT2 is a druggable target to increase neuronal NAD
8:50 - 9:10 Len Levin Modeling Mechanisms for Neuroprotective Phosphine-Boranes
9:10 - 9:30 Michael Kapiloff CaMKII – RGC neuroprotection and axon regeneration
9:30 - 9:50 Rossella Russo Modulation of autophagy: a potential strategy for RGC neuroprotection in glaucoma
9:50 - 10:00 Myungjin Kim Dendritic pruning versus soma loss in a mouse glaucoma model

Morning Tea

Session 8: Super Models & Crowded Spaces

Chairs: Andrea Loreto, Lies De Groef

10:30 - 10:50 Elena Vecchio The effect of the whale Müller glia on the RGC axonal regeneration
10:50 - 11:10 Sara Thomasy Update on a Nonhuman Primate Model of Autosomal Dominant Optic Atrophy
11:10 - 11:30 Yang Hu Glaucoma models and beyond
11:30 - 11:50 Jesse Gale The most geological of optic neuropathies
11:50 - 12:00 Anne Rombaut Intravitreal injection of MPTP leads to retinal ganglion cell death in the absence of a Parkinson's disease-like phenotype

Lunch Break

Session 9: Protecting the CNS

Chairs: Leo Schmetterer, Len Levin

17:30 - 17:50 Volker Patzel Design and delivery of functional RNA for treatment of optic neuropathies
17:50 - 18:10 Jeff Goldberg Update on clinical trials in glaucoma neuroprotection
18:10 - 18:30 Christian Behl Rethinking Alzheimer's disease research
18:30 - 18:50 Dan Milea Through the optic nerve into the brain using AI