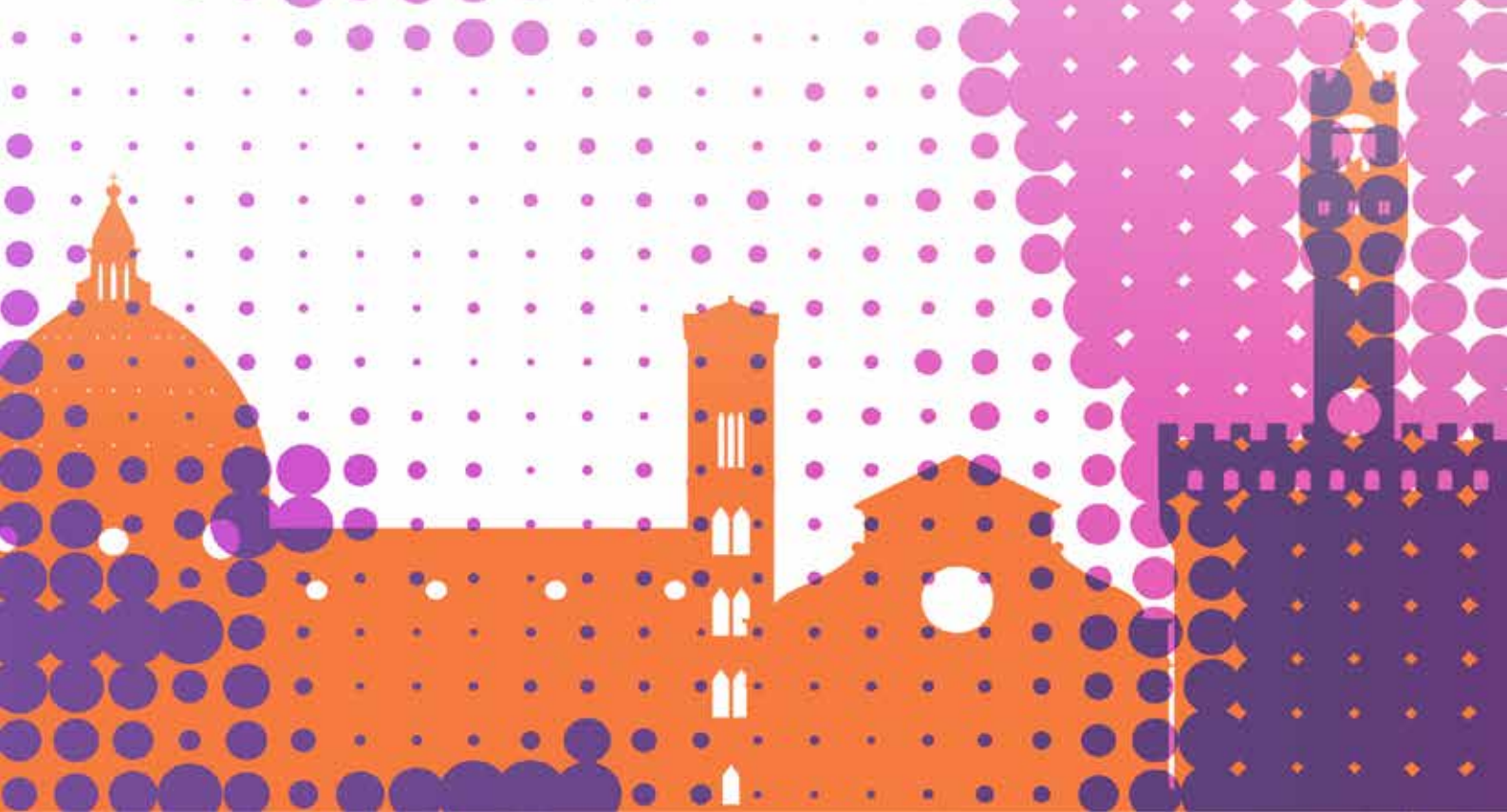
28th EVER CONGRESS

9-11 October 2025
Florence

PRELIMINARY PROGRAMME



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About the programme book

Sessions

- BM — Business Meeting
- CIS — Company Interested Symposium
- C — Course
- JM — Joint Meeting
- KN — Keynote Lecture
- POS — Poster Session
- PS — Plenary Session
- RF — Rapid Fire Session
- SIS — Special Interest Symposium
- FR — Free Paper Session

Symbol

rf	=	Rapid Fire presentation

Scientific sections

ACB	=	Anatomy / Cell Biology
COS	=	Cornea / Ocular Surface
EOVS	=	Electrophysiology, Physiological Optics, Vision Sciences
G	=	Glaucoma
IM	=	Immunology / Microbiology
LC	=	Lens and Cataract
MBGE	=	Molecular Biology / Genetics / Epidemiology
NSPH	=	Neuro-ophthalmology/Strabismology / Paediatric Ophthalmology / History of Ophthalmology
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PO	=	Pathology / Oncology
RV	=	Retina / Vitreous

08:30-08:45 | Room 2

PS **Opening Ceremony**

08:45-09:30 | Room 2

KN **Special Recognition EVER Keynote Lecture**

Diseases of retinal blood vessels of such as diabetic retinopathy are prominent causes of vision loss worldwide. Drivers of disease include endothelial cell and pericyte degeneration leading to vascular leakage, retinal ischemia and in severe cases pathological preretinal neovascularization. Anti-VEGF therapies have revolutionized treatment, however they require regular intravitreal injections and are inefficient in a large subset of patients. In this lecture, I will discuss 2 experimental disease modifying approaches developed by our lab that are currently being investigated in clinical trials. Firstly, I will discuss how modulation of neuronal guidance cues such as semaphorins can promote functional vascular regeneration and alleviate retinal ischemia. Secondly, I will present how therapeutic elimination of senescent cells from diseased retinas can trigger vascular repair and lead to long lasting benefits in patients and present preclinical and clinical data to support these findings.

08:45 Introduction
Andrzej Grzybowski *(Poland)*

08:50 Therapeutic vascular remodelling in diabetic retinal disease: on semaphorins and cellular senescence
Przemyslaw Sapieha *(Canada)*

09:20 Discussion

09:30-10:45 | Room 2

C **LC 87 - Biometry and intraocular lens power calculation**

Starting with ultrasound measurement of the eye in the 70ties of the last century, many attempts have been made to improve ocular biometry. Optical biometry was one of the cornerstones in modern cataract surgery, which was a mandatory requirement for all premium lenses. Today, all distances of the eye and the curvature of the corneal front surface could be measured with a high precision, and some of the biometers also offer tomography to assess corneal back surface curvature. First lens power calculation formula was presented in 1967 by Fyodorov, but a systematic pre-cataract biometry with individual lens power calculation started 20 years later with empirical and vergence based formulae such as SRK(2), SRKT, Hoffer-Q, Holladay, and Haigis. Today, most of the modern lens power prediction concepts are undisclosed and available online or integrated in optical biometers. In this course we will give an overview on different biometry modalities and basic lens power calculation concepts and we will discuss the pros and cons critically.

Organizer: **Achim Langenbucher** *(Germany)*
Co-organizer: **Oliver Stachs** *(Germany)*

09:30 Ultrasound and optical biometry before cataract surgery
Oliver Stachs *(Germany)*

09:41 Basics in lens power calculation – from the empirical concept to formula-based calculation and raytracing
Achim Langenbucher *(Germany)*

09:52 Formula constants and optimizations
Achim Langenbucher *(Germany)*

10:03 Calculation of toric lenses and clinical aspects of toric lens implantation
Timo Eppig *(Germany)*

10:14 Lens power calculation after corneal refractive surgery
Jascha Wendelstein *(Switzerland)*

10:25 Lens power calculation in long and short eyes – which formula is the best?
Jascha Wendelstein *(Switzerland)*

10:35 Discussion

09:30-10:45 | Room B

SIS NSPH 42 - Challenges in pediatric ophthalmology

This symposium combines anterior and posterior segment questions with respect to pediatric ophthalmology. Both conservative and surgical aspects will be addressed.

Organizer: **Thomas Fuchsluger** *(Germany)*
Co-organizer: **Patrick Yu-Wai-Man** *(United Kingdom)*

09:30 Molecular mechanisms and clinical factors influencing progression of aniridia-associated keratopathy
Nora Szentmary *(Germany)*

09:43 Keratoplasty in children - yes or no, when and how?
T**homas Fuchsluger** *(Germany)*

09:56 Surgical treatment of ectopia lentis in children
Lyubomyr Lytvynchuk *(Germany)*

10:09 When it is not a simple myopia: what is this disease with an XL eye?
Vasily Smirnov *(France)*

10:22 Inherited optic neuropathies – an update
Patrick Yu-Wai-Man *(United Kingdom)*

10:35 Discussion

09:30-10:45 | Hall 3A

RF Rapid Fire 1 - ACB - IM - PO

530 T002 Environmental, sex-dependent, and inflammasome-mediated modulation of retinal ganglion cell survival following LPS-induced sepsis
Kristy T. Rodríguez-Ramírez, Ana Isabel Gómez, Pablo Pelegrín, Marta Agudo-Barriuso *(Spain)*

465 T004 Ocular sarcoidosis - A case series in a tertiary uveitis clinic
Pedro Martins, Sofia Teixeira, Daniel Ferreira Cardoso, João Castro Cabanas, Catarina Ferreira, Sofia Fonseca *(Portugal)*

492 T005 Objective quantification of anterior uveitis inflammation using artificial intelligence: a scoping review
Muneeb Ahmad Khan, Diya Baker *(United Kingdom)*

591 T007 To assess inflammatory markers corresponding to gut dysbiosis and macrophage activation in plasma of Idiopathic Uveitis (IU) patients
Nabanita Halder, Gayatri Suresh, Madhu Nath, Rohan Chawla, Thirumurthy Velpandian *(India)*

346 T100 Tear drops and Alzheimer's: unveiling early detection biomarkers - A systematic review
Inés López-Cuenca, Lidia Sánchez-Puebla, Lorena Elvira-Hurtado, Rubén Masa-Castro, Yael Hoz-Ruiz, Elena Salobrar-Garcia, José A. Matamoros, José A. Fernández-Albarral, Hector Leal-Lasalle, Juan Jose Salazar, Ana Isabel Ramirez, Jose Manuel Ramirez, Rosa De Hoz *(Spain)*

430 T103 Circulating tumor DNA as a biomarker for surveillance of uveal melanoma
Vojtech Hanicinec, Eirunn Øvregaard, Morten Carstens Moe, Henrik Jespersen, Agate Noer *(Norway)*

482 T104 Reconstruction of medium to large full-thickness lower eyelid defects by a novel single-stage procedure: update on the marginal approach for releasing the lid with closure handling (MARCH) technique
Anna March De Ribot[1], Santiago Ortiz-Pérez[1,2], Francesc March De Ribot[1] *([1]New Zealand, [2]Spain)*

540 T106 RB1 screening for previously untested retinoblastoma survivors
Kalle Nummi, Tero Kivelä *(Finland)*

589 T107 Role of CDKN1A, MDM2, MTHFR and MTR polymorphisms in retinoblastoma: a systemic study
Shobhit Gupta, Sushma Nandyala, Tapas Roy, Deepsekhar Das *(India)*

635 T108 Transcriptomic atlas of uveal melanoma
Vojtech Hanicinec, Xavier Tekpli, Øystein Garred, Marie Fongaard, Sunniva Bøstrand, Michael Frisk, Thomas Bærland, Giang Nguyen, Jürgen Geisler, Morten Carstens Moe, Agate Noer, Henrik Jespersen *(Norway)*

09:30-10:45 | Hall 3.1

RF Rapid Fire 2 - PBP

193 S022 Comparative proteomic analysis of aqueous humour, anterior capsules and crystalline lenses in different human cataract subtypes versus healthy controls
Christina Karakosta[1,2], Martina Samiotaki[1], Anastasios Bisoukis[2], Nantieznta Kyriakidou[1], Konstantinos Moschou[1], Marilita Moschos[1] *(1Greece, 2United Kingdom)*

286 S024 Protective effects and mechanism of modified Qiju Dihuang Formula in experimental choroidal neovascularisation rats
Leilei Wang, Xiaoling Fang, Xia Chen, Wenwen Xue, Jiannan Huang, Xiaowei Tong *(China)*

361 S028 SPARC initiates gliosis via integrin α5β3/FAK/ERK signaling and mitochondrial dysfunction in early diabetic retinopathy
Shubhrajit Barman, Senthil Kumar Ganesan *(India)*

392 S029 An in-depth overview on retinal morpho-functional and molecular features of the 5xFAD murine model
Lorenzo Guidotti, Martina Lucchesi, Rosario Amato, Giuseppe Neri, Silvia Marracci, Claudia Gargini, Ugo Borello, Maurizio Cammalleri, Giovanni Casini, Massimo Dal Monte *(Italy)*

407 S031 Astrocyte-mediated protection of the hypoxic retina: involvement of beta3-adrenoceptors
Alessio Canovai, Lorenza Di Marsico, Massimo Dal Monte, Paola Bagnoli, Maurizio Cammalleri *(Italy)*

419 S033 Early retinal involvement in amyotrophic lateral sclerosis: functional and molecular characterization in SOD1G93A mice
Lorenza Di Marsico, Eleonora Daghini, Rosario Amato, Angela Cannavale, Alessio Canovai, Giuseppe Neri, Ugo Borello, Claudia Gargini, Maurizio Cammalleri, Massimo Dal Monte *(Italy)*

434 S034 Single oral dose of dronabinol enhances optic nerve head blood flow in patients with glaucoma
Gerhard Garhöfer, Theresa Lindner, Viktoria Pai, Marihan Abensperg-Traun, Leopold Schmetterer, Doreen Schmidl *(Austria)*

438 S035 Shear-stress dependent viscous properties of hyaluronic-based lubricants
Leopold Schmetterer, Gerhard Garhöfer *(Austria)*

454 S036 Toxicity of tranexamic acid in Müller cells: oxidative stress and inflammatory pathways
Dammak Azza, Nadine Gubernath, Wolf Armin *(Germany)*

566 S040 Safety and neuroprotective effects of intravitreal transplatation of bone-marrow-derived mononuclear cells exosomes to animal model of retinal degeneration
Johnny Di Pierdomenico, Ana Martínez Vacas, Andreea Delia Necula, David García Bernal, Maria Paz Villegas Perez, Diego García-Ayuso *(Spain)*

570 S041 Corneal endothelium protective effect of taurine-based ophthalmic surgical devices
Francesca Lazzara, Federica Conti, Grazia Maugeri, Erika Giuffrida, Claudio Bucolo *(Italy)*

572 S042 Design of selective PI3K delta inhibitors for diabetic retinopathy
Chiara Bianca Maria Platania, Carmela Bonaccorso, Cristina Munzone, Isabel La Rosa, Francesca Lazzara, Claudio Bucolo *(Italy)*

09:30-10:45 | Hall 3.2

SIS RV 30 - Central serous chorioretinopathy - update

Central serous chorioretinopathy – up date is planned as a SIS. During the session highly recognized specialist on CSCR patomechanism, diagnostics and treatment will share their experience as well as results of their research regarding this clinical entity. As CSCR is a common disorder, but without strong recommendations for its management, the topic seem important for both clinical practice and clinical research. Among specific subjects associated with CSCR are mineralocorticoid pathway concept, modern diagnostic modalities, such as OCT angiography, validation of results of subthreshold micropulse treatment of CSCR and current opinion on utilization of photodynamic therapy in its treatment. Finally, practical algorithms for `CSCR management will be presented.

Organizer: **Maciej Gawęcki** *(Poland)*
Co-organizer: **Andrzej Grzybowski** *(Poland)*

09:30 CSCR-patomechanism and etiology
Francine Behar-Cohen (France)

09:43 CSCR - multimodal diagnostics, recognition criteria. Classification
Stephen Schwartz *(USA)*

09:56 CSCR - treatment with classic and subthreshold lasers
Maciej Gawęcki *(Poland)*

10:09 CSCR - treatment with PDT. Strategies, eligibility
Maurizio Battaglia Parodi *(Italy)*

10:22 CSCR - algorithm for diagnostics and treatment
Kai Jin *(China)*

10:35 Discussion

09:30-10:45 | Room 4.1

C EOVS 70 - Basic principles of state-of-the-art ophthalmic instrumentation

This course is aimed at providing an overview of the basic optical principles and machine learning applications of state-of-the-art retinal-imaging systems, with a special emphasis on optical coherence tomography (OCT). The course will include a discussion of additional contrast mechanisms, future trends and cutting-edge developments, along with how such imaging can even serve as a window into brain mechanisms. The goal is to illuminate for the clinician and scientist the underlying optical concepts of various devices and technological variations, even when not familiar with the particular technology employed within the instrument, and to demonstrate its potential with applications beyond those of retinal disease diagnosis and follow-up.

Organizer: **Kristina Irsch** *(France)*
Co-organizer: **Miguel Castelo-Branco** *(Portugal)*

09:30 Optical coherence tomography - Basic optical principles
Kristina Irsch *(France)*

09:48 Optical coherence tomography - Additional contrast mechanisms, future trends, and cutting-edge technological developments
Kristina Irsch *(France)*

10:06 Optical coherence tomography - Machine learning
Rui Bernardes *(Portugal)*

10:15 Retinal imaging - A window into brain mechanisms
Miguel Castelo-Branco *(Portugal)*

10:33 Discussion

10:45-11:15 | Coffee break

11:20-12:05 | Room 2

PS Past President Lecture

The integration of artificial intelligence (AI) into ophthalmology has led to transformative advances in disease detection, prognosis, and population-level screening. While performance gains are evident in controlled settings, real-world deployment reveals persistent challenges. Some are well-recognized, including biases in training data, limited generalizability across populations, and lack of interpretability, representing the "known unknowns." However, a growing concern lies in "unknown unknowns": unpredictable failures that arise when AI systems encounter out-of-distribution inputs, rare pathologies, or subtle shifts in imaging protocols. This lecture explores the implications of these uncertainties for clinical safety, trust, and equity in ophthalmic AI. Addressing them requires not only technical innovation, such as uncertainty quantification and robust validation, but also a reframing of AI as a probabilistic and context-aware partner in clinical decision-making.

11:20 Introduction
Christina Zeitz *(France)*

11:25 AI in Ophthalmology: between known and unknown unknowns
Andrzej Grzybowski *(Poland)*

11:55 Discussion

12:05-13:20 | Room 2

SIS COS 83 - Update on instrument-assisted diagnosis for screening and diagnosis of ectatic corneal disorders

Since the launch of the first Placido topographers in the early 90ties ophthalmologists are assisted with screening and diagnosis metrics for corneal ectatic diseases. Such instruments were restricted to detect early pathological changes at the corneal front surfaces. A decade later, fist Scheimpflug tomographers showed-up which could detect and interpret early changes in the shape of both corneal surfaces together with the corneal thickness profile. Since 15 years high resolution anterior segment OCTs are on the market which have the potential to pathologies in the entire anterior eye segment. In this SIS we will show the fundamentals and development of instrument-based screening and diagnosis metrics for corneal ectatic diseases such as keratoconus, keratoglobus or pellucide marginal degeneration, and we will address quality terms such as precision, accuracy, specificity and sensitivity. New trends of instrument-assisted diagnosis such as indices from the Corvis biomechnic analysis and modern deep learning algorithms will be critically discussed and evaluated in terms of early diagnosis, staging, and monitoring of ectatic corneal disorders.

