



# 9th Optic Nerve Meeting

10-12 December 2019

Obergurgl, Austria

## AGENDA

### Tuesday 10 December

<b>8:30 - 8:40</b>	Jonathan Crowston, Franz Grus & Keith Martin <b>Session I: Astrocytes</b> <b>Moderators: Andras Lakatos &amp; Elena Vecino</b>	<i>Welcome and Introduction</i>
<b>8:40 - 8:50</b>	Andras Lakatos	<i>Is there a point in studying interspecies differences in astrocyte biology and pathology?</i>
<b>8:50 - 9:10</b>	Lea Wenger	<i>New tools for investigating human astrocyte diversity and reactivity</i>
<b>9:10 - 9:30</b>	Colleen Limegrover	<i>Astrocyte responses in human traumatic brain injury</i>
<b>9:30 - 9:50</b>	David Krizaj	<i>Neuronal and glial mechanotransduction: from retinal tension to dysfunction</i>
<b>9:50 - 10:00</b>	Eirini Kokkali	<i>When is a control eye not a control eye? Reactive microglia persist throughout the control contralateral visual pathway in experimental glaucoma</i>

### Morning Tea

### Session II: Bioenergetics and Neuron-Glial Interactions

**Moderators: Bob Casson & Pete Williams**

<b>10:30 - 10:50</b>	Pete Williams	<i>From form to function: the effect of nicotinamide on retinal ganglion cell metabolism and mitochondria</i>
<b>10:50 - 11:10</b>	Bob Casson	<i>Gene therapy with neuroglobin in experimental glaucoma</i>
<b>11:10 - 11:30</b>	Flora Hui	<i>NAM and functional recovery in human glaucoma</i>
<b>11:30 - 11:50</b>	Elena Vecino	<i>The whale's RGCs: A long way to go</i>
<b>11:50 - 12:00</b>	Oliver Gramlich	<i>Targeting the cholesterol efflux transporter 1 ameliorates optic neuritis in EAE model</i>

### Lunch Break

### Session III: Bioenergetics II

**Moderators: Peter van Wijngaarden & David Krizaj**

<b>17:30 - 17:50</b>	Tom McWilliams	<i>Landscapes of mitochondrial destruction in-vivo</i>
<b>17:50 - 18:10</b>	James Tribble	<i>Targeting Nmnats for neuroprotection in glaucoma</i>
<b>18:10 - 18:30</b>	Marcela Votruba	<i>Mitochondrial morphology drives bioenergetics defects in RGCs in mitochondrial optic neuropathies</i>
<b>18:30 - 18:50</b>	Jeff Goldberg	<i>Neural activity in retinal development and angiogenesis</i>
<b>18:50 - 19:00</b>	Lies De Groef	<i>Retinal phenotyping of mouse models of Alzheimer's disease</i>

### Wednesday 11 December

### Session IV: Disease Mechanisms, Therapeutics and Detection

**Moderators: Franz Grus & Dietmar Fischer**

<b>8:30 - 8:50</b>	Evan Reid	<i>Understanding cellular mechanisms of axonopathy in hereditary spastic paraplegia</i>
<b>8:50 - 9:10</b>	Dietmar Fischer	<i>New strategies to promote optic nerve regeneration</i>
<b>9:10 - 9:30</b>	Alice Pébay	<i>Modelling complex diseases with human pluripotent stem cells</i>
<b>9:30 - 9:50</b>	Peter van Wijngaarden	<i>Hyperspectral retinal imaging in Alzheimer's disease</i>
<b>9:50 - 10:00</b>	Wolf Lagrèze	<i>Effect of high-dose intravenous erythropoietin in optic neuritis as a clinically isolated syndrome</i>

### Morning Tea

### Session V: Retinal Response to Injury

**Moderators: Bryan Jones & Jonathan Crowston**

<b>10:30 - 10:50</b>	Bryan Jones	<i>Altered bipolar cell input to ganglion cells in retinal degeneration</i>
<b>10:50 - 11:10</b>	Romain Cartoni	<i>Using mitochondria to promote neuronal repair</i>
<b>11:10 - 11:30</b>	James Morgan	<i>Early changes in human glaucoma</i>
<b>11:30 - 11:50</b>	Mike Kapiloff	<i>cAMP compartmentation, mAKAP<math>\beta</math> signalosomes, and retinal ganglion cell neuroprotection</i>
<b>11:50 - 12:00</b>	Henrik Tonner	<i>Intravitreal injection of an anti-HMGB1 antibody attenuates neurodegeneration in a glaucoma animal model</i>

### Lunch Break

### Session VI: Gene Therapy

**Moderators: Keith Martin & Jeff Goldberg**

<b>17:30 - 17:50</b>	Andy Osborne	<i>Gene therapy - protecting retinal ganglion cells via TrkB signalling</i>
<b>17:50 - 18:10</b>	Dominik Fischer	<i>Retinal gene therapy - lessons from treating RPE, rods and cones</i>
<b>18:10 - 18:30</b>	Veselina Petrova	<i>Protrudin enhances CNS axon regeneration through multiple novel pathways</i>
<b>18:30 - 18:40</b>	Discussion	

### Thursday 12 December

### Session VII: Autophagy and -Omics

**Moderators: Christian Behl & Katharina Bell**

<b>8:30 - 8:50</b>	Christian Behl	<i>Autophagy response in chronic neuronal oxidative stress</i>
<b>8:50 - 9:10</b>	Katharina Bell	<i>Age related changes of rgc damage in an autophagy impaired model</i>
<b>9:10 - 9:30</b>	Moritz Helmstaedter	<i>Connectomics in brain diseases</i>
<b>9:30 - 9:50</b>	Julie Lefebvre	<i>Cellular and molecular strategies for retinal neuron wiring</i>
<b>9:50 - 10:00</b>	Carsten Schmelter	<i>Synthetic immunopeptides as new strategy in glaucoma therapy</i>

### Morning Tea

### Session VIII: RGC Development

**Moderators: Ed Levine**

<b>10:30 - 10:50</b>	Ed Levine	<i>Using single-cell analysis to understand how Lhx2 controls inner retinal cell production</i>
<b>10:50 - 11:10</b>	Michel Cayouette	<i>New players in the transcriptional regulation of retinal ganglion cell fate specification</i>
<b>11:10 - 11:30</b>	Anna La Torre	<i>MicroRNAs in retinal ganglion cell production and survival</i>
<b>11:30 - 11:50</b>	Tom Reh	<i>Restoring the inner retina: endogenous or exogenous stem cell approaches</i>
<b>11:50 - 12:00</b>	Discussion	

### Lunch Break

### Session IX: Regeneration, Repair and Plasticity

**Moderators: James Morgan & Richard Eva**

<b>17:30 - 17:50</b>	Richard Eva	<i>PI3 kinase delta and axonal regeneration</i>
<b>17:50 - 18:10</b>	Britta Eickholt	<i>Essential role of the actin cytoskeleton during astrogliosis and scar formation</i>
<b>18:10 - 18:30</b>	Ning Tian	<i>A dual neurotransmitter releasing bipolar cell participates in the homeostatic regulation of RGC synaptic connections</i>
<b>18:30 - 18:40</b>	Philipp Albrecht	<i>Protective effects of 4-Aminopyridine in experimental optic neuritis, optic nerve crush and multiple sclerosis</i>
<b>18:40 - 19:00</b>	Discussion and Wrap-Up of 2019 Meeting	