# AGENDA

## Tuesday 12 December

### Session I: Stem Cell Models

- **Moderators: Alice Pebay & Hani Levkovitch-Verbin**
- **Jonathan Crowston, Franz Grus & Keith Martin**
  - Welcome and introduction
- **8:30 - 8:50**
  - Jonathan Crowston, Franz Grus & Keith Martin
  - Diverse microglia in Alzheimer’s disease
- **8:50 - 9:10**
  - Alice Pebay
  - Studying neurodegeneration using iPSCs
- **9:10 - 9:30**
  - Markus Kuehn
  - Adaptive transfer of lymphocytes from human glaucoma patients causes loss of retinal ganglion cells in NOD/scid gamma mice
- **9:30 - 9:50**
  - Katharina Bell
  - Fc Receptors influence ab uptake into Müller cells

### Morning Tea

### Session II: Bioenergetics

- **Moderators: Bob Casson & Colm O’Brien**
- **Ian Trounce & Meagan McManus**
  - Amyloid precursor protein mediate protection from rotenone toxicity in-vitro and in the retina
- **10:30 - 10:50**
  - Tony Khawaja
  - Mitochondrial genetic variation and its implications for glaucoma
- **10:50 - 11:10**
  - Bob Casson
  - Bioenergetic neuprotection in glaucoma
- **11:10 - 11:30**
  - Colm O’Brien
  - Bioenergetics of lamina cribrosa fibroblasts

### Lunch Break

## Wednesday 13 December

### Session III: Mitochondrial Dysfunction and Turnover

- **Moderators: Ian Trounce & Meagan McManus**
- **Guillermo Lopez-Domenech**
  - Importance of mitochondrial transport and distribution for the maintenance of complex dendritic morphologies
- **17:30 - 17:50**
  - Meagan McManus
  - mtDNA mutation, mitophagy and inflammation
- **17:50 - 18:10**
  - Beatriz Villarreal Zori
  - Mitophagy in RGCs
- **18:10 - 18:30**
  - Len Levin
  - Redox-dependent signaling in axonal degeneration
- **18:30 - 18:50**
  - Sebastian Funke
  - MeCP2 association with glaucoma and protein interactions in the retina

### Session IV: Neuroinflammation

- **Moderators: Franz Grus & Christian Behl**
- **Christian Behl**
  - BAG3-mediated selective autophagy in adaptation and disease
- **8:30 - 8:50**
  - Sian Henson
  - Inflammation and t-cell metabolism
- **8:50 - 9:10**
  - Dietmar Fischer
  - Microglia are irrelevant for neuronal degeneration and axon regeneration after acute injury
- **9:10 - 9:30**
  - Vanessa Bergen
  - Immunoproteomic profiling: identification of novel biomarker candidates in glaucoma
- **9:30 - 9:40**
  - Ely Lefevere
  - MMP-3 mediates retinal inflammation and provides neuroprotection after optic nerve injury

### Morning Tea

### Session V: Glia-Axon Interactions

- **Moderators: Ragnhildur Thora Karadottir & Robin Franklin**
- **Minam Kokko**
  - Mitochondrial function in Müller cells
- **17:30 - 17:50**
  - Ragnhildur Thora Karadottir
  - Regulation of myelination by neuronal activity
- **17:50 - 18:10**
  - Andras Lakatos
  - Neuronal help-me signals in astrocyte-mediated repair and neurodegeneration
- **18:10 - 18:30**
  - Oliver Gramlich
  - Function of IL-33/ST2 signaling in glaucoma
- **18:30 - 18:50**
  - Carsten Schmelter
  - Discovery and targeted MS-based strategies for the identification of glaucoma-related IgG V domain peptides

### Lunch Break

## Thursday 14 December

### Session VII: Ageing and Senescence

- **Moderators: Jonathan Crowston & Peter van Wijngaarden**
- **Pete Williams**
  - Ageing, neuronal metabolism and mitochondria in glaucoma
- **8:30 - 8:50**
  - John Fingert
  - TBK1 and normal tension glaucoma
- **8:50 - 9:10**
  - Giovanna Mallucci
  - RBM3 and synapse regeneration in neurodegeneration
- **9:10 - 9:30**
  - Robin Franklin
  - Adult CNS progenitors, myelin and ageing

### Morning Tea

### Session VIII: Heavy Metals, Excitability and Mechanosensitivity

- **Moderators: Steve Petrou & Peter Crouch**
- **Steve Petrou & Peter Crouch**
  - ASO therapy in epileptic encephalopathy
- **8:30 - 8:50**
  - Peter Crouch
  - Copper and its biochemical and therapeutic role in amyotrophic lateral sclerosis
- **8:50 - 9:10**
  - Rajatika Jakobs
  - Gene expression and function in reactive astrocytes
- **9:10 - 9:30**
  - Craig Pearson
  - Modifying chondroitin sulphation enhances retinal ganglion cell axon regeneration in the mouse optic nerve
- **9:30 - 9:50**
  - Kota Sato
  - The neuroprotective effect of hesperidin in NMDA-induced retinal injury

### Lunch Break

### Session IX: Axonal Transport

- **Moderators: Keith Martin & Richard Eva**
- **Richard Eva**
  - Targeting PI3 kinase to promote axon transport and regeneration in the adult CNS
- **17:30 - 17:50**
  - Geoff Norris
  - Molecular mechanism of microglia-mediated clearance of neuronal debris after optic nerve crush
- **17:50 - 18:10**
  - Peter van Wijngaarden
  - Lactate transport in the optic nerve
- **18:10 - 18:30**
  - Herbert Reitsamer
  - What I want from a non-IOP lowering glaucoma treatment
- **18:30 - 19:00**
  - Keith Martin, Franz Grus and Jonathan Crowston
  - The final act