Organizer: **Achim Langenbucher** *(Germany)*
Co-organizer: **Michael Belin** *(USA)*

16:50 Corneal ectasia in a clinical setting
László Modis *(Hungary)*

17:03 Ectasia screening with the Placido topographer, Scheimpflug tomographer and anterior segment OCTs
Achim Langenbucher *(Germany)*

17:16 Instrument based screening vs. clinical diagnosis – How do modern tomographers assist the ophthalmologist
Michael Belin *(USA)*

17:29 New developments of keratoconus diagnosis with the Corvis biomechanical analysis
Elias Flockerzi *(Germany)*

17:42 AI and deep learning in early keratoconus – Think the unthinkable
Benjamin Fassbind *(Switzerland)*

17:55 Discussion

12:05-13:20 | Room B

SIS NSPH 84 - Protect, enhance, restore - novel strategies for the optic nerve rescue

The optic nerve, a crucial component of the visual pathway, plays an essential role in transmitting visual information from the retina to the brain. Damage to the optic nerve can lead to irreversible vision loss and significantly impair quality of life. The need for optic nerve restoration has become increasingly critical as advancements in medical technology and neuroscience highlight the potential for regenerative therapies. Current treatment options are limited, often focusing on managing symptoms rather than addressing the underlying damage. Innovative approaches, including stem cell therapy, neuroprotective strategies, and biomaterial scaffolds, are being explored to promote nerve regeneration and functional recovery. Restoration of optic nerve function not only aims to recover lost vision but also has profound implications for enhancing cognitive processing and overall well-being. As the population ages and the prevalence of optic nerve injuries rises, prioritizing research and development in this field is vital for improving patient outcomes and fostering greater independence for those affected by vision loss.

Organizer: **Adrian Smedowski** *(Poland)*
Co-organizer: **Marcela Vortuba** *(United Kingdom)*

12:05 Optic nerve rescue 2025 update
Adrian Smedowski *(Poland)*

12:21 Pharmacological restoration of the optic nerve
Tasneem Khatib *(United Kingdom)*

12:37 Electrostimulation of the optic nerve
Marcela Vortuba *(United Kingdom)*

12:53 CNTF-based RGC rescue
Jeffrey Goldberg *(USA)*

13:09 Discussion

12:05-13:20 | Hall 3A

RF Rapid Fire 3 - EOVS

89 S001 Optical image quality of two toric extended depth of focus intraocular lenses based on wavefront engineering technology
Martina Vacalebre, Elena Anastasi, Renato Frison, Simon Federico Spanò, Benedetta Castroflorio, Maria Cristina Curatolo *(Italy)*

90 S002 Evaluation of a virtual reality headset at a tertiary care ophthalmology setting
Catherine Dang[1], Hong-An Nguyen[1], Soumya Podury[1], Matthew Quinn[1], Catherine Tsilfidis[1], Rustum Karanjia[1,2] *([1]Canada, [2]USA)*

91 S003 Defocus incorporated mulitiple segment spectacle lenses for myopia control: a retrospective study in a Turkish cohort
Nilay Akagun, Emrah Altiparmak *(Turkye)*

170 S004 Association between building density and screening myopia in children and adolescents: a five-year longitudinal study from China
Jingjing Wang, Xiangui He *(China)*

173 S005 Visual activity enhances neuronal excitability in thalamic relay neurons
Aurore Aziz, Dumenieu Mael, Fronzaroli-Molinieres Laure, Naudin Lois, Bonnaure Cecile, Wakade Anushka, Zanin Emilie, Ankri Norbert, Incontro Salvatore, Denis Daniele, Marqueze Beatrice, Brette Romain, Debanne Dominique, Russier Michael *(France)*

212 S007 Use of L-tyrosine supplementation to support retinal function in a mouse model of deprivation myopia
Bartosz Machna, Klaudia Mroz, Monika Katan, Anna Gasiorek, Anna Pacwa, Maciej Oseka, Mikołaj Górka, Joanna Lewin-Kowalik, Adrian Smedowski *(Poland)*

330 S009 Influence of head movement of fixation stability and eye angle changes during virtual reality perimetry
Hsin-yang Chen[1], Raphael Sznitman[1], Jan Darius Unterlauft[2], Martin Zinkernagel[1], Nathanael Urs Häner[1] *([1]Switzerland, [2]Germany)*

359 S010 Assessing retinal function in an Alzheimer´s disease mouse model APPNL-F/NL-F using electroretinography
Lidia Sánchez-Puebla[1], Santiago Milla Navarro[1], Inés López-Cuenca[1], José A. Matamoros[1], Elena Salobrar-Garcia[1], José A. Fernández-Albarral[1], Lorena Elvira-Hurtado[1], Ana I. Ramírez[1], Juan Jose Salazar[1], Takaomi C. Saido[2], Takashi Saito[2], Carmen Nieto-Vaquero[1], María Ángeles Moro[1], Rosa De Hoz[1], Pedro De La Villa[1], Jose Manuel Ramirez[1] *([1]Spain, [2]Japan)*

581 S015 Retina-brain neurovascular coupling connection
Rui Bernardes[1], João Jordão[1], João Figueira[1], Miguel Morgado[1], Pedro Guimarães[1], Pedro Serranho[1], Delia DeBuc[2], Michel Paques[3], Miguel Castelo-Branco[1] *([1]Portugal, [2]USA, [3]France)*

626 S016 The pulvinar's role in visual hierarchy communication and cortical integration
Christian Casanova, William Thomas, Nelson Cortes Hernandez *(Canada)*

639 S017 Comparative performance of six large language models in the self-assessment test of the American Academy of Ophthalmology
Andrea Taloni, Antonia Carmen Sangregorio, Filippo Lixi, Mario Troisi, Francesco Paolo Mancini, Valerio Calabresi, Feyza Çukurova, Raphael Kilian, Valentino De Ruvo, Luigi De Rosa, Giulia Coco, Massimo Busin, Giuseppe Giannaccare *(Italy)*

677 S018 Evidence for altered color adaptation in autism spectrum disorder
Miguel Castelo-Branco, João Castelhano, Francisca Matias *(Portugal)*

12:05-13:20 | Hall 3.1

FP Free Paper Session 1

149 In vitro studies of the effects of the retinal pigment epithelium-derived extracellular vesicles
Giorgia Bresciani, Federico Manai, Marialaura Amadio *(Italy)*

234 Neurovascular barrier dysfunction in age-related maclar degeneration and Alzheimer's diseases: homocysteine-driven breakdown and emerging therapeutic strategies
Amany Tawfik[1], Hossameldin Abouhish[1], Lamiaa Shalaby[1], Nehal Elsherbiny[2], Omar Elzayat[1], Charlene Hsiung[1], Aya Almaoued[1] *([1]United States, [2]Saudi Arabia)*

279 Human choroid Opsin3 expression, melanocytes and effects of blue light exposure
Michele Madigan[1], Chieh-Lin (Stanley) Wu[2], Ha Duong[1], V. Cioanca[1], Peter Mccluskey[1], Robert Conway[1] *([1]Australia, [2]Taiwan)*

70 Limbal niche cells regulate immune responses and maintain protective mechanisms within the corneal epithelial stem cell niche
Yiqun Fan, Andreas Gießl, Matthias Zenkel, Nina Eisenhauer, Simon Voekl, Ursula Schlötzer-Schrehardt *(Germany)*

223 Efficacy and safety of descemet stripping only combined with ripasudil for treating fuchs dystrophy at a leading center in Spain
Javier Pérez Esquiva, Jose Lamarca, Anton Barraquer, Miriam Barbany, Ruben Delgado, Raquel Larena, Gemma Julio, Rafael Barraquer *(Spain)*

244 A synthetic injectable hydrogel with anti-inflammatory effect for treating full-thickness corneal perforations
Mostafa Zamani-Roudbaraki, Neethi Thathapudi, Michel Haagdorens, Marc Groleau, Malcolm Latorre, Solange Muhayimana, Mozhgan Aghajanzadeh-Kiyaseh, Mona Moradi, Isabelle Brunette, Christos Boutopoulos, Marie-Claude Robert, May Griffith *(Canada)*

12:05-13:20 | Hall 3.2

LC 62 - Myopia controversies and challenges in 2025

High myopia is a major cause of visual impairment. In the last 60 years, there has been a marked increase in the prevalence of high myopia in developed countries in East and Southeast Asia, and there are signs of similar, but less dramatic increases, in North America and Europe. It is accepted that myopia results from excessive axial elongation of the eye, which appears to be environmentally driven. The session will present major controversies related with myopia pathogenesis and treatment, including progression of myopia in adults, treatment differences between Asian and non-Asians, and challenges, including Low-level Red Light Therapy, and Myopia Calculators.

Organizer: **Andrzej Grzybowski** *(Poland)*
Co-organizer: **Olavi Pärssinen** *(Finland)*

12:05 Historical overview of the studies about epidemiology of myopia
Olavi Pärssinen *(Finland)*

12:18 Incidence and progression of myopia in adulthood
Mohammad Hassan Emamian *(Iran)*

12:31 Treatment differences between Asian and non-Asians
Carla Rita Dos Santos Costa Lança *(United Arab Emirates)*

12:44 RLRL in myopia control - European experience
Andrzej Grzybowski *(Poland)*

12:57 Visual acuity and spherical equivalent calculator
Piotr Artiemjew *(Poland)*

13:10 Discussion

12:05-13:20 | Room 4.1

EOVS 46 - Electrophysiology and the localisation of visual pathway dysfunction

Symptoms and signs associated with retinal and retinal ganglion cell pathology are often non-specific and pose a diagnostic challenge. Precise phenotyping may be confounded by the limitations of subjective tests, whereas electrodiagnostic recordings provide objective methods which can localise and characterise dysfunction within the retina. This SIS will provide an update on electrophysiological methods relevant to ophthalmic and neuro-ophthalmic practice, including complementary use of full-field electroretinography, used to assess photoreceptor and inner retinal function, pattern electroretinography, used to assess macular and macular retinal ganglion cell function, and electro-oculography, essential to assess generalised retinal pigment epithelium function. The use of recently published International (ISCEV) standard methods and extended ERG protocols will be highlighted, using case-based examples to illustrate how loci of dysfunction may be identified, aiding diagnosis and clinical management. Recent phenotyping data will be used to show the principles of interpretation, discrepancies between structure and function and the clinical value of electrophysiological testing.

Organizer: **Anthony G. Robson** *(United Kingdom)*
Co-organizer: **Omar Mahroo** *(United Kingdom)*

12:05 Generalised RPE dysfunction in adults and children
Dorothy Thompson *(United Kingdom)*

12:21 ERGs in photoreceptor disorders
Anthony G. Robson *(United Kingdom)*

12:37 ERGs in inner retinal disorders.
Omar Mahroo *(United Kingdom)*

12:53 Retinal ganglion cell dysfunction
Magella Neveu *(United Kingdom)*

13:09 Discussion

13:30-14:30

CIS **Industry Sponsored Lunch Symposia**

14:40-15:20 | Room 2

KN **De Laey EVER Keynote Lecture**

14:40 Introduction
Patrick Yu-Wai-Man *(United Kingdom)*

14:45 Keynote Lecture
Dan Milea *(France)*

15:15 Discussion

15:20-16:20 | Poster Area

POS **Poster Session 1**

16:20-16:50 | Coffee break

16:50-18:05 | Room 2

SIS LC 59 - Restoration of cccommodation

The restoration of accommodation in the pseudophakic eye is still regarded one of the last remaining frontiers in ophthalmology. Decades of principal and applied research resulted in numerous concepts from lens regeneration and lens refilling to electro-optical solutions. Most concepts failed in clinical trials due to a lack of predictability of the refractive outcome or a lack of accommodation in the long term. Additional factors that prevented successful clinical application were lack of usability in terms of requirement for a large incision, bulky implant, and/or generally complicated implantation compared to standard IOLs. Factors preventing commercial success from the manufacturers point of view is a complex production resulting in non-competitive price. We give an overview on the principles and historic and current concepts of accommodative intraocular lenses and lens regeneration and discuss the challenges associated with accommodative IOLs from the regulatory and clinical perspective.

Organizer: **Timo Eppig** (Germany)
Co-organizer: **Justin Christopher D'Antin** *(Spain)*

12:05 History and principles of accommodative intraocular lenses
Timo Eppig (Germany)

12:18 Lens refilling and lens regeneration
Justin Christopher D'Antin *(Spain)*

12:31 Experience with the Phaco-Ersatz System
Rafael I. Barraquer *(Spain)*

12:44 Challenges associated with accommodative systems
Timo Eppig (Germany)

12:57 Experience with the lumina accommodative IOL
Jens Schrecker *(Germany)*

13:10 Discussion

16:50-18:05 | Room B

C NSPH 66 - Decoding the scientific headline in ocular neurobiology

In a world where scientific communication is crucial for the dissemination and impact of research, transforming complex findings into accessible messages without compromising accuracy is a challenge. Recognizing this need and building upon the success and excellent feedback of the 'Improve the impact of your eye research with storytelling' session at the last EVER meeting, this proposal outlines the next phase to strengthen our research communication. This hands-on course is designed for researchers in ocular neurobiology who seek to improve their ability to communicate discoveries clearly and effectively. Through interactive exercises, participants will analyze how the media presents science and learn to identify the key elements that ensure information shared with society is both useful and accurate, avoiding misinformation and misconceptions. The course will focus on specific examples from ocular neurobiology, from neural plasticity in the visual system to the effects of light on the retina, emphasizing the importance of precise yet accessible language in scientific outreach. By the end of the course, attendees will have gained tools to better communicate their research, minimizing distortions and fostering a more effective dialogue with the media and the general public.

Organizer: **Victor Meseguer** *(Spain)*
Co-organizer: **Ariadna Diaz-Tahoces** *(Spain)*

16:50 Understanding the media ecosystem for better scientific communication
Angeles Gallar *(Spain)*

17:11 Strategies for clear and accurate scientific communication
Victor Meseguer *(Spain)*

17:32 The challenge of communicating science in ocular neurobiology
Ariadna Diaz-Tahoces *(Spain)*

17:53 Discussion

16:50-18:05 | Hall 3A

RF Rapid Fire 4 - MBGE

153 T013 Myopia in football player: influence of outdoors activities measured by conjunctival ultraviolet autofluorescence biomarker
Sergio Recalde, Alejandro Güemes, Maria Hernandez, María Fraga de la Viesca, Miriam De la Puente, Cristina Irigoyen, Jaione Bezunartea, Maite Moreno Orduña, Manuel Saenz de Viteri, Jesús Barrio, Valentina Bilbao, Jorge Gonzalez-Zamora, Alfredo García Layana *(Spain)*

160 T014 Deep lerning-based morphometry of the human orbit using MRI data from the German NAKO study
Navid Farassat[1], Kevin Wornath[1], Moises Fuentes[1], Marco Reisert[1], Susanne Rospleszcz[1], Javier Rodriguez-Zabala[2], Daniel Böhringer[1], Christopher Schlett[1], Wolf Lagrèze[1] *([1]Germany, [2]Colombia)*

401 T021 Identification of a novel gene defect, EGFLAM, underlying complete congenital stationary night blindness and high myopia
Sanja Boranijasevic[1], Julien Navarro[1], Christel Condroyer[1], Lonneke Hear-Wigman[2], Aline Antonio[1], Dhaenens Claire-Marie[1], Sahel José-Alain[1,3], Ingeborgh van den Born[2], Martha Tjon-Fo-Sang[2], Sabine Defoort[1], Vasily Smirnov[1], Isabelle Audo[1], Christina Zeitz[1] *([1]France, [2]The Neterlands, [3]USA)*

432 T023 Differential effect of outdoor time on myopia prevention in hyperopic and premypic children
Ziyi Qi, Xiangui He, Jun Chen, Xiaohu Ding, Mingguang He, Xun Xu *(China)*

470 T027 Investigation of factors promoting corneal wound healing
Anna Pacwa, Bartosz Machna, Klaudia Mroz, Anna Gasiorek, Monika Katan, Maciej Oseka, Joanna Lewin-Kowalik, Adrian Smedowski *(Poland)*

511 T029 Knobloch syndrome presenting with polymicrogyria and shallow anterior chamber: a case report
João Castro Cabanas, Pedro Martins, Carolina Madeira *(Portugal)*

520 T030 Sphingolipids plasma profile in keratoconus patients
Uxía Regueiro, Maite López-López, Tania Alvite-Piñeiro, Alberto Ouro, Isabel Lema *(Spain)*

523 T031 Near-infrared light-responsive retinal implants regulate neurotrophic gene expression in primary hippocampal neurons
Şeyma Nur Yaman, Uğur Berkay Calışkan, Humeyra Nur Kaleli, Tarık Safa Kaya, Murat Hasanreisoğlu, Sedat Nizamoğlu *(Turkye)*

546 T032 The effects of long-term work in mesopic environments and lifestyle risk factors on the prevalence of myopia in adults
Rafaela Garrido-Mercado[1], Olavi Pärssinen[2], Jesús Carballo-Álvarez[1], Maria Garcia Montero[1], Maria Cinta Puell Marin[1] *([1]Spain, [2]Finland)*

605 T033 Clustering analysis with optical coherence tomography data in leber hereditary optic neuropathy (LHON) patients by non-negative matrix factorization unsupervised learning technique
Martina Romagnoli, Michele Carbonelli, Giulia Amore, Leonardo Caporali, Claudio Fiorini, Piero Barboni, Maria Lucia Cascavilla, Chiara La Morgia, Valerio Carelli *(Italy)*

631 T035 Descriptive analysis of a Danish eye and vision cohort using the deep learning tool automorph for retinal vasculature assessment
Hande Coskun, Marcel Reimann, Jeppe Samuelsen, Miriam Kolko *(Denmark)*

644 T036 Transcriptional profiling of NLRP3 inflammasome- activated monocytes from keratitis fugax hereditaria
Sabita Kawan, Pau Costa, Michael Backlund, Annamari Immonen, Helena Kilpinen, Olli Pietiläinen, Tero Kivelä, Joni Turunen *(Finland)*

16:50-18:05 | Hall 3.1

RF Rapid Fire 5 - NSPH

127 T047 The role of astigmatism in myopia, its progression and management: a scoping review
Stephanie Kearney[1], Rakhee Shah[2,3] *([1]United Kingdom, [2]The Neterlands)*

189 T053 Efficacy of lenadogene nolvarvovec gene therapy versus idebenone: a matched adjusted indirect comparison
Valérie Biousse[1], Patrick Yu-Wai-Man[2], Nancy Newman[1], Valerio Carelli[3], Adeline Pierache[4], François Montestruc[4], Magali Taiel[4], José-Alain Sahel[1] *([1]USA, [2]United Kingdom, [3]Italy, [4]France)*

201 T054 Atropine and spectacle lens combination treatment (ASPECT): 24-month interim results of a randomised controlled trial for myopia control
Noemi Guemes Villahoz[1], Paula Talavero-Gonzalez[1], Paloma Porras-Angel[1], Rafael Bella-Gala[1], Alicia Ruiz-Pomeda[1], Beatriz Martín García[1], Elena Hernandez-Garcia[1], C Nunila Gomez-De-Liano[1], Rakhee Shah[2], Julian Garcia Feijoo[1], Rosario Gomez-De-Liano[1] *([1]Spain, [2]The Neterlands, / United Kingdom)*

208 T056 Choroidal thickness changes in myopic children using combination treatment of atropine eyedrops and defocus incorporated multiple segments (DIMS) spectacle lenses
Noemi Guemes Villahoz[1], Paula Talavero-Gonzalez[1], Paloma Porras-Angel[1], Alicia Ruiz-Pomeda[1], Rafael Bella-Gala[1], Elena Hernandez-Garcia[1], Beatriz Martín García[1], C Nunila Gomez-De-Liano[1], Rakhee Shah[2], Julian Garcia Feijoo[1], Rosario Gomez-De-Liano[1] *([1]Spain, [2]The Neterlands, / United Kingdom)*

226 T058 Characterising spontaneous retinal venous pulsations in patients with idiopathic intracranial hypertension
Mojtaba Golzan[1], Solmaz Bastani[1], Ashish Agar[1], Mitchell Lawlor[1], Sheng Chiong Hong[2], Renoh Chalakkal[2], Clare Fraser[1] *([1]Australia, [2]New Zealand)*

