PROGRAM SCHEDULE

Session 1

Carol Toris, Vikas Gulati: Age Matters - effects of aging on ocular physiology

Anat Galor: Aging and dry eye

Vikas Gulati and Carol Toris: Effects of Growth and Puberty on Aqueous Humor Dynamics and Drug Response

Melissa Bailey: Ciliary muscle movement and age

Massimo A Fazio: Scleral Stiffness Changes with Age and Race in Human Eyes

Lejla Vajzovoc: Human foveal development

Session 2

Oliver Zeitz, Peter Kador: Clinical meets pre-clinical: Translational Research

Casey Kopczynski: Discovery and development of AR-13324, a first-in-class drug for glaucoma

Nanna Junker: Therapeutic innovation in diabetic retinopathy: Developing predictive drug discovery approaches

Guido Hartmann: Characterisation of a crossmab antibody targeting VEGF and Ang2 for neovascular diseases of the eye

Peter Kador: Nutraceutical Optixcare Eye Health Ameliorates Ocular Oxidative Stress and Maintains Tear Flow

Oliver Zeitz: Search for novel endpoints in retinology: Public-private partnership in the IMI-2 program

Carol Toris: Consensus statements to aid in the design and implementation of translational research studies of glaucoma

Session 3

Malinda Fitzgerald, Janet Blanks: AMD: clinical, pharmacological and basic science

Zsolt Ablonczy: The molecular composition of Bruch's membrane predicts aging and age-related macular degeneration

Janet Blanks: Novel Treatment for Neovascularization in Retinal Disease

Baerbel Rohrer: Local production of the alternative pathway component, factor B, is sufficient to promote laser-induced choroidal neovascularization

Matthew Campbell: Tolerability and efficacy of IL-18 in a non-human primate model of neovascular AMD

Goldis Malek: Investigating the therapeutic potential of targeting the aryl hydrocarbon receptor (AhR) in age-related macular degeneration (AMD)

Session 4

Iok-Hou Pang, Dongfeng Chen: Endogenous and exogenous neuroprotectors for retina

Kip Connor: Innate Immune Mediators Facilitate Photoreceptor Cell Death in Retinal Detachment

Dong Feng Chen: A novel binding protein of insulin-like growth factor for optic nerve injury

Iok-Hou Pang: Involvement of caspase-7 in optic nerve crush-induced retinal ganglion cell death

Dennis S Rice & Nicolas G Bazan: Deletion of adiponectin receptor 1 causes photoreceptor dysfunction and degeneration

Hongli Wu: Novel Strategy for RPE Protection: Glutaredoxin-Targeting Natural Products

Petr Baranov: A novel neuroprotective small molecule for GDNF induction and photoreceptor rescue

PROGRAM SCHEDULE

Session 5

Chris McGahan, Tom Yorio: Young investigators session

Teresia Carreon: Direct interaction of cochlin with mechanosensing channel TREK-1 in intraocular pressure regulation

Cula Dautriche: Evaluation of a Bioengineered Conventional Outflow Tract as a Model for High-throughput Glaucoma Drug Screening

Mike Dismuke: Trabecular Meshwork Exosomes: Role in Cellular Uptake of ECM

Karen Torrejon: Pharmacological Responsive Bioengineered 3D Human Trabecular Meshwork

Rania Sulaiman: An anti-angiogenic small molecule therapy for choroidal neovascularization

Sumana Chintalapudi: Identification of NA3 glycan as a potential candidate for atrophic AMD by promoting the development of photoreceptor outer segment assembly via receptor ligation in Muller cells

Session 6

Pedram Hamrah, Beatrice Peebo: Utility of intravital microscopy for ocular disease

Rudolff Guthoff: Nerve fiber density in the corneal subbasal plexus, its role in the follow-up of diabetic neuropathy

Pedram Hamrah: Utility of in vivo confocal microscopy-based imaging endpoints for the assessment of ocular surface inflammation

Edoardo Villani: In vivo confocal microscopy of the ocular surface in dry eye: over the cornea

Neil Lagali: Towards development of improved anti-angiogenic therapies: insights from in vivo confocal microscopy in the murine cornea

Beatrice Peebo: Imaging models for assessing angiogenesis and evaluating anti-angiogenic therapies

Session 7

Rachel Caspi, Heping Xu: Ocular Immunology and disease

Daniel Saban: Immune responses at the ocular surface

Rachel Caspi: Ocular Autoimmunity – a collusion of development and environment

Shikhar Mehrotra: T Cells in Ocular Dysfunction: Lessons From a Vitiligo Prone Novel Transgenic Mouse

Heping Xu: Immunology of retinal degenerative disease

Session 8

Ash Jayagopal, Shusheng Wang: RNA-directed therapies for retinal diseases

Alfred Lewin: RNA Based Gene Therapy for Autosomal Dominant Retinitis Pigmentosa

Shunbin Xu: miRNAs in diabetic retinopathy and treatment

Ashwath Jayagopal: Targeted Nanocarriers for Therapy of Retinal Vascular Disease

Shusheng Wang: Noncoding RNAs in ocular angiogenesis

Xavier Gérard: AON intravitreal injections to manipulate splicing in retinal cells

PROGRAM SCHEDULE

Session 9

Uday Kompella, Cheryl Rowe-Rendleman: New advances in ocular drug delivery

Bryce Chiang: The Suprachoroidal Space Accessed by Microneedle Injection

Michael Robinson: Pharmacokinetic/ Pharmacodynamic Considerations with Ocular Drug Delivery Implants

Steve Giannos: Photokinetic Drug Delivery: Light-enhanced Permeation In An In Vitro Model Eye

Kim Brazzell: Nanoparticles in Ocular Drug Delivery

Morgan V. Fedorchak: The Monthly Eye Drop: Preclinical testing of long-term, hydrogel/microsphere eye drops for glaucoma

Session 10

Jeff Kiel, Doreen Schmidl: Ocular ischemia and blood flow

Crawford Downs: Perfusion pressure: continuous telemetry measurement of blood pressure and bilateral IOP in primates

Leo Schmetterer: Oxygen modulation of flicker-induced blood flow changes in the human retina

Doreen Schmidl: Retinal oxygen metabolism in healthy subjects

Taiji Nagaoka: Role of Neuronal Nitric Oxide Synthase in Regulating Retinal Blood Flow In Response to Flicker-Induced Hyperemia in Cats

Jeff Kiel: AR-13324 lowers EVP in Dutch Belted rabbits

Session 11

Jenny Wang, David Woodward: Towards disease modifying drugs for treating glaucoma

Abbot Clark: Retinal ganglion cell neuroprotection by JNK inhibition and neuritin-1 gene therapy

Terete Borrás: Predictable candidate genes for glaucoma gene therapy

Jenny Wang: Disease Modifying/ Reversing Anti-Glaucoma Drugs: A High-Throughput Method for Lead Discovery

Rama Krishnan: Novel antiglaucoma therapies that target endothelial cell contraction

David Woodward: Steroid-Induced Glaucoma in Mice: A Model with Potential for Studying Disease Modification /Reversal