271 T062 Lenadogene nolparvovec gene therapy for leber hereditary optic neuropathy in the real-life setting
Chiara La Morgia[1], Catherine Vignal-Clermont[2], Valerio Carelli[1], Patrick Yu-Wai-Man[3], Mark Moster[4], Robert Sergott[4], Sarah Thornton[4], Sean Donahue[4], Hélène Dollfus[2], Thomas Klopstock[5], Vasily Smirnov[2], Catherine Cochard[2], Marie-Benedicte Rougier[2], Pierre Lebranchu[2], Caroline Froment[2], Frederic Pollet-Villard[2], Claudia Prospero-Ponce[4], Francis Munier[6], Magali Taiel[2], José-Alain Sahel[4] *([1]Italy, [2]France, [3]United Kingdom, [45]Germany, [6]Switzerland)*

274 T063 The onset of photophobia: impact of acute bright light exposure on cellular and molecular changes from the retina to the brain
Jiayi Zhang, Jian Huang, Reboussin Elodie, Laurence Bourgeais, Stéphane Mélik Parsadaniantz, Réaux-Le Goazigo Annabelle *(France)*

275 T064 Indirect comparison of lenadogene nolparvovec gene therapy versus natural history in patients with m.11778G>A MT-ND4 leber hereditary optic neuropathy
Patrick Yu-Wai-Man[1], Nancy Newman[2], Mark Moster[2], Valerio Carelli[3], Valérie Biousse[2], Prem Subramanian[2], Catherine Vignal-Clermont[4], An-Guor Wang[5], Sean Donahue[2], Bart Leroy[6], Robert Sergott[2], Thomas Klopstock[7], Alfredo Sadun[2], Gema Rebolleda Fernandez[8], Bart Chwalisz[2], Rudrani Banik[2], Magali Taiel[4], José-Alain Sahel[2] *([1]United Kingdom, [2]USA, [3]Italy, [4]France, [5]Taiwan, [6]Belgium, [7]Germany, [8]Spain)*

342 T067 Machine learning analysis of visual field progression for dominant optic atrophy-OPA1
Catarina Coutinho, Ferdinando Zanchetta, Michele Carbonelli, Marco Battista, Alice Galzignato, Chiara La Morgia, Giulia Amore, Martina Romagnoli, Luigi Brotto, Paolo Nucci, Leonardo Caporali, Francesco Bandello, Valerio Carelli, Maria Lucia Cascavilla, Rita Fioresi, Piero Barboni *(Italy)*

16:50-18:05 | Hall 3.1

RF Rapid Fire 5 - NSPH *(cont.)*

353 T069 The effect of disease-modifying therapy on retinal thinning in relapsing-remitting multiple sclerosis
Sanela Sanja Burgić[1], Mirko Resan[2], Daliborka Tadić[2] *([1]Bosnia and Herzegovina, [2]Serbia)*

609 T084 Disease severity at baseline in Leber hereditary optic neuropathy patients from the Case Record Survey-2 with simultaneous versus sequential bilateral vision loss
Thomas Klopstock[1], Bart Leroy[2], Patrick Yu-Wai-Man[3], Judith Van Everdingen[4], Maciej Krawczynski[5], Valerio Carelli[6], Xavier Llòria[6] *([1]Germany, [2]Belgium, [3]United Kingdom, [4]The Neterlands, [5]Poland, [6]Italy)*

645 T090 Impact of prematurity on ocular biometry and refractive development during the first years of life
Merve Mutlu, Burcin Cakir *(Turkye)*

16:50-18:05 | Hall 3.2

C RV 53 - Management of geographic atrophy between AI-assisted multimodal imaging and function

This course provides a comprehensive approach to managing geographic atrophy (GA) secondary to age-related macular degeneration (AMD) by integrating advanced imaging, artificial intelligence (AI), and functional assessment. Participants will first explore the latest multimodal imaging techniques to enhance detection and monitoring of GA progression. The focus then shifts to the role of AI in quantifying lesion characteristics, tracking changes over time, and predicting disease trajectory. By leveraging AI-driven analysis, clinicians can gain deeper insights into GA evolution and refine monitoring strategies. Finally, the course examines how structural biomarkers correlate with functional vision loss including microperimetry, addressing the impact on patient quality of life and visual performance. Understanding these connections will allow for improved clinical decision-making, patient counseling, and future therapeutic strategies. This program equips clinicians with essential tools to optimize GA management.

Organizer: **Gregor Reiter** *(Austria)*
Co-organizer: **Enrico Borrelli** *(Italy)*

16:50 Multimodal Imaging assessment of GA
Enrico Borrelli *(Italy)*

17:06 Beyond the macula: the role of UWF imaging in geographic atrophy
Daniela Bacherini *(Italy)*

17:22 Artificial intelligence to assess GA lesions and progression
Ambresin Aude *(Switzerland)*

17:38 Linking structure to function in GA
Gregor Reiter *(Austria)*

17:54 Discussion

16:50-18:05 | Room 4.1

SIS EOVS 54 - Vision beyond just visual acuity

With the identification of novel targets, the number of interventional clinical trials in ophthalmology has increased. Visual acuity has for a long time been considered the gold standard endpoint for clinical trials, but in the recent years it became evident that other endpoints are required for many indications including geographic atrophy and inherited retinal diseases. Numerous potential surrogate endpoints have been proposed, but their validation remains a complex challenge, requiring robust scientific evidence. In this symposium, we provide an overview of promising clinical endpoints in ophthalmology, with a particular focus on retinal diseases. We explore functional and structural biomarkers, as well as quality of life measures, and critically assess their potential as endpoints in pivotal trials. This highly interdisciplinary symposium brings together leading experts from ophthalmology (Scholl), engineering (Ghezzi), and neuroscience (Herzog). It features clinical findings from large-scale studies in age-related macular degeneration (AMD) and inherited retinal diseases (Scholl), advancements in neuroprostheses (Ghezzi), and extensive visual testing and statistical analysis in both patients and healthy controls (Herzog).

Organizer: **Michael Herzog** *(Switzerland)*
Co-organizer: **Hendrik Scholl** *(Austria)*

16:50 Beyond classic visual testing
Michael Herzog *(Switzerland)*

17:11 Outcome measures to prove functional benefit of changes in retinal imaging
Hendrik Scholl *(Austria)*

17:32 Testing behavioral end-points in naturalistic mazes using virtual and augmented reality
Diego Ghezzi *(Switzerland)*

17:53 Discussion

18:05-18:50

CIS Industry Sponsored Afternoon Symposia

18:50-19:20

Welcome Reception

08:30-09:15 | Room 2

KN Soubrane EVER Keynote Lecture

The retinal pigment epithelium (RPE) supports photoreceptors through key functions like outer segment phagocytosis and visual pigment replenishment. Regional differences in RPE sensitivity are implicated in diseases such as age-related macular degeneration (AMD) and choroideremia. However, most in vitro and animal models lack proper macular regions, limiting their disease modeling accuracy. This study aims to generate iPSC-derived macular and mid-peripheral RPE to better model regional RPE degeneration. Using AI-based software (REShAPE), we identified five RPE subpopulations, with P1 representing macular RPE and P3 representing mid-peripheral RPE. We screened 115 developmental pathway-targeting compounds to generate macular and mid-peripheral RPE from iPSCs. The RPE subtypes were assessed through morphology, barrier function, RNA sequencing, metabolism, and complement-induced stress assays. Macular iPSC-RPE displayed sheet-like apical processes, supported cones, relied on glycolysis, and showed higher AMD-like sensitivity. Mid-peripheral iPSC-RPE exhibited finger-like apical processes, supported rods, used oxidative phosphorylation, and were more resilient to stress. This model provides a more physiologically relevant platform for studying retinal diseases, drug screening, and targeted cell replacement therapies.

08:30 Introduction
Lyubomyr Lytvynchuk *(Germany)*

08:35 Macular iPSC derived RPE reproduces regional sensitivity to AMD
Kapil Bharti *(USA*

09:05 Discussion

09:20-10:35 | Room 2

RF Young Investigators Session 1

99 T001 Comparative study of the ciliary body in mice and humans: new structural and vascular insights
Patricia Jaramillo, Ana Carretero, David Ramos González, Jesús Ruberte *(Spain)*

569 F049 Contribution of voltage-gated sodium and calcium channels to the excitability of menthol-sensitive corneal nerve terminals in mice
Fernando Aleixandre-Carrera, Almudena Iñigo-Portugués, M Carmen Acosta, Juana Gallar, Victor Meseguer *(Spain)*

587 F054 Comparative evaluation of corneal and epithelial thickness measurements using spectral-domain and swept-source anterior segment optical coherence tomography in eyes with keratoconus
Mirza Karamovic, Marika Wahlberg Ramsay, Branka Samolov, Abinaya Venkataraman1 Alberto Dominguez-Vicent *(Sweden)*

268 S008 The relationship between the cellular retinal structure measured with adaptive optics scanning laser ophthalmoscope and retinal function measured with multifocal electroretinogram in late-onset retinal degeneration
Stephanie Quinn, Penny Lawton, Andrew Browning, Laura Young *(United Kingdom)*

564 F095 Short-term high-dose nicotinamide treatment across glaucoma subtypes reveals increased mitochondrial DNA content and minimal metabolomic changes in blood
Simon Gustavsson[1], Antoni Vallbona Garcia[2], James Tribble[1], Pete Williams[1], Gauti Johannesson[1], Theo Gorgels[2], Birke Benedikter[2], Hubert Smeets[2], Patrick Lindsey[2], Carroll Webers[2] *([1]Sweden, [2]The Neterlands)*

633 F100 Regional disparities in glaucoma diagnosis and surgery in Denmark: urgent need for increased resources
Jeppe Samuelsen, Christina Eckmann-Hansen, Kim Holmgaard, Hadi Kjærbo, Miriam Kolko *(Denmark)*

191 T003 Optical coherence tomography biomarkers in Vogt-Koyanagi-Harada disease: a longitudinal analysis of choroidal vascularity index and choroid thickness
Vasco Lobo, Afonso Lima-Cabrita, Rafael Whitfield, Filomena Pinto, Sofia Mano, Ines Leal *(Portugal)*

348 F116 Quantitative cataract grading based on blue-light autofluorescence confocal imaging
Alessandro Arrigo, Emanuela Aragona, Francesco Bandello *(Italy)*

09:20-10:35 | Room B

SIS NSPH 50 - Optic neuropathies - from mechanisms to therapies

Optic neuropathies encompass a diverse group of disorders affecting the retinal ganglion cells and the optic nerve, often leading to irreversible vision loss. Recent advances in genetics, molecular biology, and neuroprotection are transforming our understanding of these conditions and paving the way for novel therapeutic approaches. This symposium will bring together leading experts to explore the latest breakthroughs, from disease mechanisms to innovative interventions. The session will begin with an overview of the expanding genetic landscape of inherited optic neuropathies, highlighting newly identified mutations and their implications for diagnosis and treatment. Next, we will examine how retinal ganglion cells serve as early biomarkers of metabolic and mitochondrial dysfunction in LRRK2 Parkinsonian models, offering insights into neurodegenerative disease intersections. We will then present an update on OPA1 rescue by trans-splicing, a promising strategy to restore mitochondrial function in dominant optic atrophy. Finally, we will introduce the mitoVISION-IQ, a novel tool designed to measure quality of life in clinical trials for inherited optic neuropathies, ensuring that patient-centered outcomes remain at the forefront of therapeutic development. This session will provide a comprehensive view of cutting-edge research in optic neuropathies, bridging fundamental mechanisms with translational and clinical advances.

Organizer: **Neringa Jurkute** *(United Kingdom)*
Co-organizer: **Raoul Kanav Khanna**

09:20 The expanding genetic landscape of inherited optic neuropathies
Claudio Fiorini *(Italy)*

09:36 Use of retinal ganglion cells for early detection of metabolic and mitochondrial dysfunction in LRRK2 Parkinsonian models
Gloria Cimaglia *(United Kingdom)*

09:52 OPA1 rescue by trans-splicing – an update
Aymane Bouzidi *(France)*

10:08 Developing the mitoVISION-IQ for measuring quality of life in clinical trials of inherited optic neuropathies
Benson Chen *(United Kingdom)*

10:24 Discussion

09:20-10:35 | Hall 3A

RF Rapid Fire 6 - LC

77 F108 Refractive errors after cataract surgery
Rym Maamouri, Molka Ferchichi, Riahi Souhir, Aouni Jaafer, Monia Cheour *(Tunisia)*

79 F109 Comparison of corneal power assessment methods for true corneal power after myopic small-incision lenticule extraction
Xiaoling Fang, Jiannan Huang, Leilei Wang, Wenwen Xue, Xia Chen *(China)*

93 F110 Accuracy of twenty intraocular lens power calculation formulas in long eyes
Wiktor Stopyra[1], Oleksiy Voytsekhivskyy[2], Andrzej Grzybowski[1] *([1]Poland, [2]Ukraine)*

105 F112 Ophthalmological manifestations and visual outcomes of electical and lightning trauma: a systematic review
Maria Piedrahita, Felipe Pineda, Felipe Moreno, Maria Estevez, Nicolas España, Viviana Infante, Germán Mejía-Salgado, Carlos Cifuentes, Diana Rey, Laura Rodriguez-Camelo, Alejandra de-la-Torre *(Colombia)*

256 F114 Influence of axial length on target refraction after intraocular lens implantation in children under 2 years of age
Alejandro Alcaide Costa, Eva Calpe, Gemma Julio, Rafael Barraquer *(Spain)*

301 F115 Systemic medications associate with cataract surgery in patients over 50 years
Sirpa Loukovaara, Antti Riikonen, Tuomas Lilius, Jari Haukka *(Finland)*

494 F117 Historical overwiev of the studies about epidemiolgy of myopia
Olavi Pärssinen *(Finland)*

516 F119 Impact of cataract surgery on scotopic and photopic mydriasis
Inês Mendo, Mariana Vaz, João Vaz, Filipe Moraes, Inês Machado, Tomas Loureiro, Nuno Campos *(Portugal)*

551 F120 Effect of the corneal spherical aberrations on the selection of extended range intraocular lenses
Dayan Flores Cervantes, Inas Baoud Ould Haddi, Emilio Dorronzoro Ramírez, Vanesa Gerena Arevalo, Cristina Bonnin Arias, Vanesa Blázquez Sánchez *(Spain)*

558 F121 An algorithmic approach to refractive aim following cataract surgery in the National Health Service setting
George Liu, Christopher Liu *(United Kingdom)*

09:20-10:35 | Hall 3.1

RF Rapid Fire 7 - G

164 F069 Galectin-3 is associated with Müller cells in glaucoma
Anne Rombaut, Alan Nicol, Rune Brautaset, Pete Williams, James Tribble *(Sweden)*

182 F070 Evaluation of synthetically generated optical coherence tomography images
Damon Wong[1], Ashish Jith[1], Jacqueline Chua[1], Leopold Schmetterer[1,2] *([1]Singapore, [2]Austria)*

207 F071 Proteomics analyses of ocular small extracellular vesicles in glaucoma
Ana Guzman Aranguez, Raquel Rejas-Gonzalez, Ana Montero-Calle, Rodrigo Barderas, Natalia Pastora Salvador, María José Crespo Carballes, Juan Snachez-Naves *(Spain)*

238 F073 Impact of preserved and preservative-free latanoprost eye drops on calcium regulation in conjunctival goblet cells
Umalbaninn Alnoor[1], Jeffrey A. Bair[2], Steffen Heegaard[1], Miriam Kolko[1] *([1]Denmark, [2]USA)*

270 F075 Tolerability of preservative-free latanoprost/timolol fixed combination versus preserved bimatoprost/timolol in patients with open-angle glaucoma or ocular hypertension - The AdEQUATE study
Julian Garcia Feijoo[1], Leopold Schmetterer[2,3] *([1]Spain, [2]Singapore, [3]Austria)*

325 F076 A clinical evaluation of a virtual reality headset-based visual field test compared to standard automated perimetry in healthy volunteers and glaucoma patients
Maribel Espinosa-Cabrera *(United Kingdom)*

351 F080 How short is too short? Evaluating postoperative survival after glaucoma surgery in a real-world cohort
Bernardo Monteiro, Rafael Whitfield, Vasco Lobo, Emanuel Fernandes, Dina Costa, Nuno Amaro, Miguel Santos, André Diogo Barata, Rafael Correia Barão, Luis Abegão Pinto *(Portugal)*

431 F082 Exploring the associations of self-reported glaucoma and physical activity: findings from a danish eye and vision cohort - Project FOREVER
Thao Tran, Jens Rovelt Andreasen, Josefine Freiberg, Christina Eckmann-Hansen, Miriam Kolko *(Denmark)*

450 F083 Sigma-1 receptor activation represents a novel therapeutic strategy for ocular hypertension
Judit Hodrea[1], Timea Medveczki[1], Tamas Lakat[1], Minh Tran[1], Akos Toth[1], Anna Takacsi-Nagy[1], Gyorgy Torok[1], Szabo Attila[1], Illes Kovacs[1,1], Dr. Fekete Andrea[1,2] *([1]Hungary, [2]USA)*

455 F086 Challenges in glaucoma diagnosis: agreement in clinical diagnosis and deep learning glaucoma screening
Joana Pargana[1], Afonso Lima-Cabrita[1], Rafael Whitfield[1], Vasco Lobo[1], Bernardo Monteiro[1], Sanna Leinonen[2], Ana Miguel[3], Marta Pazos[4], Panayiota Founti[5], Rafael Correia Barão[1], Ingeborg Stalmans[6], Luis Abegão Pinto[1] *([1]Portugal, [2]Finland, [3]France, [4]Spain, [5]United Kingdom, [6]Belgium)*

462 F088 Inhibitory effects of 3',4'-dihydroxyflavonol in a rabbit model of minimally-invasive glaucoma surgery with PreserFlo Microshunt
Jennifer Fan Gaskin, Zoe Pasvanis, Roy Kong, Elsa Chan *(Australia)*

642 F101 Ensuring reliable glaucoma detection with deep learning: the critical role of calibration and evaluation practices
Marcel Reimann, Peter Tejlgaard Kampen, Josefine Vilsbøll Sundgaard, Miriam Kolko Anders Bjorholm Dahl *(Denmark)*

09:20-10:35 | Hall 3.2

SIS

RV 58 - Retinal fibrosis: molecular mechanisms and emerging therapeutic strategies

Retinal fibrosis is a major clinical challenge that contributes to vision loss in several retinal diseases, including diabetic retinopathy, age-related macular degeneration (AMD), retinopathy of prematurity, and proliferative vitreoretinopathy. Current therapeutic approaches remain largely ineffective, likely due to a limited understanding of the molecular and cellular mechanisms underlying fibrosis in the retina. This symposium will foster innovative discussion through bringing together experts in retinal cell biology, fibrosis, and translational research to discuss recent advances in understanding the pathophysiology of retinal fibrosis and explore innovative therapeutic strategies. Symposium Objectives: to discuss the molecular and cellular mechanisms of retinal fibrosis; to discuss emerging therapeutic strategies for preventing or treating fibrosis; to foster collaboration between researchers, and clinicians in the field of retinal diseases.

Organizer: **Mohamed AL-Shabrawey** *(USA)*
Co-organizer: **Manuela Bartoli** *(USA)*

09:20 Bone morphogenetic protein signalling and retinal fibrosis
Mohamed AL-Shabrawey *(USA)*

09:3 MicroRNA-21 (miR-21) as a new player in retinal fibrosis
Manuela Bartoli *(USA)*

09:46 A novel approach to target EMT and MMT in retinal fibrosis
Mei Chen *(Ireland)*

09:59 Cellular and molecular tracing of myofibroblast origins in the choroidal neovascularization model of age-related macular degeneration
Katia Corano Scheri *(USA)*

10:12 Role of inflammation in subretinal fibrosis secondary to nAMD
Heping Xu *(China)*

10:25 Discussion

09:20-12:05 | Room 4.1

JM

EVER-CORONIS Foundation - Ocular surface innervation disorders

In the past, the role of sensory nerves in ocular surface disorders received little attention in ophthalmology. However, growing awareness of eye discomfort and pain, especially in common ocular surface conditions and following modern anterior segment surgeries, has shifted this view over the last few decades. An important function of corneal nerves is the trophic maintenance of ocular tissues, which is particularly impaired in diabetes. There is now growing evidence highlighting the essential interaction between peripheral sensory nerves and ocular tissues, along with a dynamic relationship between the nervous and immune systems, which can become dysregulated in disease. The 2025 Coronis Ocular Surface Biennial Symposium will begin with a plenary lecture and the presentation of the Endre A. Balazs Medal to Professor Reza Dana, in recognition of his significant contributions to our understanding of the influence of corneal nerves on immune, epithelial, and endothelial function. The program will continue with expert presentations on advances in ocular surface regeneration, the diagnosis and treatment of neuropathic ocular pain, and the role of corneal nerves in dry eye disease and viral keratitis.

Chairman: **Jesús Merayo LLoves** *(Spain)*

09:20 Introductory remarks
Jesús Merayo LLoves *(Spain)*

09:25 Presentation of the Endre A. Balazs Medal 2025 to Professor Reza Dana
Wolfgang Müller-Lierheim *(President of the CORONIS Foundation)*

09:30 Endre A. Balazs Prize Lecture
Corneal nerves and the regulation of immunity, epithelial, and endothelial function
Reza Dana *(USA)*

10:10 Regeneration of the ocular surface with plasma rich in growth factors
Jesús Merayo LLoves *(Spain)*

10:35 Coffee break

11:05 Diagnosis and management of neuropathic ocular pain
Pedram Hamrah *(USA)*

11:20 Corneal nerve involvement in dry eye disease
Victor Perez Quinones *(USA)*

11:35 Corneal nerve involvement in viral keratitis
Paolo Rama *(Italy)*

11:50 Closing remarks
Jesús Merayo LLoves *(Spain)*

10:35-11:05 | Coffee break

11:05-12:05 | Poster Area

POS **Poster Session 2**

12:10-12:55 | Room 2

PS **European Ophthalmic Heritage Lecture**

The eye and the brain are considered to display "immune privilege" (IP), a term that was introduced to explain why corneal allografts were accepted but skin allografts were rejected. Similar allografts to the brain and to the anterior chamber of the eye had previously been shown not to be rejected. Over time, the concept was extended to consider the CNS as a privileged site to all foreign antigens but the evidence that the CNS provides a privileged environment for infectious agents has been less strong. The tissue environment plays a role in determining the outcome of the host-microbe interaction. The CNS (the brain parenchyma and the retina) has a tightly regulated immune response, mediated mainly through parenchymal microglia and perivascular macrophages. In contrast, the CNS border tissues (leptomeninges, uveal tract) both house a sizeable complement of resident immune cells which maintain homeostasis and act as "guardians" of immunity in CNS. The AIDS epidemic revealed how defective immunity led to the emergence of opportunistic CNS infections in immunodeficient individuals, suggesting that in immunocompetent individuals these organisms persist as latent infections. A relationship between latent CNS infection and CNS immunity (IP) may exist and possible mechanisms are discussed.

12:10 Introduction
Jarmila Heissigerova *(Czech Republic)*

12:15 Keynote Lecture
John Forrester *(United Kingdom)*

12:45 Discussion

13:05-14:05

CIS **Industry Sponsored Lunch Symposia**

14:15-15:30 | Room 2

RF Young Investigators Session 2

309 T017 Identification and functional validation of a novel disease-causing variant in the non-coding region of NYX
Filip Spanic, Michiels Christelle, Julien Navarro, Aline Antonio, Christel Condroyer, Sylvie Berthémy-Pellet, Isabelle Audo, Christina Zeitz *(France)*

499 T076 Late-onset Leber hereditary neuropathy: study in a large Italian cohort
Marco Battista, Michele Carbonelli, Luigi Brotto, Giulia Amore, Catarina Coutinho, Martina Romagnoli, Alice Galzignato, Paolo Nucci, Leonardo Caporali, Maria Lucia Cascavilla, Claudio Fiorini, Chiara La Morgia, Valerio Carelli, Piero Barboni *(Italy)*

684 T095 Evaluation of vascular index by optical coherence tomography angiography in patients with ischemia-related paralytic strabismus
Seren Kaplan Gungordu, Burcin Cakir, Nilgun Ozkan Aksoy, Meryem Dilara Kilic *(Turkye)*

510 S038 Extracellular vesicle therapy for sepsis-induced neurodegeneration: influence of host sex and transplant compatibility
Jhoana Abigail Guarnizo-Campoverde, Kristy Tatiana Rodríguez Ramírez, David García Bernal, Fernando Lucas-Ruiz, Jesus Isais Gil Chinchilla, Caridad Galindo-Romero, Maria José Ruiz-Pastor, Marta Agudo-Barriuso *(Spain)*

350 T102 Evaluation of tarsorraphy in patients undergoing parotidectomy for oncological disease: a multidisciplinary assessment
Tomaz Oliveira, Ricardo Nogueira *(Portugal)*

315 S069 Innovative automated imaging approach for quantitative analysis of retinal glial cells
Lidia Sánchez-Puebla, Miguel A. Sánchez-Puebla, Ana Granados, Valentín Moreno, Ana Isabel Ramirez, Jose Manuel Ramirez, Juan Llorens, Inés López-Cuenca *(Spain)*

447 S090 Evaluating the consequences of appointment delays on AMD progression at the Western Eye Hospital during the COVID-19 lockdown
Inés López-Cuenca[1], Lorenzo Fabozzi[2], Saad Younis[2], Ahmad Ali[2], Francesca Cordeiro[2] *([1]Spain, [2]United Kingdom)*

14:15-15:30 | Room B

SIS

NSPH 89 - Genetic factors and clinical manifestations in developmental eye disorders: the current state and future directions

Over the past 25 years, we have collected a cohort of over 1,000 genetically unexplained families affected with pediatric ocular disorders including early-onset cataract or glaucoma, aniridia/iris hypoplasia, corneal opacities, Axenfeld-Rieger anomaly, complex microphthalmia, and other developmental phenotypes. Through targeted gene sequencing, copy number variation analysis, and exome/genome sequencing in families affected with these disorders, we successfully identified a genetic etiology for ~50% of these families, with varying success rate for specific phenotypes. These studies identified multiple novel genes previously not associated with human disease as well as uncovered novel disease mechanisms or phenotypic extensions for known factors. However, our knowledge regarding the genetic factors involved in developmental ocular phenotypes remains incomplete and we are diligently working to identify new causes, through cutting-edge analyses of sequencing data, functional studies in zebrafish, human cell culture, and iPSC-derived disease models. This presentation will include discussion of novel approaches and exciting new candidates to explain additional families with a broad range of developmental ocular phenotypes with different clinical manifestations.

Organizer: **Elena Semina** *(USA)*
Co-organizer: **Huban Atilla** *(Türkiye)*

14:15 Genetic factors in developmental eye disorders
Elena Semina *(USA)*

14:36 Developmental eye disorders as rare diseases
Dominique Bremond-Gignac *(France)*

14:57 Clinical manifestation of developmental eye disorders
Huban Atilla *(Türkiye)*

15:18 Discussion

14:15-15:30 | Hall 3A

RF Rapid Fire 8 - COS

146 F009 Effects of DFL24498 on proinflammatory innate and adaptive immune cell responses in vitro and in a translational murine model of atopic keratoconjunctivitis
Marta Sacchetti, Anna Sirico, Maria De Lucia, Rafael Cypriano Dutra, Rubina Novelli, Giuseppina Vicaretti, Anna Lucia Valeri, Maria Concetta Dragani, Tiziana Romeo, Andrea Aramini, Marcello Allegretti *(Italy)*

225 F017 Injectable bioengineered hydrogel for the delivery of cells and extracellular vesicles to the conjunctiva
Laura García-Posadas[1], Ismael Romero-Castillo[1], Antonio López-García[1], Mark Ahearne[2], Yolanda Diebold[1] *([1]Spain, [2]Ireland)*

312 F024 Novel artificial intelligence approaches for redness hyperemia analysis
Nico Curti, Tommaso Giacometti, Luigi Fontana, Gastone Castellani, Piera Versura *(Italy)*

535 F042 Outcomes of posterior approach ptosis repair: 5-year retrospective study at a tertiary referral center
Tiago das Neves, Joana Ferreira, Ricardo Costa-Gertrudes, Pedro Lopes, Ana Magriço *(Portugal)*

556 F045 Diesel exhaust particles exposure disrupts lipid metabolism in immortalised meibomian gland epithelial cells
Ha Duong, V Cioanca, Minh Phan, Michele Madigan, Blanka Golebiowski *(Australia)*

562 F046 Preoperative ocular surface inflammation in corneal transplant candidates: role of HLA-DR expression
Silvia Odorici, Carmen Ciavarella, Michele Potenza, Daniela Pollutri, Antonio Moramarco, Luigi Fontana, Piera Versura *(Italy)*

578 F052 Evaluation of cross-linking of donor corneas following therapeutic keratoplasty in cases of infectious keratitis
Sushma Nandyala, Aafreen Bari, Himanshu Khandelwal, Namrata Sharma *(India)*

607 F056 Clinical proteomics characterized age- and tear secretion-associated molecular changes in dry eye syndrome
Natarajan Perumal, Hao Lin, Anna Lindner, Adina Glasmacher, Bettina Multani, Caroline Manicam *(Germany)*

613 F058 Extracellular vesicles and exosomes in corneal graft integration
Grace Lin, Neethi Thathapudi, Mostafa Zamani-Roudbaraki, Marie-Claude Robert, May Griffith *(Canada)*

623 F059 Examination of the potential influence of baseline corneal fluorescein staining score on dry eye symptom improvement in patients treated with ciclosporin 0.1% cationic emulsion: analysis of data from the PERSPECTIVE study
Anita Reynolds[1], Elisabeth M. Messmer[2], Ines Lanzl[2] *([1]United Kingdom, [2]Germany)*

663 F061 Comparison between Keratograph 5M® and Antares® for ocular surface evaluation
Dayan Flores Cervantes, Inas Baoud Ould Haddi, Emilio Dorronzoro Ramírez, Vanesa Blázquez Sánchez, Cristina Bonnin Arias *(Spain)*

690 F063 The role of dECM hydrogel-nap against high glucose-induced inflammation on 3D-corneal epithelium
Grazia Maugeri, Nicoletta Palmeri, Agata Grazia D'Amico, Antonio Longo, Davide Scollo, Simona Casarella, Francesca Boccafoschi, Velia D'Agata *(Italy)*

14:15-15:30 | Hall 3.1

RF Rapid Fire 9 - RV

124 S050 Bone morphogenetic protein signaling and retinal fibrosis
Mohamed AL-Shabrawey[1], Sonali Sharma[1], Ikbal Karkoukli[1], Alee Asaaf[1], Muhammad Haque[1], Gieth Alahdab[1], Mohamed Tarek[1,2], Yuji Mishina[1] *([1]USA, [2]Egypt)*

157 S051 Biodegradable ultrathin nanofibrous carrier for retinal tissue engineering: optical, mechanical and degradation properties
Hana Studenovska, Mourad Souibgui, Jitka Nováčková, Vladimír Proks, Jiří Hodan, Věra Cimrová *(Czech Republic)*

171 S052 Diabetes and diabetic retinopathy in Finland during 2000-2017 based on nationwide survey and register data
Petri Purola, Seppo Koskinen, Hannu Uusitalo *(Finland)*

206 S057 *Escherichia coli* Nissle 1917 as an adjuvant therapy reduces inflammation severity in experimental autoimmune uveitis
Klara Dusova, Petra Prochazkova, Aneta Klímová, Monika Rova, Nikolina Canova, Jarmila Heissigerova, Miloslav Kverka, Radka Roubalova, Janet Jezkova, Michaela Brichova, Petra Svozilkova *(Czech Republic)*

217 S060 Retinal vascular changes in mild cognitive impairment using SD-OCT angiography: pilot study
Lorena Elvira-Hurtado, Inés López-Cuenca, Lidia Sánchez-Puebla, José A. Matamoros, José A. Fernández-Albarral, Mario Salas-Carrillo, Pedro Gil, Ana Isabel Ramirez, Juan Jose Salazar, Rosa De Hoz, Jose Manuel Ramirez, Elena Salobrar-Garcia *(Spain)*

221 S061 Detecting retinal alterations in vascular dementia using OCT and OCTA
Lorena Elvira-Hurtado, Inés López-Cuenca, Lidia Sánchez-Puebla, José Antonio Matamoros, José A. Fernández-Albarral, Mario Salas-Carrillo, Pedro Gil, Ana I. Ramírez, Juan Jose Salazar, Rosa De Hoz, Jose Manuel Ramirez, Julian Garcia Feijoo, Elena Salobrar-Garcia *(Spain)*

222 S062 Evaluation of two novel riboflavin-based dyes for safe and effective vitreoretinal staining
Mario Troisi, Ciro Caruso, Carmine Ostacolo, Ciro Costagliola *(Italy)*

311 S068 Long-term outcomes of bilateral injection of lenadogene nolparvovec gene therapy for leber hereditary optic neuropathy
Nancy Newman[1], Patrick Yu-Wai-Man[2], Prem Subramanian[1], Sarah Thornton[1], An-Guor Wang[3], Sean Donahue[1], Bart Leroy[4], Valerio Carelli[5], Valérie Biousse[1], Catherine Vignal-Clermont[6], Alfredo Sadun[1], Robert Sergott[1], Gema Rebolleda Fernández[7], Bart Chwalisz[1], Rudrani Banik[1], Magali Taiel[6], José-Alain Sahel[1] *([1]USA, [2]United Kingdom, [3]Taiwan, [4]Belgium, [5]Italy, [6]France, [7]Spain)*

364 S076 Structural, morphology and evolution study of AMD drusenoid deposits with OCT and morphology-structural software
Corinne Gonzalez *(France)*

369 S079 Randomized, controlled study to investigate the efficacy and safety of resveratrol vitamin supplements in patients with non-proliferative diabetic retinopathy without macular edema (REVOLUTION study)
Chrysa Agapitou, Alexia Risi-Koziona, Eleni Dimitriou, Stamatios Lampsas, Panagiotis Theodossiadis, Irini Chatziralli *(Greece)*

391 S084 Early onset progressive loss of rod bipolar cells accompanied by ubiquitin punctae in Cln3delta7/8 mice
Tommi Torsti, Kai Kaarniranta, Anu Kauppinen, Markus M. Forsberg *(Finland)*

442 S089 Impact of ectopic internal retinal layers in postoperative outcomes of idiopathic epiretinal membrane
João Castro Cabanas, Daniel Ferreira Cardoso, Pedro Martins, Catarina Ferreira, Filipe Sousa Neves, Miguel Bilhoto, Paula Sepúlveda *(Portugal)*

14:15-15:30 | Hall 3.2

RV 77 - Saving the macula: novel aspects of pathology and treatment strategies in retinal diseases

Macular preservation remains a critical challenge in the management of retinal diseases, where novel therapeutic strategies are rapidly evolving. This session, "Saving the Macula: Novel Aspects of Pathology and Treatment Strategies in Retinal Diseases," will explore groundbreaking approaches in gene and cell-based therapies, innovative drug delivery methods, and advancements in genetic testing for retinal disorders. Experts from leading institutions will discuss emerging treatments for age-related macular degeneration, stem cell transplantation, and vision restoration techniques. Attendees will gain insight into cutting-edge research and clinical applications, fostering a deeper understanding of how modern ophthalmology is reshaping the future of retinal disease management.

Organizer: **Lyubomyr Lytvynchuk** *(Germany)*
Co-organizer: **Stephen Schwartz** *(USA)*

14:15 The role for genetic testing in AMD care
Stephen Schwartz *(USA)*

14:28 Cell-based therapy of retinal disorders
Kapil Bharti *(USA)*

14:41 Developing a new delivery route for stem- and gene-based therapy of retinal diseases
Lyubomyr Lytvynchuk *(Germany)*

14:54 A model for de novo pigmentation of amelanotic retinal pigment epithelial cells for cell-based therapy
Goran Petrovski *(Norway)*

15:07 How to help patients who losing their vision: update on vision aid
Marc Levy *(USA)*

15:20 Discussion

14:15-15:30 | Room 4.1

EOVS 73 - Vision requirements within demanding work environments

The content and topics of interest we put forward this year are new and reflect the continued importance and wide range of vision standards within visually demanding occupations. Visual performance can be affected by many different stimulus attributes. Vision standards set within each occupation must ensure that those applicants who pass can perform all suprathreshold, safety-critical tasks within that environment as well as normal trichromats (who have no visual / ocular disabilities). Safety cannot be compromised, but safety-critical tasks always employ suprathreshold stimuli that are well above the expected upper normal threshold limits. It is therefore also important to ensure that the standards we set do not discriminate against those applicants with mild deficiencies who are able to carry out visually demanding tasks as well as applicants with normal vision. The papers selected for presentation in this symposium focus on four key aspects of occupational vision that remain controversial.

Organizer: **John Barbur** *(United Kingdom)*
Co-organizer: **Marisa Rodriguez-Carmona** *(United Kingdom)*

14:15 The effects of long-term work in mesopic environments on different aspects of functional vision
Rafaela Garrido Mercado *(Spain)*

14:28 Improvements in colour vision assessment for train drivers
Marisa Rodriguez-Carmona *(United Kingdom)*

14:41 Changes in visual performance at lower light levels
John Barbur *(United Kingdom)*

14:54 Spatial vision following corneal refractive surgery - comparison with multifocal intraocular lenses
Ayşe Özpinar *(Türkiye)*

15:07 Refractive surgery in flying occupations
Frank Jakobs *(Germany)*

15:20 Discussion

15:35-16:15 | Room 2

PS Missoten EVER Keynote Lecture

As a Neurologist with an interest in visual disorders I have seen many patients affected by Occipital Lobe disorders. These range from visual loss (hemianopia and cortical blindness) through to positive symptoms and hallucinations. My career has spanned an era where advances in clinical assessment on the one hand and in basic science on the other have resulted in a vast mutually beneficial increase in knowledge. In my talk I hope to convince the EVER community of the continuing benefits to science and to patients of this approach.

15:35 Introduction
Marisa Rodriguez-Carmona *(United Kingdom)*

15:40 40 years with the occipital lobe
Gordon Plant *(United Kingdom*

16:05 Discussion

16:15-16:45 | Coffee break

16:45-18:00 | Room 2

SIS LC 74 - New technologies and innovations in cataract surgery

Cataract surgery is one of the most common and successful surgical procedures performed in the world today. Although cataract surgery is already an extremely safe and effective treatment for visual restoration in patients with cataract, it is constantly evolving and improving with the aim to deliver the best possible clinical outcomes in terms of safety and visual results. In this special interest symposium, we will highlight significant advancements and innovations in cataract surgery, expanding from modern AI-assisted IOL power calculation to digital navigation-assisted implantation of toric IOLs, and from femtosecond laser-assisted cataract surgery to the latest IOL technology. The purpose of this symposium is to provide useful insights into current advancements in cataract surgery not only to novice surgeons, but also to seasoned experts, thereby improving their clinical and surgical practice.

Organizer: **Zisis Gkatzioufas** *(Switzerland)*
Co-organizer: **Andrzej Grzybowski** *(Poland)*

16:45 What AI can add to cataract surgery: update 2025
Andrzej Grzybowski *(Poland)*

16:58 Digital navigation-assisted implantation of toric IOLs
Zisis Gkatzioufas *(Switzerland)*

17:11 Arc stérile: a new surgical space for cataract surgery
Louis Arnould *(France)*

17:24 Evolution of IOL technologies
Mayank Nanavaty *(United Kingdom)*

17:37 Accommodating IOLs, evolution and future
Rafael I. Barraquer *(Spain)*

17:50 Discussion

16:45-18:00 | Room B

SIS COS 27 - Neuroimmune crosstalk in the cornea: new insights into sensory and immune interactions

The concept of corneal "immune privilege" has been extensively studied since its initial conception. The cornea is endowed with a significant population of resident immune cells, whose function in ocular physiology extends beyond pathogen defence. Interactions between these immune cells and other corneal components, such as sensory nerves, appear to play a crucial role not only in inflammatory and pathological conditions but also in maintaining corneal homeostasis. In this symposium, we will discuss the latest advances in corneal neuroimmune interactions research and their potential implications for health and disease, presented by leading experts and promising early-career researchers in the field. To encourage the participation of young investigators, one presentation will be selected from the abstracts submitted by early-career researchers in the field.

Organizer: **M. Carmen Acosta** *(San Juan de Alicante)*
Co-organizer: **Laura Frutos-Rincón** *(Spain)*

16:45 Corneal neuropathy: cause or consequence
Reza Dana *(USA)*

17:01 Corneal neuroimmune interactions and pain: unraveling the complex connections
Réaux-Le Goazigo Annabelle *(France)*

17:17 Uncovering functional interactions between dendritic cells and sensory nerves in the healthy cornea
Laura Frutos-Rincón *(Spain)*

17:33 Provisional title: Neuroinflammation: connecting pain and inflammation
Giulio Ferrari *(Italy)*

17:49 Discussion

16:45-18:00 | Hall 3.1

FP Free Paper Session 2

360 High-purity functional corneal endothelial cells from human induced pluripotent stem cells via a novel wash-out method
Kyu Sang Eah, Eun-Ah Ye, Changmin Kim, Ryun Hee Lee, Yeji Yoon, Jiyoon Park, Jae Yong Kim, Hun Lee *(South Korea)*

365 The soluble guanylate ciclase stimulator BAY 41-2272 attenuates transforming growth factor Beta1-induced myofibroblast differentiation of human corneal keratocytes
Matilde Buzzi, Rita Mencucci, Mirko Manetti *(Italy)*

459 A meta-analysis of the efficacy of trehalose/hyaluronic acid eyedrops on dry eye signs and symptoms
Piera Versura[1], Antonio Mateo-Otobia[2], Alexandros Gryparis[3], Foteini Zarokosta[3], Chiambaretta Frédéric[4] *([1]Italy, [2]Spain, [3]Greece, [4]France)*

474 Theranostic-guided corneal cross-linking in progressive keratoconus: insights from the Siena experience
Elia Chiavetta, Mario Fruschelli, Rita Mencucci, Alberto Carnicci, Matilde Buzzi, Marco Lombardo *(Italy)*

490 Relationship between lifestyle habits and corneal biomechanics and segmental biometry in myopic eyes
Beatriz Vieira[1], Gabriel Santos[1], João Heitor Marques[1], Renato Ambrósio[2], Pedro Menéres[1], João Melo Beirão[1], Pedro Baptista[1] *([1]Portugal, [2]Brazil)*

509 Light discomfort thresholds under different lighting conditions in healthy subjects and dry eye patients
Filippo Lixi[1], Giulia Coco[1], Claudia Corda[1], Edoardo Villani[1], Alessandra Curci[1], Carina Slidsborg[2], Giuseppe Giannaccare[1] *([1]Italy, [2]Denmark)*

16:45-18:00 | Hall 3.2

SIS MBGE 48 - Contribution of genetic and environmental factors to the development and protection of myopia

Myopia, also called nearsightedness, is a condition in which objects in the distance are blurred. Both, genetic and environmental factors may cause this condition. Recent findings have shown that myopia is the most common ocular disorder worldwide with an increasing prevalence in the last 40 years. It is predicted that the worldwide prevalence of myopia will increase from the current 25 to 50% in the next three decades, while the prevalence already exceeds 80% in several parts of Asia. Isolated myopia is rare, which represent a non-syndromic severe myopia, which may be associated with cataract and retinal detachment that may lead to blindness. In addition, high myopia may also occur in other rare disorders, e.g. in retinal disorders like retinitis pigmentosa and congenital stationary night blindness. The aim of this symposium is to summarize the knowledge of myopia in respect to clinical aspects of myopia, the identification of candidate genes and environmental factors by genome-wide association studies and by in vivo modeling.

Organizer: **Christina Zeitz** *(France)*
Co-organizer: **Baptiste Wilmet** *(France)*

16:45 Myopia and OCT
Falk Schrödl *(Austria)*

17:01 Importance of phenotyping patients with myopia
Isabelle Audo *(France)*

17:17 Modulation of all- trans retinoic acid by light and dopamine in the murine eye
Virginie Verhoeven *(USA)*

17:33 Shedding light of myopia using mouse models in inherited retinal disorders
Baptiste Wilmet *(France)*

17:49 Discussion

16:45-18:00 | Room 4.1

SIS EOVS 79 - Innovative early-age-related macular degeneration (AMD) phenotyping

The Symposium explores cutting-edge methods for early Age-Related Macular Degeneration (AMD) detection through imaging and computational analysis. The first session introduces the need for Early AMD biomarkers, emphasizing the challenges of applying traditional clinical grading schemes to Optical Coherence Tomography (OCT) images, and closing with clinical implications for early AMD screening and progression monitoring. Lisa Nivison-Smith presents RPE curvature analysis highlighting its correlation with drusen development and its potential for early AMD screening. The next talk by Thomas Peschel focuses on exact drusen masking as ground truth, comparing manual, semi-automated, and fully automated segmentation methods to enhance AMD classification and progression assessment. Marcus Wagner describes feature recognition by descriptomics as innovative early AMD phenotyping. He introduces stereology as a robust method for quantifying drusen volume, providing statistical advantages over binary segmentation. A panel discussion addresses the integration of AI and statistical models, standardization challenges, and clinical translation. The symposium fosters interdisciplinary collaboration to advance AMD phenotyping and precision medicine.

Organizer: **Franziska G. Rauscher** *(Germany)*
Co-organizer: **Marcus Wagne**r (Germany)

16:45 Retinal pigment epithelium (RPE) curvature as an early AMD biomarker
Lisa Nivison-Smith *(Australia)*

17:03 Exact masking of drusen by desktop application for manual grading of Early-AMD lesions – Precision in AMD segmentation
Thomas Peschel *(Germany)*

17:21 Recognition of Early-AMD lesions in retinal OCT scans by descriptomic
Marcus Wagner *(Germany)*

17:39 Discussion

18:00-18:45 | Room 2

GA **General Assembly**

18:45-19:15

BM **Business Meetings**

ACB - COS - EOVS	**Room 2**
G - IM - LC	**Room B**
MBGE	**Hall 3A**
NSPH	**Hall 3.1**
PBP - PO	**Hall 3.2**
RV	**Room 4.1**

08:30-09:15 | Room 2

PS EVER ACTA Lecture

An overview on new diagnostics regarding ocular surface neoplasia will be discussed, This includes high resolution optical coherence tomography, in vivo confocal microscopy and high resolution UBM. Furthermore, new clinical observations along with treatment modalities for conjunctival melanoma including targeted therapy and the use of check point inhibitors for metastases will be discussed. Malignant lymphoma of the conjunctiva, clinics along with treatment modalities such as low dose radiation therapy will be discussed. Conjunctival squamous cell carcinoma will be presented with clinical signs, two different subtypes due to HPV positivity, treatment modalities and new immunotherapy.

08:30 Introduction
Kai Kaarniranta *(Finland)*

08:35 Current developments in the diagnosis and therapy of ocular surface neoplasias
Steffen Heegaard *(Denmark)*

09:05 Discussion

09:15-10:30 | Room 2

SIS MBGE 49 - Disease modelling in inherited retinal disorders

This session aims to deliver input about disease modelling in inherited retinal disorders

Organizer: **Christina Zeitz** *(France)*
Co-organizer: **Baptiste Wilmet** *(France)*

09:15 Title TBD
Vinit Mahajan *(Austria)*

09:31 Title TBD
Olivier Goureau *(France)*

09:47 Title TBD
Mike Cheetham *(United Kingdom)*

10:03 Title TBD
Rossella Valenzano *(The Netherlands)*

10:19 Discussion

09:15-10:30 | Room B

SIS COS 75 - New technologies and innovations in corneal surgery

Corneal surgery has evolved rapidly over the last years. The introduction and refinement of lamellar transplantation techniques, as well as advancements in tissue bio-engineering and regenerative medicine have revolutionized corneal transplantation surgery. Moreover, translational research has contributed enormously towards the fabrication of artificial corneal transplants. Finally, employment of modern technology, such as the use of femtosecond laser, together with technological innovations including intraoperative optical coherence tomography or 3D head-up surgery, provided increased precision and safety, particularly in complex cases. In this special interest symposium, we provide useful insights into new technologies and innovations in corneal surgery, aiming to improve the clinical and surgical practice of both novice surgeons and seasoned experts in the field.

Organizer: **Zisis Gkatzioufas** *(Switzerland)*
Co-organizer: **Thomas Fuchsluger** *(Germany)*

16:45 Current approaches in corneal endothelial bioengineering
Gilles Thuret *(France)*

16:58 Artificial cornea – Where are we standing?
Thomas Fuchsluger *(Germany)*

17:11 Intraoperative OCT applications in corneal surgery
Zisis Gkatzioufas *(Switzerland)*

17:24 Femtosecond laser applications in corneal transplantation
Mohamed Elalfy *(Egypt)*

17:37 Novel surgery for acute corneal hydrops
Arne Viestemz *(Germany)*

17:50 Discussion

09:15-10:30 | Hall 3A

SIS Woman in EVER

09:15-10:30 | Hall 3.1

FP Free Paper Session 3

514 Deciphering the role of miRNAs derived from licensed mesenchymal stromal cells extracellular vesicle cargo in the regeneration of the corneal epithelium
Manon Jammes[1], Yedizza Rautavaara[2], Seyedmohammad Moosavizadeh[1], Petros Moustardas[2], Trung Bach[1], Abbas Tabasi[1], Jiemin Wang[1], Neil Lagali[2], Thomas Ritter[1] *([1]Ireland, [2]Sweden)*

517 Change in central corneal thickness after descemet membrane endothelial keratoplasty in fibrillar layer positive vs. negative fuchs endothelial corneal dystrophy eyes
Mert Mestanoglu, Antonia Howaldt, Nihan Demiralay, Claus Cursiefen, Björn Bachmann, Mario Matthaei *(Germany)*

518 The impact of sex on injury-induced corneal denervation: implications for the ocular surface
Giuseppe Suanno, Philippe Fonteyne, Silvia Palombella, De Micheli Massimo, Francesco Bandello, Giulio Ferrari *(Italy)*

552 Topographic astigmatism after deep anterior lamellar keratoplasty: orientation, power, and correlation with preoperative values
Antonia Carmen Sangregorio, Andrea Taloni, Maria Angela Romeo, Giuseppe Alessio, Andrea Lucisano, Vincenzo Scorcia, Giovanna Carnovale Scalzo *(Italy)*

576 Ultra-structure of corneal stroma, collagen fibril and interfibrillar spacing in myopic cornea and myopic cornea treated with pallet containing L-tyrosine
Saeed Akhtar[1], Bartosz Machna[2], Adrian Smedowski[2] *([1]Saudi Arabia, [2]Poland)*

590 Understanding preservative effects on bioequivalence of topical ocular products
Eva Maria del Amo[1], Susanna Posio[1], Jooseppi Puranen[1], Annika Valtari[1], Anam Hammid[1], Mira Laurila[1], Katariina Kauppinen[1], Lea Piskanen[1], Eetu Valkama[1], Yan Wang[2], Andre O'Reilly Beringhs[2], Amir Sadeghi[1], Elisa Toropainen[1], Kati-Sisko Vellonen[1], Arto Urtti[1] *([1]Finland, [2]USA)*

09:15-10:30 | Hall 3.2

C G 32 - Why gonioscopy still remains essential in the time of anterior segment OCT

Besides the examination of optic nerve head and retinal nerve fiber bundles, gonioscopy is the most important examination we have when performing structure analysis. The differentiation between angle closure, angle closure suspect and open angle is essential not only for the correct diagnosis, but as well in order to draw the best therapeutic consequences out of these findings. In addition to grading systems that help us to classify the types of glaucoma, we can find pathological changes like abnormal vessels, inflammatory induced changes, pigmentations, clefts etc. that help us to make the right diagnosis and therapy. Nowadays, AS-OCT is a big help and makes it a lot easier, but there are still essential deficits, that do not allow to replace gonioscopy completely by this new examination. In this course, we will show what we can see in normal and pathological eyes and which findings can be observed in AS-OCT and which cannot. We will also explain how a state of the art gonioscopy examination is performed.

Organizer: **Anton Hommer** *(Austria)*
Co-organizer: **Doreen Schmidl** *(Austria)*

09:15 Normal findings
Nikolaus Hommer *(Austria)*

09:36 Abnormal findings
Anton Hommer *(Austria)*

09:57 Comparison AS-OCT and others vs. gonioscopy
Doreen Schmidl *(Austria)*

10:18 Discussion

09:15-10:30 | Room 4.1

C IM 68 - Controversies in ocular inflammation

This session will explore key debates in the diagnosis and management of ocular inflammatory diseases, examining the evolving role of imaging modalities and treatment strategies. Experts will discuss whether fluorescein angiography remains essential in the era of OCT angiography, the necessity of indocyanine green angiography in diagnosing Birdshot chorioretinopathy, and the choice between systemic and local therapy in ocular lymphoma. Additionally, we will assess whether multimodal imaging can replace traditional clinical examination and if local therapies can serve as alternatives to conventional immunosuppression. Through case-based discussions and interactive debates, this session will challenge current paradigms and provide insights into optimizing patient care in ocular inflammation.

Organizer: **Ester Carreño Salas** *(Spain)*
Co-organizer: **François Willermain** *(Belgium)*

09:15 Can multimodal imaging substitute clinical examination?
Will Tucker *(United Kingdom)*

09:28 Is dye really needed today? Fluorescein angiography vs OCTA
Ester Carreño Salas *(Spain)*

09:41 Is ICG mandatory in birdshot chorioretinopathy?
Colin Chu *(United Kingdom)*

09:54 Can local therapy substitute conventional immunosuppression?
François Willermain *(Belgium)*

10:07 Lymphoma: systemic or local therapy?
Jarmila Heissigerova *(Czech Republic)*

10:20 Discussion

10:30-11:00 | Coffee break

11:00-12:00 | Poster Area

POS Poster Session 3

12:05-12:50 | Room 2

PS Ophthalmic Research Lecture

12:05 Introduction
Hendrik Scholl *(Austria)*

12:10 Keynote lecture
Bart Leroy *(Belgium)*

12:40 Discussion

13:00-14:00

CIS **Industry Sponsored Lunch Symposia**

14:10-15:25 | Room 2

C **MBGE / ACB 55 - Genomic DNA and Single-cell sequencing technologies**

Systems biology and big data are rapidly transforming biomedical science. This joint course, organized by MGBE and ABC, introduces advanced technologies used in genomic DNA and single-cell research. The course covers key methodologies, including exome and genome sequencing for monogenic diseases, long-read genome sequencing for rare disease diagnostics, and single-cell RNA sequencing (scRNA-seq) alongside chromatin accessibility analysis (ATAC-seq). Participants will gain insights into the applications and interpretation of these technologies in biomedical research.

Organizer: **Joni Turunen** *(Finland)*
Co-organizer: **Heli Skottman** *(Finland)*

14:10 Exome and genome sequencing in monogenic diseases
Mathieu Quinodoz *(Switzerland)*

14:31 Rare disease diagnostics with long-read genome sequencing
Stephan Ossowski *(Germany)*

14:52 Single-cell RNA sequencing (scRNA-seq) and assay for transposase-accessible chromatin using sequencing (ATAC-seq) analyses
Jo Zhou *(The Netherlands)*

15:13 Discussion

14:10-15:25 | Room B

SIS **COS 60 - Tear fluid biomarkers of the ocular surface: diagnostics, immunology and methodology**

Tear fluid is emerging as a source of non-invasive biomarkers since tear fluid biomarkers are the only way to gather biological information about the ocular surface in real time. During this Special Interest Group session, presentations will explore the diagnostic value of these biomarkers in limbal stem cell deficiency and dry eye disease, as well as their significance in ocular immunology. A critical overview of current research methodologies will address common practices and challenges in the field. Furthermore, the session will introduce recent insights into tear fluid miRNAs, discussing their potential applications in non-invasive diagnostics. Overall, the programme aims to stimulate thoughtful discussion on the interdisciplinary links between ocular surface biology and immunology, with an emphasis on clinical relevance and future research directions.

Organizer: **Marlies Gijs** *(The Netherlands)*
Co-organizer: **Piera Versura** *(Italy)*
Co-organizer: **Amalia Enriquez de Salamanca** *(Spain)*

14:10 Optimization of tear fluid collection methods for multi-omics analysis
Clemence Bonnet *(USA)*

14:23 Tear fluid biomarkers in ocular immunology
Antonio Di Zazzo *(Italy)*, Alessandra Micera *(Italy)*

14:36 Advances in tear fluid biomarkers for dry eye disease
Christophe Baudouin *(France)*

14:49 Methodology of tear fluid biomarker research: common practices and challenges
Marlies Gijs *(The Netherlands)*

15:02 Tear fluid biomarkers for ocular pain
Amalia Enriquez de Salamanca *(Spain)*

14:10-15:25 | Hall 3.1

FP Free Paper Session 4

598 Spironolactone as a candidate for ocular surface regeneration: evidence from a limbal stem cell model
Raquel Gregorio Arribada, Rodrigues-Braz Daniela, francine Behar-Cohen *(France)*

647 Contralateral-eye analysis of deep anterior lamellar keratoplasty versus mushroom penetrating keratoplasty over 5 years
Andrea Taloni, Raphael Kilian, Valentino De Ruvo, Georgiana Camburu, Luigi De Rosa, Niccolò Salgari, Andrea Sollazzo, Angeli Christy Yu, Massimo Busin *(Italy)*

652 Distribution of chondroitin sulphate glycosaminoglycan in rat corneal stroma treated with Ultravoilet-A and Riboflavin: Ultrastructural studies
Saeed Akhtar[1], Turki Almubrad[1], Aljohara Alkanaan[1], Adrian Smedowski[2] *([1]Saudi Arabia, [2]Poland)*

610 Evaluating burden of dry eye disease using utility scores: a mapping approach with "Ocular Surface Disease Index" and "European Quality of Life Five Dimensions"
Sihem Lazreg[1], Julia Gonzalez[2] *([1]Algeria, [2]France)*

259 Selective serotonin reuptake inhibitor (SSRI) for amblyopia treatment: a systematic review and meta-analysis of randomized controlled trials
Ehtesham Shamsher[1], Luisa de Barros Saccaro[2], Victor Barreiros Pungirum[3], Bao Nghi Tran[4], Omar Alghaith[1], Fatemeh Khabazianzadeh[5], I. Betina Ip[1], Holly Bridge[1] *([1]United Kingdom, [2]Brazil, [3]Argentina, [4]Hungary, [5]Iran)*

180 Identification and validation of a novel anti-angiogenic factor
Xiaomeng Wang, Ching-Jou Chen, Hang-Tang Chen *(Singapore)*

SATURDAY
11 OCTOBER 2025

14:10-15:25 | Hall 3.1

C PO 65 - Identifying histopathological lesions in AMD: BLamD, BLinD, and soft drusen for research and clinical practice

This course provides an in-depth examination of histopathological lesions associated with age-related macular degeneration (AMD), including basal laminar deposit (BLamD), basal linear deposit (BLinD), and soft drusen. Participants will learn to identify these lesions in tissue samples through case-based learning and practical insights applicable to research, post-mortem examinations, and pathology practice. The session combines didactic presentations, panel discussions, and audience interaction to ensure comprehensive learning. At the conclusion of this course, the attendee will be able to: 1. identify and differentiate BLamD, BLinD, and soft drusen in histological samples; 2. understand the significance of these lesions in AMD progression and research contexts; 3. Apply histological diagnostic techniques to improve post-mortem examination and pathology reporting; 4. recognise challenges and limitations in identifying AMD-associated lesions and discuss solutions; 5. Utilise structured reporting templates for these lesions in clinical and research practice.

Organizer: **Svetlana Cherepanoff** *(Australia)*

14:10 Didactic Presentation 1: Recognising AMD-specific lesions in resin and paraffin sections
Svetlana Cherepanoff *(Australia)*

14:30 Didactic Presentation 2: AMD mimics on ex vivo imaging: histological keys to accurate diagnosis
Svetlana Cherepanoff *(Australia)*

14:50 Panel Discussion

14:10-15:25 | Hall 3.2

SIS G 81 - Back to big surgery

Glaucoma, a leading cause of irreversible blindness worldwide, necessitates effective management strategies to preserve vision and quality of life. Despite advances in pharmacological treatments, some patients experience inadequate intraocular pressure (IOP) control or suffer from medication side effects. Surgery offers significant advantages over medical management for glaucoma patients, particularly in those with advanced or refractory disease. Filtration surgery presents notable advantages over minimally invasive glaucoma surgery (MIGS) for treating glaucoma, especially in cases of advanced or poorly controlled disease. One of the key benefits of filtration surgery is its effectiveness in achieving substantial and sustained reduction in intraocular pressure (IOP), often surpassing the levels attainable through MIGS. Furthermore, filtration surgery typically provides a longer-lasting solution, with the potential for fewer reoperations compared to MIGS, which may require additional procedures over time to maintain IOP control. Additionally, filtration surgery has a well-established track record and comprehensive understanding of postoperative management, whereas MIGS, being newer, may have varying outcomes that are still being studied. By offering robust IOP control and durability in treatment outcomes, filtration surgery remains a cornerstone in the management of glaucoma.

Organizer: **Adrian Smedowski** *(Poland)*
Co-organizer: **Miriam Kolko** *(Denmark)*

14:10 Back to big surgery
Adrian Smedowski *(Poland)*

14:26 Back to trabeculectomy
Carlo Traverso *(Italy)*

14:42 Back to tubes
Karl Mercieca *(Germany)*

14:58 Back to deep sclerectomy
Cédric Schweitzer *(France)*

15:14 Discussion

14:10-15:25 | Room 4.1

SIS IM 72 - How nutrition and dysbiosis are implicated in uveitis; therapeutic opportunities

This symposium will outline the cellular, hormonal, immune, and neural signalling mechanisms that link the gut microbiome, immune system, and eye health focussing on uveitis. We will explore some of the research related to microbiota imbalance and the association with inflammatory conditions that can affect the eye, and the use of probiotics and prebiotics as potential treatment for managing ocular inflammatory conditions. We will also discuss how nutrition and lifestyle impact systemic and ocular health by exploring the effects of Western diet, sedentary lifestyle, stress and disrupted sleep on gut microbiota and metabolic health, and how these factors result in insulin resistance, mitochondrial dysfunction, and systemic and ocular inflammation. We will conclude with an overview of the socioeconomic determinants of health, and associated discrepancies in visual impairment and eye care services, and discuss how food insecurity and nutritional inequalities can lead to ocular diseases.

Organizer: **Jarmila Heissigerova** *(Czech Republic)*
Co-organizer: **Gabriela Ortiz Nieva** *(United Kingdom)*

14:10 General introduction
Teresa Sandinha *(United Kingdom)*

14:26 Broad description of the association of microbiota imbalance in systemic and ocular pathologies
Gabriela Ortiz Nieva *(United Kingdom)*

14:42 The gut immunology, microbiome and intestinal barrier disruption impact in the posterior segment inflammation: experimental evidence and potential clinical applications.
Jarmila Heissigerova *(Czech Republic)*

14:58 Nutrition and life style influences on the cellular and gut health
Russel Philips *(Australia)*

15:14 Discussion

15:25-15:55 | Coffee break

16:00-16:45 | Room 2

PS European Academy of Ophthalmology Lecture

Two approaches of controlling the refractive state of tunable lenses are presented:
1. Bipolar contact lens ring electrodes positioned on the scleral conjunctiva right above the ciliary muscle allowed volunteers to use accommodative biopotentials at the surface of the eye to control the refractive state of electrically tunable external lenses. Presbyopes (>75 y) were able to use such biopotentials of their neuronal accommodation reflex to properly focus via electrically tunable lenses a series of computer-controlled optotypes randomly presented for far and near vision up to a 3 dpt accommodative demand.
2. Bipolar intraocular ring electrodes were implanted in Cynomolgous monkeys into the sulcus behind the iris in front of the anterior capsule, contacting the ciliary muscle. Its biopotentials were continuously recorded and wirelessly transmitted via a microcontroller, biopotential amplifier and a Bluetooth interface, positioned on an encapsulated flexible H-shaped printed circuit board (12x18 mm) placed under the superior rectus muscle, powered by a retrobulbar button-cell battery.
Summary: These experiments demonstrate that ciliary muscle biopotentials can be used to restore accommodation via electrically tunable lenses using the natural accommodation-reflex loop of the central nervous system that is defective in presbyopia. Although it will be still a long way to go until the first implantation in man, we have shown in volunteers and cynomolgus monkeys the principal feasibility of such a system to restore accommodation.

12:05 Introduction
Andrej Grzybowski *(Poland)*

12:10 Keynote Lecture
Eberhart Zrenner *(Germany)*

12:40 Discussion

16:45-18:00 | Room 2

SIS MBGE 56 - Recent breakthroughs in the genetics of inherited retinal diseases

This session aims to deliver input about disease modelling in inherited retinal disorder.

Organizer: **Joni Turunen** *(Finland)*
Co-organizer: **Christina Zeitz** *(France)*

16:45 Genetic discoveries in inherited retinal diseases in Finland
Joni Turunen *(Finland)*

17:01 Novel gene defect identification in inherited retinal disease
Christina Zeitz *(France)*

17:17 Structural variants causing retinal dystrophies
Alison Hardcastle *(United Kingdom)*

17:33 Variants in U4 and U6 small nuclear RNA genes cause retinitis pigmentosa
Mathieu Quinodoz *(Switzerland)*

17:49 Discussion

16:45-18:00 | Room B

C COS 33 - Advanced microscopy techniques in the diagnosis of ocular surface diseases

Diagnosing ocular surface diseases is challenging due to their complexity and variability. Traditional methods, such as slit-lamp biomicroscopy and fluorescein staining, provide limited insights into cellular and subcellular changes in conditions like dry eye, allergic conjunctivitis, and infectious keratitis. These disorders often share overlapping symptoms, complicating accurate diagnosis. Subtle changes, such as glaucoma therapy-induced conjunctival damage, are also difficult to detect with conventional tools. Advanced techniques like in vivo confocal microscopy (IVCM) and scanning electron microscopy (SEM) provide high-resolution imaging of the ocular surface, enabling early detection of cellular abnormalities and pathogens. SEM is especially valuable in assessing infectious keratoconjunctivitis with negative culture results and cases unresponsive to broad-spectrum antibiotics. It also identifies changes in epithelial microvilli, an early biomarker of ocular surface health. However, challenges related to accessibility, expertise, and integration into clinical care limit their use. This course will explore the various microscopy techniques and the use of artificial intelligence in enhancing diagnostic and treatment outcomes.

Organizer: **Mario Troisi** *(Italy)*
Co-organizer: **Salvatore Del Prete** *(Italy)*

09:15 In vivo microscopic approach: the confocal microscopy
Maria Laura Passaro *(Italy)*

09:31 Ex vivo microscopic techniques for ocular infections and microbiome analysis
Salvatore Del Prete *(Italy)*

09:47 Scanning electron microscopy (SEM) applications in dry eye, allergies, and drug tolerability
Mario Troisi *(Italy)*

10:03 Future directions in ocular surface imaging: integrating AI to enhance microscopic diagnostics
Mario Savastano *(Italy)*

10:19 Discussion

16:45-18:00 | Hall 3A

SIS LC 71 - Learning ophthalmic surgery in virtual reality

Virtual reality training is mandatory in the flight industry and is increasingly becoming mandatory for surgical training in medicine. The SIS will cover principles of motor skill learning, skill monitoring, expected evolution of skill during motor skill learning, and challenges in cataract surgery. Then, the technology behind ophthalmic virtual reality surgery will be presented. Subsequently, the development and experience of introducing virtual reality training as a mandatory step before ophthalmic surgery in patients, will be covered. Thereafter, strategies for and experience of measuring evidence for improvement of surgical skill with virtual reality training of cataract surgery will be presented. Finally, evidence for improvement of ophthalmic surgical skill will be presented. A simulator for virtual reality cataract surgery will be made available at the meeting for trial sessions.

Organizer: **Per Soderberg** *(Sweden)*
Co-organizer: **Ann Sofia Skou Thomsen** *(Denmark)*

16:45 Principles of motor skill learning and challenges in learning cataract surgery
Per Soderberg *(Sweden)*

16:58 The technology behind ophthalmic virtual reality surgery
Eva Skarman *(Sweden)*

17:11 Introducing virtual reality training as a mandatory step before surgery in patients
Ann Sofia Skou Thomsen *(Denmark)*

17:24 Measuring evidence for improvement of skill with virtual reality training
Zhaohua Yu *(Sweden)*

17:37 Evidence for improved surgical skill after virtual reality training
Amalie Carlsson *(Denmark)*

17:50 Discussion

16:45-18:00 | Hall 3.1

SIS **Young Ophthalmologists and Vision Researchers Session EVER**

16:45-18:00 | Hall 3.2

C **PO 69 - Scaling of Fundoscopy Images: optical origins, correction methods and impact on clinical studies**

Fundus photography is widely used in ophthalmology for diagnosing and monitoring retinal diseases. However, due to individual variations in ocular anatomy and optics, refraction introduces scaling differences that prevent accurate distance measurements on individual fundus images. In this course, we will introduce the optical principles underlying these scaling variations and discuss various methods to correct them, incorporating impacts from ocular anatomy as well as camera design. Furthermore, we will present straightforward phantoms that can be used to calibrate your own camera. The course will then demonstrate the clinical and scientific relevance of these corrections in different contexts of research and clinical routine, for example, by improving the quantification of patchy chorioretinal atrophy in highly myopic patients. Importantly, we will also explain methods for correction in longitudinal studies or when following patients over time, this includes facilitating the impact of emmetropization. Finally, we will examine recent advancements aimed at extending these correction methods to the entire retina, with a particular focus on their applications in radiotherapy planning for ocular tumors, where precise localization is critical for treatment success.

Organizer: **Jan-Willem Beenakker** *(The Netherlands)*
Co-organizer: **Rebekka Heitmar** *(United Kingdom)*

16:45 Understanding and correcting for scaling of fundus photographs
Jan-Willem Beenakker *(The Netherlands)*

17:01 Impact of emmetropization and refractive errors on fundus images
Rebekka Heitmar *(United Kingdom)*

17:17 Correcting for changes in refractive error in longitudinal studies
Kirsty Tatiana Rodríguez-Ramírez *(Germany)*

17:33 Peripheral images scaling of fundus photographs and their implications in ocular oncology
Corné Haasjes *(The Netherlands)*

17:49 Discussion

16:45-18:00 | Room 4.1

SIS **ACB 57 - Advancing our understanding of corneal diseases with human cell-based approaches**

Session will showcase a series of research examples highlighting the critical role of human cell-based models in understanding and treating corneal diseases. Each presentation will demonstrate why and how these models are indispensable tools for studying corneal development, unravelling disease mechanisms, and exploring potential therapeutic interventions. By delving into these innovative methodologies, the session aims to underscore the importance of human cell-based models in advancing our knowledge and treatment of corneal diseases.

Organizer: **Heli Skottman** *(Finland)*
Co-organizer: **Jo Zhou** *(The Netherlands)*

16:45 Immortalized cell lines from primary aniridia limbal epithelial cells as models for congenital aniridia
Nora Szentmary *(Germany)*

17:01 Transcriptional profiling of NLRP3 inflammasome-activated monocytes in keratitis fugax hereditaria
Sabita Kawan *(Finland)*

17:17 Single-cell RNA-seq on human cornea organoids
Dulce Lima Cunha *(The Netherlands)*

17:33 Harnessing human pluripotent stem cells for corneal tissue modeling
Heli Skottman *(Finland)*

17:49 Discussion

18:05-18:40 | Room 2

PS **Prize Award Ceremony and Closing Remarks**

18:40-19:10
Farewell Reception

Poster Session 1

12:05-13:20

POS Poster Session ACB

99 T001 Comparative study of the ciliary body in mice and humans: new structural and vascular insights
Patricia Jaramillo, Ana Carretero, David Ramos González, Jesús Ruberte *(Spain)*

530 T002 *rf* Environmental, sex-dependent, and inflammasome-mediated modulation of retinal ganglion cell survival following LPS-induced sepsis
Kristy T. Rodríguez-Ramírez, Ana Isabel Gómez, Pablo Pelegrín, Marta Agudo-Barriuso *(Spain)*

POS Poster Session IM

191 T003 Optical coherence tomography biomarkers in Vogt-Koyanagi-Harada disease: a longitudinal analysis of choroidal vascularity index and choroid thickness
Vasco Lobo, Afonso Lima-Cabrita, Rafael Whitfield, Filomena Pinto, Sofia Mano, Ines Leal *(Portugal)*

465 T004 *rf* Ocular sarcoidosis - A case series in a tertiary uveitis clinic
Pedro Martins, Sofia Teixeira, Daniel Ferreira Cardoso, João Castro Cabanas, Catarina Ferreira, Sofia Fonseca *(Portugal)*

492 T005 *rf* Objective quantification of anterior uveitis inflammation using artificial intelligence: a scoping review
Muneeb Ahmad Khan, Diya Baker *(United Kingdom)*

522 T006 Refractory ocular inflammation in granulomatosis with polyangiitis: a rare case of anterior non-necrotising scleritis with pan-uveitis requiring enucleation
Sohail Daniel, Priya Bhatt, Abdelsattar Farrag *(United Kingdom)*

591 T007 *rf* To assess inflammatory markers corresponding to gut dysbiosis and macrophage activation in plasma of Idiopathic Uveitis (IU) patients
Nabanita Halder, Gayatri Suresh, Madhu Nath, Rohan Chawla, Thirumurthy Velpandian *(India)*

634 T008 Unilateral presentation of acute posterior multifocal placoid pigment epitheliopathy in a 16-year-old patient following influenza-B infection
Efthymia Kalogera, Evangelos Spanos, Nikolaos Garyfallos, Michael Karampelas, Vasileios Peponis, Kallirroi Konstantopoulou *(Greece)*

707 T009 Value of the Quantiferon Tb Gold Plus test in the diagnosis of presumed tuberculosis uveitis: a report of 258 cases
S. Aitbaziz, S. Djoudi, S. Bouayad, Y. Seghiri, D.J. Souttou *(Algeria)*

708 T010 Anterior chamber puncture a useful diagnostic tool
S. Aitbaziz, S. Djoudi, S. Bouayad, D.J. Souttou *(Algeria)*

POS Poster Session MBGE

67 T011 The profile of keratoconus in 60 years of age and older: a population-based study
AbbasAli Yekta, Hasan Hashemi, Mehdi Khabazkhoob, Alireza Jamali, Hadi Ostadimoghaddam, Asieh Ehsaei, Yeganeh Yekta, Reihaneh Yekta *(Iran)*

119 T012 Determinants of disability among people with diabetes in Kotayk province of Armenia
Aida Giloyan, Diana Muradyan, Tsovinar Harutyunyan, Varduhi Petrosyan *(Armenia)*

153 T013 *rf* Myopia in football player: influence of outdoors activities measured by conjunctival ultraviolet autofluorescence biomarker
Sergio Recalde, Alejandro Güemes, Maria Hernandez, María Fraga de la Viesca, Miriam De la Puente, Cristina Irigoyen, Jaione Bezunartea, Maite Moreno Orduña, Manuel Saenz de Viteri, Jesús Barrio, Valentina Bilbao, Jorge Gonzalez-Zamora, Alfredo García Layana *(Spain)*

160 T014 *rf* Deep lerning-based morphometry of the human orbit using MRI data from the German NAKO study
Navid Farassat[1], Kevin Wornath[1], Moises Fuentes[1], Marco Reisert[1], Susanne Rospleszcz[1], Javier Rodriguez-Zabala[2], Daniel Böhringer[1], Christopher Schlett[1], Wolf Lagrèze[1] *([1]Germany, [2]Colombia)*

161 T015 The impacts of high refractive errors on self-reported visual function and mental health
Arevak Saruhanian, Jens Møller, Jens Rovelt Andreasen, Josefine Freiberg, Marcel Reimann, Jeppe Samuelsen, Miriam Kolko, Nina Jacobsen *(Denmark)*

184 T016 A qualitative study exploring patient attitudes towards novel therapies for inherited retinal dystrophies
Marcela Votruba *(United Kingdom)*

309 T017 The effects of mutation and age at onset on individual disease trajectories in Leber hereditary optic neuropathy eyes from the Case Record Survey-2
Marcela Votruba[1], Bart Leroy[2], Patrick Yu-Wai-Man[1], Judith Van Everdingen[3], Maciej Krawczynski[4], Valerio Carelli[5], Xavier Llòria[5], Thomas Klopstock[6] *([1]United Kingdom, [2]Belgium, [3]The Neterlands, [4]Poland, [5]Italy, [6]Germany)*

318 T018 One-year mortality after ophthalmic surgery: impact of age and ASA classification in a 10-year cohort
Rafael Whitfield, Joana Pargana, Henrique Reis, Vasco Lobo, Luis Abegão Pinto *(Portugal)*

373 T019 CRB1-associated retinopathy: new insights from a Portuguese cohort
Joana Ferreira[1], Ricardo Gertrudes[1], Kaminska Karolina[2], Luísa Santos[1], Ana Berta Sousa[1], Rita Anjos[1], Rita Pinto[1], Virginie Peters[2], Elifnaz Celik[2], Carlo Rivolta[2], Cristina Santos[1] *([1]Portugal, [2]Switzerland)*

375 T020 Gyrate atrophy without scalloping: diagnostic clues in an actionable retinal dystrophy
Joana Ferreira, Kaminska Karolina, André Travessa, Júlio Rocha, Elifnaz Celik, Márcia Pereira, Virginie Peters, Carlo Rivolta, Luísa Santos, Cristina Santos *(Portugal)*

401 T021 *rf* Identification of a novel gene defect, EGFLAM, underlying complete congenital stationary night blindness and high myopia
Sanja Boranijasevic[1], Julien Navarro[1], Christel Condroyer[1], Lonneke Hear-Wigman[2], Aline Antonio[1], Dhaenens Claire-Marie[1], Sahel José-Alain[1,3], Ingeborgh van den Born[2], Martha Tjon-Fo-Sang[2], Sabine Defoort[1], Vasily Smirnov[1], Isabelle Audo[1], Christina Zeitz[1] *([1]France, [2]The Neterlands, [3]USA)*

404 T022 The impact of oral escitalopram therapy on the expression of brain-derived neurotrophic factor (BDNF) and the function of retinal neurons in mice
Klaudia Mroz, Bartosza Machna, Anna Pacwa, Mikołaj Górka, Magdalena Dębiec, Anna Gąsiorek, Joanna Lewin-Kowalik, Adrian Smedowski *(Poland)*

432 T023 *rf* Differential effect of outdoor time on myopia prevention in hyperopic and premypic children
Ziyi Qi, Xiangui He, Jun Chen, Xiaohu Ding, Mingguang He, Xun Xu *(China)*

444 T024 Retinal dystrophies in focus - insights from transgenic mouse models
Anna Gasiorek, Anna Pacwa, Monika Katan, Klaudia Mroz, Bartosz Machna, Xiaonan Liu, Joanna Lewin-Kowalik, Adrian Smedowski *(Poland)*

461 T025 UCHL1 missense and loss-of-function variants are an emerging cause of autosomal dominant optic atrophy (ADOA)
Leonardo Caporali[1], Claudio Fiorini[1], Giada Capirossi[1], Federico Sadun[1], Maria Lucia Cascavilla[1], Chiara La Morgia[1], Marco Battista[1], Lorenzo Bianco[1], Piero Barboni[1], Xavier Dieu[2], Danara Ormanbekova[1], Flavia Palombo[1], Eleonora Pizzi[1], Valentina Del Dotto[1], Valerio Carelli[1], Patrizia Amati-Bonneau[2], Alessandra Maresca[1] *([1]Italy, [2]France)*

467 T026 Congenital corneal opacities in a Finnish cohort
Elsa-Leea Kotola, Joni Turunen, Kari Krootila, Anna Majander *(Finland)*

470 T027 *rf* Investigation of factors promoting corneal wound healing
Anna Pacwa, Bartosz Machna, Klaudia Mroz, Anna Gasiorek, Monika Katan, Maciej Oseka, Joanna Lewin-Kowalik, Adrian Smedowski *(Poland)*

511 T029 Knobloch syndrome presenting with polymicrogyria and shallow anterior chamber: a case report
João Castro Cabanas, Pedro Martins, Carolina Madeira *(Portugal)*

520 T030 *rf* Sphingolipids plasma profile in keratoconus patients
Uxía Regueiro, Maite López-López, Tania Alvite-Piñeiro, Alberto Ouro, Isabel Lema *(Spain)*

523 T031 *rf* Near-infrared light-responsive retinal implants regulate neurotrophic gene expression in primary hippocampal neurons
Şeyma Nur Yaman, Uğur Berkay Calışkan, Humeyra Nur Kaleli, Tarık Safa Kaya, Murat Hasanreisoğlu, Sedat Nizamoğlu *(Turkye)*

546 T032 *rf* The effects of long-term work in mesopic environments and lifestyle risk factors on the prevalence of myopia in adults
Rafaela Garrido-Mercado[1], Olavi Pärssinen[2], Jesús Carballo-Álvarez[1], Maria Garcia Montero[1], Maria Cinta Puell Marin[1] *([1]Spain, [2]Finland)*

605 T033 *rf* Clustering analysis with optical coherence tomography data in leber hereditary optic neuropathy (LHON) patients by non-negative matrix factorization unsupervised learning technique
Martina Romagnoli, Michele Carbonelli, Giulia Amore, Leonardo Caporali, Claudio Fiorini, Piero Barboni, Maria Lucia Cascavilla, Chiara La Morgia, Valerio Carelli *(Italy)*

622 T034 New insights on AAV2-ND4 transfer between eyes: post-mortem analyses in leber hereditary optic neuropathy following gene therapy
Valerio Carelli[1], Nancy Newman[2], Leonardo Caporali[1], Fred Ross-Cisneros[2], Valérie Biousse[2], Blando Santino[1], Elisa Boschetti[1], Lindreth Dubois[2], Henry Liu[2], Philippe Ancian[3], Magali Taiel[3], Alfredo Sadun[3] *([1]Italy, [2]USA, [3]France)*

631 T035 *rf* Descriptive analysis of a Danish eye and vision cohort using the deep learning tool automorph for retinal vasculature assessment
Hande Coskun, Marcel Reimann, Jeppe Samuelsen, Miriam Kolko *(Denmark)*

644 T036 *rf* Transcriptional profiling of NLRP3 inflammasome- activated monocytes from keratitis fugax hereditaria
Sabita Kawan, Pau Costa, Michael Backlund, Annamari Immonen, Helena Kilpinen, Olli Pietiläinen, Tero Kivelä, Joni Turunen *(Finland)*

686 T037 Single-cell RNA-seq and ATAC-seq analysis: multi-omics approaches to study stem cell properties and functions
Jo Zhou *(The Neterlands)*

705 T038 Neuroprotective effects of estrogen signaling modulation and FasR/FasL pathway regulation in retinal ischemia outcomes in ovariectomized mice
Piotr Rodak, Edyta Olakowska, Anna Pacwa, Klaudia Mróz, Bartosz Machna, Joanna Machowicz, Bartłomiej Kocurek, Adrian Smędowski *(Poland)*

POS Poster Session NSPH

64 T039 Optical cohrenece tomography as a biomarker in multiple sclerosis
Amira Mabrouk, Besma Ben Achour, Houda Lajmi, Amine Zahaf, Wassim Hmaied *(Tunisia)*

65 T040 The effect of orthokeratology lens application on biometric and refractive parametres in myopia progression control
Büşra Kaya Adaş, Aysegül Penbe *(Turkye)*

76 T041 Corneal aberrometry and topography in children with amblyopia
Rym Maamouri, Selmi Slim, Azri Hassen, Molka Ferchichi, Monia Cheour *(Tunisia)*

81 T042 The importance of treatment compliance in myopia control: a retrospective study
Irene Schiavetti, Andrea Lembo, Alessandra Curci, Paolo Nucci *(Italy)*

98 T043 Mitochondria and oxidation: implications for LHON
Alfredo Sadun *(USA)*

103 T044 Defocus incorporated multiple segments spactacle lenses in clinical practice: a retrospective analysis of one-year outcomes and predictors of treatment sucess in a Turkish cohort
Nilay Akagun, Emrah Altiparmak *(Turkye)*

116 T045 Psuedo-Foster Kennedy syndrome and idiopathic intracranial hypertension: a case report
Hounaida Chaabene, Zaghdoudi Asma, Hedhiri Mohamed Habib, Mbarek Sameh, Nada Sakli, Blel Olfa, Wafa Ammari, Mahmoud Anis, Riadh Messaoud *(Tunisia)*

127 T047 The role of astigmatism in myopia, its progression and management: a scoping review
rf **Stephanie Kearney[1], Rakhee Shah[2,3]** *([1]United Kingdom, [2]The Neterlands)*

138 T048 Off-label use of idebenone in pediatric patients with OPA1-dominant optic atrophy: a two-case report
Florina Stoica, Mihai Lucian Osman, Corina Ladariu, Mihaela Galea, Cosmin Valentin Rus, Chirita-Emandi Adela *(Romania)*

155 T049 Pediatric ocular rosacea (a serie case)
Oumayma Amara, Meriem Aissaoui, Zyad Laftimi, Ghizlane Daghouj, Loubna Elmaaloum, Bouchra Allali, Asmaa El Kettani *(Morocco)*

162 T050 CHARGE syndrome in a neonate presenting with ocular colobomas
Theodora Gianni, Anna Nikolaidou, Efthymia Tsina *(Greece)*

163 T0510 Characteristics and management of cataract following proton beam radiotherapy in pediatric orbital rhabdomyosarcoma
Dmitri Artemiev, Darius G. Hildebrand *(Switzerland)*

185 T052 Visual field defects and retinal nerve fiber layer analysis in Alzheimer´s disease patients: a pilot study
Tania Alvite-Piñeiro, Miriam Ramallo Pita, Marta Rodríguez-Fernández, Maite López-López, Uxía Regueiro, Juan Manuel Pías-Peleteiro, Tomás Sobrino, Isabel Lema *(Spain)*

189 T053 rf
Efficacy of lenadogene nolvarvovec gene therapy versus idebenone: a matched adjusted indirect comparison
Valérie Biousse[1], Patrick Yu-Wai-Man[2], Nancy Newman[1], Valerio Carelli[3], Adeline Pierache[4], François Montestruc[4], Magali Taiel[4], José-Alain Sahel[1] *([1]USA, [2]United Kingdom, [3]Italy, [4]France)*

201 T054 rf
Atropine and spectacle lens combination treatment (ASPECT): 24-month interim results of a randomised controlled trial for myopia control
Noemi Guemes Villahoz[1], Paula Talavero-Gonzalez[1], Paloma Porras-Angel[1], Rafael Bella-Gala[1], Alicia Ruiz-Pomeda[1], Beatriz Martín García[1], Elena Hernandez-Garcia[1], C Nunila Gomez-De-Liano[1], Rakhee Shah[2], Julian Garcia Feijoo[1], Rosario Gomez-De-Liano[1] *([1]Spain, [2]The Neterlands, / United Kingdom)*

202 T055
Increased macular density correlates with high expanded disability status scale in neuromyelitis optic spectrum disorder Patients without optic neuritis: Indications of primary retinal vasculopathy
Lee Chaeyeon, Jaeryung Kim, Kyung Ah Park *(South Korea)*

208 T056 rf
Choroidal thickness changes in myopic children using combination treatment of atropine eyedrops and defocus incorporated multiple segments (DIMS) spectacle lenses
Noemi Guemes Villahoz[1], Paula Talavero-Gonzalez[1], Paloma Porras-Angel[1], Alicia Ruiz-Pomeda[1], Rafael Bella-Gala[1], Elena Hernandez-Garcia[1], Beatriz Martín García[1], C Nunila Gomez-De-Liano[1], Rakhee Shah[2], Julian Garcia Feijoo[1], Rosario Gomez-De-Liano[1] *([1]Spain, [2]The Neterlands, / United Kingdom)*

211 T057
CARs in a diagnostic pathway: a cancer-associated retinopathy case series
Vasco Lobo, Bernardo Monteiro, Filomena Pinto, Luis Abegão Pinto, Joana Ferreira *(Portugal)*

226 T058 rf
Characterising spontaneous retinal venous pulsations in patients with idiopathic intracranial hypertension
Mojtaba Golzan[1], Solmaz Bastani[1], Ashish Agar[1], Mitchell Lawlor[1], Sheng Chiong Hong[2], Renoh Chalakkal[2], Clare Fraser[1] *([1]Australia, [2]New Zealand)*

245 T059
Management of vertical incomitant strabismus: utility of the Scott procedure
Edurne De La Cámara Sahuquillo, Diana Perez Garcia, Leon Remon, Juan Ibañez, Pablo Tejada González, Inmaculada Herrero Sánchez, Cristina Calvo Simón, Francisco Javier Ascaso *(Spain)*

257 T060
Digital eye strain in health students: are symptoms driven by binocular vision or ocular surface factors?
Maria João Santos Barata[1], Pedro Aguiar[1], Andrzej Grzybowski[2], André Moreira-Rosário[1], Carla Rita dos Santos Costa Lança[3] *([1]Portugal, [2]Poland, [3]United Arab Emirates)*

264 T061
"Cat-scratch disease" - A rare case of ocular trauma
Inês Ludovico, Patrícia Barros da Silva, Ricardo Costa-Gertrudes, Carlos Batalha *(Portugal)*

271 T062 rf
Lenadogene nolparvovec gene therapy for leber hereditary optic neuropathy in the real-life setting
Chiara La Morgia[1], Catherine Vignal-Clermont[2], Valerio Carelli[1], Patrick Yu-Wai-Man[3], Mark Moster[4], Robert Sergott[4], Sarah Thornton[4], Sean Donahue[4], Hélène Dollfus[2], Thomas Klopstock[5], Vasily Smirnov[2], Catherine Cochard[2], Marie-Benedicte Rougier[2], Pierre Lebranchu[2], Caroline Froment[2], Frederic Pollet-Villard[2], Claudia Prospero-Ponce[4], Francis Munier[6], Magali Taiel[2], José-Alain Sahel[4] *([1]Italy, [2]France, [3]United Kingdom, [45]Germany, [6]Switzerland)*

274 T063 rf
The onset of photophobia: impact of acute bright light exposure on cellular and molecular changes from the retina to the brain
Jiayi Zhang, Jian Huang, Reboussin Elodie, Laurence Bourgeais, Stéphane Mélik Parsadaniantz, Réaux-Le Goazigo Annabelle *(France)*

275 T064 rf
Indirect comparison of lenadogene nolparvovec gene therapy versus natural history in patients with m.11778G>A MT-ND4 leber hereditary optic neuropathy
Patrick Yu-Wai-Man[1], Nancy Newman[2], Mark Moster[2], Valerio Carelli[3], Valérie Biousse[2], Prem Subramanian[2], Catherine Vignal-Clermont[4], An-Guor Wang[5], Sean Donahue[2], Bart Leroy[6], Robert Sergott[2], Thomas Klopstock[7], Alfredo Sadun[2], Gema Rebolleda Fernandez[8], Bart Chwalisz[2], Rudrani Banik[2], Magali Taiel[4], José-Alain Sahel[2] *([1]United Kingdom, [2]USA, [3]Italy, [4]France, [5]Taiwan, [6]Belgium, [7]Germany, [8]Spain)*

293 T065 Effectiveness of defocus incorporated multiple segments spectacle lenses on myopia control in Romanian children: 2-year results
Daniela Goicea *(Romania)*

319 T066 Surgery for congenital fibrosis of extraocular muscles in siblings with KIF21A mutation
Rafael Whitfield, Filipa Teixeira, Susana Duarte, Bernardo Monteiro, Emanuel Fernandes, Pedro Lino, Rita Gama *(Portugal)*

342 T067 Machine learning analysis of visual field progression for dominant optic atrophy-OPA1
rf
Catarina Coutinho, Ferdinando Zanchetta, Michele Carbonelli, Marco Battista, Alice Galzignato, Chiara La Morgia, Giulia Amore, Martina Romagnoli, Luigi Brotto, Paolo Nucci, Leonardo Caporali, Francesco Bandello, Valerio Carelli, Maria Lucia Cascavilla, Rita Fioresi, Piero Barboni *(Italy)*

352 T068 Beyond the tumor - Pediatric bilateral IgG4-related orbital disease masquerading as neoplasia
Bernardo Monteiro, Rafael Whitfield, Vasco Lobo, Inês Lourenço, Nuno Simas, Ana Patricia Reis, Filipa Teixeira, Joana Couceiro, Ana Claúdia Fonseca *(Portugal)*

353 T069 The effect of disease-modifying therapy on retinal thinning in relapsing-remitting multiple sclerosis
rf
Sanela Sanja Burgić[1], Mirko Resan[2], Daliborka Tadić[2] *([1]Bosnia and Herzegovina, [2]Serbia)*

358 T070 Traumatic bilateral acute vision loss due to pituitary apoplexy ; a case report
Heavin Rakhmat Saintika, Wino Vrieda Vierlia, Seskoati Prayitnaningsih *(Indonesia)*

396 T071 Axial lenght distribution in patients with OPA1-associated dominant optic atrophy
Maria Lucia Cascavilla, Lorenzo Bianco, Marco Battista, Maria Francesca Gennaro, Alessio Antropoli, Valerio Carelli, Chiara La Morgia, Leonardo Caporali, Anna Maria De Negri, Piero Barboni, Francesco Bandello *(Italy)*

435 T072 Development of a chromatic pupillometer
Sebastien Buchwalder, Martial Geiser, Filippo Piffaretti *(Switzerland)*

445 T073 Correction of residual paretic esotropia with partial transposition of hummelsheim combined with botulinum toxin injection
Inmaculada Herrero Sanchez, Víctor Aguado Casanova, Diana Perez Garcia, Patricia Ramiro, Leon Remon, Pablo Tejada González, Edurne De La Cámara Sahuquillo, Francisco Javier Ascaso *(Spain)*

479 T074 Trifocal Intraocular lens implantation in unilateral cataract in a pediatric patient: indications and outcomes
Ana María Abad Pascual, Diana Perez Garcia, Francisco Javier Ascaso, Juan Ibañez, Javier Ramos Duarte, Inmaculada Herrero Sánchez, Pablo Tejada González, Edurne De La Cámara Sahuquillo, Luca Manuel Bueno Borghi, Cristina Calvo Simón, Carla Sánchez Remacha, Miguel Castillo Fernández *(Spain)*

484 T075 Distinct pattern observed after intermittent exotropia surgery: characteristics of patients exhibiting postoperative rebound esodrift
Seong-Joon Kim *(South Korea)*

499 T076 Late-onset Leber hereditary neuropathy: study in a large Italian cohort
Marco Battista, Michele Carbonelli, Luigi Brotto, Giulia Amore, Catarina Coutinho, Martina Romagnoli, Alice Galzignato, Paolo Nucci, Leonardo Caporali, Maria Lucia Cascavilla, Claudio Fiorini, Chiara La Morgia, Valerio Carelli, Piero Barboni *(Italy)*

526 T077 Post-traumatic ocular hypertension : epidemiological, clinical, therapeutic, and evolutive profiles
Oumayma Amara, Meriem Aissaoui, Zyad Laftimi, Ghizlane Daghouj, Loubna Elmaaloum, Bouchra Allali, Asmaa El Kettani *(Morocco)*

563 T078 Retinal structure and visual function in asymptomatic Leber herediary optic neuropathy carriers
Johan Hedström, Maria Nilsson, Martin Engvall, Pete Williams, Abinaya Venkataraman *(Sweden)*

571 T079 Correlations between ophthalmological, multi-OMICs and Quality of life data of a large cohort of dominant optic atrophy cases related to OPA1 variants
Aymane Bouzidi[1], Christina Eckmann-Hansen[2], Beatrice Bocquet[1], Méline Wery[1], Cinzia Bocca[1], Valérie Desquiret-Dumas[1], Adélie Mellinger[1], Michael Larsen[2 3], Isabelle Meunier[1], Xavier Zanlonghi[1], Guy Lenaers[1] *([1]France, [2]Denmark)*

584 T080 OPA1 rescue by trans-splicing : an update
Aymane Bouzidi, Yannick Ledantec, Adélie Mellinger, Valérie Desquiret-Dumas, Olivier Baris, Alexis Bemelmans, Jing Wang4, Guy Lenaers *(France)*

596 T081 Idiopathic intracranial hypotension presenting as horizontal binocular diplopia: a rare case report
Nikolaos Garyfallos, Evangelos Spanos, Dionisios Vakalopoulos, Konstantinos Kardamakis, Dimitra Antonopoulou *(Greece)*

604 T082 Brain MRI abnormalities of the visual pathway in subacute LHON: what is the prevalence?
Giulia Amore, Michele Carbonelli, Martina Romagnoli, Caterina Tonon, Raffaele Lodi, Valerio Carelli, Chiara La Morgia *(Italy)*

606 T083 Visual acuity outcomes by causative mutation in Leber hereditary optic neuropathy: analyses from LEROS and Case Record Survey-2
Patrick Yu-Wai-Man[1], Bart Leroy[2], Judith van Everdingen[3], Maciej Krawczynski[4], Valerio Carelli[5], Xavier Llòria[5], Thomas Klopstock[6] *([1]United Kingdom, [2]Belgium, [3]The Neterlands, [4]Poland, [5]Italy, [6]Germany)*

609 T084 *rf* Disease severity at baseline in Leber hereditary optic neuropathy patients from the Case Record Survey-2 with simultaneous versus sequential bilateral vision loss
Thomas Klopstock[1], Bart Leroy[2], Patrick Yu-Wai-Man[3], Judith Van Everdingen[4], Maciej Krawczynski[5], Valerio Carelli[6], Xavier Llòria[6] *([1]Germany, [2]Belgium, [3]United Kingdom, [4]The Neterlands, [5]Poland, [6]Italy)*

611 T085 Patient demographics and disease characteristics in a historical cohort of patients with Leber hereditary optic neuropathy from Case Record Survey-2
Neringa Jurkute[1], Bart Leroy[2], Patrick Yu-Wai-Man[1], Judith Van Everdingen[3], Maciej Krawczynski[4], Valerio Carelli[5], Xavier Llòria[5], Thomas Klopstock[6] *([1]United Kingdom, [2]Belgium, [3]The Neterlands, [4]Poland, [5]Italy, [6]Germany)*

612 T086 Identification and functional validation of a novel disease-causing variant in the non-coding region of NYX
Filip Spanic, Michiels Christelle, Julien Navarro, Aline Antonio, Christel Condroyer, Sylvie Berthémy-Pellet, Isabelle Audo, Christina Zeitz *(France)*

632 T087 Dominant optic atrophy clinical variability in the largest-ever identified OPA1 family displaying a deletion of OPA1 last two exons
Xavier Zanlonghi[1], Bouzidi Aymane[1], Patrizia Amati-Bonneau[1], Meunier Isabelle[1], Beatrice Bocquet[1], Charif Majida[2], Guichet Agnès[1], Valérie Desquiret-Dumas[1], Guy Lenaers[1] *([1]France, [2]Morocco)*

640 T088 Optic neuropathy: an atypical presentation of lyme disease
Taha Koutheir Bizani, Alioua Haifa, Khammeri Houssem, Sayadi Jihene, Imene Zeghal *(Tunisia)*

641 T089 Hereditary optic atrophy in childhood: structural and functional analysis in a cohort of Italian patients
Michele Carbonelli, Marco Battista, Giulia Amore, Luigi Brotto, Maria Lucia Cascavilla, Leonardo Caporali, Chiara La Morgia, Valerio Carelli, Piero Barboni *(Italy)*

645 T090 *rf* Impact of prematurity on ocular biometry and refractive development during the first years of life
Merve Mutlu, Burcin Cakir *(Turkye)*

653 T091 Low-dose atropine-related esotropia in a four-year-old child with high myopia
Athanasia Sandali[1], Theodora Gianni[2], Anna Nikolaidou[3], Lampros Lamprogiannis[4] *([1]Greece, [2]Cyprus, [3]Germany)*

667 T092 Restrictive post-traumatic strabismus without muscle entrapment: surgical management with conjunctival grafting
Javier Ramos Duarte, Ana María Abad Pascual, Edurne De La Cámara Sahuquillo, Pablo Tejada González, Inmaculada Herrero Sánchez, Luca Manuel Bueno Borghi, Carla Sánchez Remacha, Cristina Calvo Simón, Miguel Castillo Fernández, Julia Aramburu Clavería, Marta Suñer Martínez, Francisco Javier Ascaso, Diana Perez Garcia *(Spain)*

669 T093 Pediatric open globe injuries: predictive factors for visual prognosis
Meriem Aissaoui, Oumayma Amara, Laftimi Zyad, Daghouj Ghizlane, Loubna Elmaaloum, Allali Bouchra, Asmaa El Kettani *(Morocco)*

680 T094 Evaluation of conjunctival wound closure after strabismus surgery using fibrin glue
Susana Duarte, Rafael Whitfield, Bernardo Monteiro, Emanuel Fernandes, Pedro Lino, Filipa Teixeira, Rita Gama *(Portugal)*

684 T095 Evaluation of vascular index by optical coherence tomography angiography in patients with ischemia-related paralytic strabismus
Seren Kaplan Gungordu, Burcin Cakir, Nilgun Ozkan Aksoy, Meryem Dilara Kilic *(Turkye)*

696 T096 Pediatric traumatic cataract
Ghizlane Daghouj, Sara Ettouri, Ali Rami, Laftimi Zyad, Loubna El Maaloum, Bouchra Allali, Asmaa El Kettani *(Morocco)*

697 T097 Open globe trauma in children: epidemiological, clinical, therapeutic and prognostic aspects
Sara Ettouri, Daghouj Ghizlane, Kawtar El Hadi, Arab Lamiaa, Laftimi Zyad, Loubna El Maaloum, Bouchra Allali, Asmaa El Kettani *(Morocco)*

POS Poster Session PO

261 T098 Cherry tear - A rare case of caruncular oncocytoma
Inês Ludovico, Tiago das Neves, Ricardo Costa-Gertrudes, Catarina Mota, Carlos Batalha *(Portugal)*

306 T099 Begnin oncocytoma of the ocular caruncle: a case series and literature review
Stefano Dore, Sara Sechi, Laura Dessole, Rita Serra, Matteo Sacchi, Clara Ellecosta *(Italy)*

346 T100 Tear drops and Alzheimer's: unveiling early detection biomarkers - A systematic review
rf
Inés López-Cuenca, Lidia Sánchez-Puebla, Lorena Elvira-Hurtado, Rubén Masa-Castro, Yael Hoz-Ruiz, Elena Salobrar-Garcia, José A. Matamoros, José A. Fernández-Albarral, Hector Leal-Lasalle, Juan Jose Salazar, Ana Isabel Ramirez, Jose Manuel Ramirez, Rosa De Hoz *(Spain)*

349 T101 Multidisciplinary management of cervicofacial necrotizing fasciitis with orbital involvement: a case report
Tomaz Oliveira, Bruno Rosa (Portugal)

350 T102 Evaluation of tarsorraphy in patients undergoing parotidectomy for oncological disease: a multidisciplinary assessment
Tomaz Oliveira, Ricardo Nogueira *(Portugal)*

430 T103 Circulating tumor DNA as a biomarker for surveillance of uveal melanoma
rf
Vojtech Hanicinec, Eirunn Øvregaard, Morten Carstens Moe, Henrik Jespersen, Agate Noer *(Norway)*

482 T104 Reconstruction of medium to large full-thickness lower eyelid defects by a novel single-stage procedure: update on the marginal approach for releasing the lid with closure handling (MARCH) technique
rf
Anna March De Ribot[1], Santiago Ortiz-Pérez[1,2], Francesc March De Ribot[1] *([1]New Zealand, [2]Spain)*

536 T105 Eyelid trichoblastic carcinoma: a diagnostic and therapeutic challenge
Amina El Mayel, Mohamed Ben Hadj Khelifa, Rim Kmiha, Ghassen Marzouk, Imen Abbes, Amel Chebbi *(Tunisia)*

540 T106 RB1 screening for previously untested retinoblastoma survivors
rf
Kalle Nummi, Tero Kivelä *(Finland)*

589 T107 Role of CDKN1A, MDM2, MTHFR and MTR polymorphisms in retinoblastoma: a systemic study
rf
Shobhit Gupta, Sushma Nandyala, Tapas Roy, Deepsekhar Das *(India)*

635 T108 Transcriptomic atlas of uveal melanoma
rf
Vojtech Hanicinec, Xavier Tekpli, Øystein Garred, Marie Fongaard, Sunniva Bøstrand, Michael Frisk, Thomas Bærland, Giang Nguyen, Jürgen Geisler, Morten Carstens Moe, Agate Noer, Henrik Jespersen *(Norway)*

Poster Session 2

11:05-12:05

POS Poster Session COS

59	F001	Distribution of keraconus assessed by belin/ambrosio parameters according to age and gender in tertiary eye center: across-sectional study **Alì Hakim Reyhan** *(Turkye)*
60	F002	Artificial intelligence in the differential diagnosis of ocular surface lesions **Eszter Szalai, Zoltan Richard Janki, Kincso Kozma, Adrienne Csutak, Vilmos Bilicki** *(Hungary)*
63	F003	Functional dry eye disease severity and systemic manifestation in Sjogren's syndrome **Amira Mabrouk, Besma Ben Achour, Rim Bourguiba, Wassim Hmaied** *(Tunisia)*
71	F004	Keratoscope-guided opening of the graft host junction to treat elevated astigmatism after deep anterior lamellar keratoplasty **Costanza Rossi, Andrea Lucisano, Andrea Taloni, Massimiliano Borselli, Vincenzo Scorcia** *(Italy)*
94	F005	The vision impact survey for keratoconus (VISYKO) for measuring the quality of life in patients with keratoconus **Matilde Buzzi, Rita Mencucci, Danilo Alunni-Fegatelli, Stefano Gallio, Alberto Carnicci, Mario Fruschelli, Giuseppe Lombardo, Marco Lombardo** *(Italy)*
122	F006	Presence of fibrillar layer does not influence rebubbling rate after descemet membrane endothelial keratoplasty in advanced fuchs endothelial corneal dystrophy eyes **Nihan Demiralay, Mert Mestanoglu, Antonia Howaldt, Johanna Wiedemann, Silvia Schrittenlocher, Mario Matthaei, Claus Cursiefen, Björn Bachmann** *(Germany)*
139	F007	Effect of autologous serum eye drops: 15 years of experience **Joana Pargana, Susana Duarte, Bruno Guerreiro Dias, Emanuel Fernandes, Rui Ferreira, Patrícia José, Ana Miguel Quintas, Paulo Silva Guerra** *(Portugal)*
146 *rf*	F009	Effects of DFL24498 on proinflammatory innate and adaptive immune cell responses in vitro and in a translational murine model of atopic keratoconjunctivitis **Marta Sacchetti, Anna Sirico, Maria De Lucia, Rafael Cypriano Dutra, Rubina Novelli, Giuseppina Vicaretti, Anna Lucia Valeri, Maria Concetta Dragani, Tiziana Romeo, Andrea Aramini, Marcello Allegretti** *(Italy)*
152	F010	An artificial intelligence approach to detect keratitis in in vivo confocal microscopy **Katarzyna Kryszan, Mateusz Walasz, Ewa Wróblewska-Czajka, Edward Wylęgała, Adam Wylęgała** *(Poland)*
176	F011	From prescription to protection: investigating informed consent gaps in contact lens practice **Onur Furundaoturan, Ilayda Korkmaz, Ozlem Barut Selver (**Turkye)
188	F012	Pioneering design and advancement of a one-piece keratoprosthesis (KPro) for human corneal restoration **Mozhgan Aghajanzadeh-Kiyaseh, Mostafa Zamani-Roudbaraki, Marie-Claude Robert, May Griffith** *(Canada)*
210	F013	Impact of descemet membrane endothelial keratoplasty on corneal sensitivity in fuchs endothelial dystrophy: a comparative analysis **Bruno Guerreiro Dias, Bernardo Monteiro, Vasco Lobo, Joana Pargana, Rui Ferreira, Patrícia José, Ana Miguel Quintas, Paulo Silva Guerra** *(Portugal)*

213 F014 Safety and efficacy of combined peripheral corneal crosslinking and fine-needle diathermy for regression of human corneal neovascularization
Mert Mestanoglu, Deniz Hos, Johanna Wiedemann, Heide Heinen, Friederike Schaub, Felix Bock, Claus Cursiefen *(Germany)*

218 F015 Clinical validation of enhanced optical coherence tomography tools for quantitative analysis of corneal transparency and haze in post-photorefractive keratectomy patients
Nuno Vivas Brás, Benjamin Memmi, Corentin Soubeiran, Maëlle Vilbert, Maëlle Bouhassane, Cristina Georgeon, Vincent Borderie, Anatole Chessel, Karsten Plamann *(France)*

220 F016 Investigating corneal sensitivity in hereditary transthyretin amyloidosis: a cross-sectional comparative analysis
Bruno Guerreiro Dias, Bernardo Monteiro, Vasco Lobo, Patrícia José, Paulo Silva Guerra, Carlos Marques-Neves, Isabel Conceição, Ana Miguel Quintas *(Portugal)*

225 F017 *rf* Injectable bioengineered hydrogel for the delivery of cells and extracellular vesicles to the conjunctiva
Laura García-Posadas[1], Ismael Romero-Castillo[1], Antonio López-García[1], Mark Ahearne[2], Yolanda Diebold[1] *([1]Spain, [2]Ireland)*

232 F018 Aesthetics vs. physiology^ the impact of cosmetic procedure on meibomian glands
Vitalyna Harkusha, Tetiana Zhmud, Olga Melnyk *(Ukraine)*

233 F019 Towards safer glaucoma treatment: cytological evaluation of the conjunctiva in preservative-free vs. preserved latanoprost users
Olga Melnyk, Tetiana Zhmud, Vladyslav Tetarchuk *(Ukraine)*

248 F020 Neurofilaments in tears as biomarkers of corneal neuronal degeneration in diabetic patients: a pilot study
Emanuela Aragona, Giovanni William Oliverio, Maura Mancini, Alessandro Arrigo, Paola Palino, M'hamed Aguennouz, Gianpaolo Zerbini, Francesco Bandello, Pasquale Aragona *(Italy)*

276 F021 Digital phantoms for improved OCT based corneal densitometry
Maria Miażdżyk, Alejandra Consejo, D. Robert Iskander *(Spain)*

298 F022 Relationship between ocular biomechanics and segmental biometry in myopic eyes
Beatriz Vieira[1], Gabriel Santos[1], João Heitor Marques[1], Renato Ambrósio[2], Pedro Menéres[1], João Melo Beirão[1], Pedro Baptista[1] *([1]Portugal, [2]Brazil)*

300 F023 Ocular side effects of Dupilumab in patienrs treated for atopic dermatitis
Stefano Dore, Antonio Pinna, Rosanna Satta, Clara Ellecosta *(Italy)*

312 F024 *rf* Novel artificial intelligence approaches for redness hyperemia analysis
Nico Curti, Tommaso Giacometti, Luigi Fontana, Gastone Castellani, Piera Versura *(Italy)*

326 F025 Antimicrobial efficacy and corneal safety of cold atmospheric plasma in keratitis treatment
Fanyue Meng, Volker Stoldt, FriedrichAnton Steindor, Joana Witt, Florian Groeber-Becker, Gerd Geerling *(Germany)*

343 F026 Femtosecond laser-assisted implantation of corneal allogenic intrastromal ring segments for visual rehabilitation in keratoconus after corneal crosslinking: a case series
Dafni Planta, Eleftherios Chatzimichail, Dimitrios Kyroudis, Frank Blaser, Nicolas Feltgen, Zisis Gkatzioufas *(Switzerland)*

379 F027 Clinical outcomes of repeated corneal crosslinking for progressive keratoconus after failure of primary procedure: safety and efficacy at 12-month follow up
Eleftherios Chatzimichail, Mohamed Elalfy, Frank Blaser, Nicolas Feltgen, Zisis Gkatzioufas *(Switzerland)*

380 F028 Management of a difficult case of toxic epidermal necrolysis after topical use of chloramphenicol
Evangelia Dalieraki, Georgios Dalianis, Chryssa Terzidou *(Greece)*

381 F029 Femtosecond laser-assisted implantation of corneal allogenic intrastromal ring segments for visual rehabilitation in keratoconus after corneal crosslinking
Eleftherios Chatzimichail, Dimitrios Kyroudis, Frank Blaser, Nicolas Feltgen, Zisis Gkatzioufas *(Switzerland)*

409 F030 3D printed nanocomposite contact lenses for ocular health management
Haider Butt *(United Arab Emirates)*

417 F031 Evaluation of novel drug targets in eye samples from patients affected with rare eye diseases
Silvia Palombella, Matteo Pederzolli, Gianluca Tilaro, Philippe Fonteyne, Erica Alessandra Lecchi, Federico Procopio, Giulio Ferrari *(Italy)*

418 F032 Cord blood serum attenuates hyperosmotic-induced stress in human conjunctival epithelial cells
Gloria Astolfi, Carmen Ciavarella, Chiara Coslovi, Elisa Bergantin, Marina Buzzi, Luigi Fontana, Piera Versura *(Italy)*

421 F033 Coneal wounds: epidemiological, clinical, progressive and therapeutic profile (about 200 cases)
Sara Ettouri, Daghouj Ghizlane, Kawtar El Hadi, Arab Lamiaa, Ali Rami, Laftimi Zyad, Loubna El Maaloum, Bouchra Allali, Asmaa El Kettani *(Morocco)*

426 F034 Biomechanical & tomographical outcomes in keratoconus offspring: a 3-year prospective study
Maite López-López, Uxía Regueiro, Tania Alvite-Piñeiro, Isabel Lema *(Spain)*

437 F035 MicroRNA profile in human corneal tissue of Keratoconus patients undergoing lamellar keratoplasty
Carmen Ciavarella, Antonio Moramarco, Silvia Odorici, Natalie Di Geronimo, Gianandrea Pasquinelli, Luigi Fontana, Piera Versura *(Italy)*

441 F036 A personalized treatment approach with cord blood prp eye drops in severe dry eye associated with EGFR inhibitors: a pilot study on hla-dr expression as efficacy biomarker
Daniela Pollutri, Natalie De Geronimo, Andrea De Giglio, Francesco Gelsomino, Andrea Ardizzoni, Luigi Fontana, Piera Versura *(Italy)*

456 F037 Standardizing tear fluid biomarker research: a comprehensive review of collection methods and analysis protocols
Marlies Gijs[1], Nienke van de Sande[1], Clemence Bonnet[2], Jente Schmeetz[1], Rosa Fernandes[3], Sonia Trave-Huarte[4], Marcela Huertas-Bello[2], Jeremy Chung Bo Chiang[4], Nikolay Boychev[2], Shruti Sharma[2], Tear Research Network Scoping Review taskforce[1] *([1]The Neterlands, [2]USA, [3]Portugal, [4]United Kingdom)*

464 F038 Tear proteomic signatures reveal and predict keratoconus progression in a case-control cohort
Maddi Alonso-Agesta, Itziar Martinez-Soroa, Txomin Alberdi, Aritz Bidaguren, Arantxa Acera *(Spain)*

473 F039 Sub400 corneal crosslinking for advanced pediatric keratoconus
Ricardo Costa-Gertrudes, Pedro Lopes, Joana Ferreira, Tiago das Neves, Vitor Maduro, Nuno Alves, Pedro Gil, Eduardo Silva, João Feijão *(Portugal)*

500 F040 Ocular and corneal topography findings in patients with ichthyoisis
Rym Maamouri, Zaoauk Anissa, Aouni Jaafer, Kammoun Alyssa, Fenniche Samy, Monia Cheour *(Tunisia)*

533 F041 DMEK for corneal decompensation following anterior chamber dislocation of a dexamethasone implant
Jacqueline Fröhlich, Eleftherios Chatzimichail, Alexandra Steinemann, Nicolas Feltgen, Zisis Gkatzioufas *(Switzerland)*

535 F042 Outcomes of posterior approach ptosis repair: 5-year retrospective study at a tertiary referral center
rf **Tiago das Neves, Joana Ferreira, Ricardo Costa-Gertrudes, Pedro Lopes, Ana Magriço** *(Portugal)*

537 F043 Combined corneal graft suture revision, pars-plana vitrectomy and cataract surgery in case of a previous penetrating keratoplasty complicated with anterior capsule integrity and malignant glaucoma after multi-resistant pseudomonas aeruginosa corneal ulcer
Tiago das Neves, Pedro Lopes, Joana Ferreira, Ricardo Costa-Gertrudes, Lívio Costa, Sara Crisóstomo *(Portugal)*

543 F044 In vitro evaluation of the effects of serotonin-norepinephrine reuptake inhibitors and neurokinin-1 receptor antagonists on corneal cold sensory nerve terminal activity
Laura Frutos-Rincón, M Carmen Acosta, Juana Gallar *(Spain)*

556 F045 Diesel exhaust particles exposure disrupts lipid metabolism in immortalised meibomian gland epithelial cells
rf **Ha Duong, V Cioanca, Minh Phan, Michele Madigan, Blanka Golebiowski** *(Australia)*

562 F046 Preoperative ocular surface inflammation in corneal transplant candidates: role of HLA-DR expression
rf **Silvia Odorici, Carmen Ciavarella, Michele Potenza, Daniela Pollutri, Antonio Moramarco, Luigi Fontana, Piera Versura** *(Italy)*

557 F047 Pearson syndrome-associated endothelial dysfunction: a case report
Ricardo Costa-Gertrudes, Joana Ferreira, Tiago das Neves, Pedro Lopes, Bruna Cunha, Pedro Gil, Eduardo Silva *(Portugal)*

567 F048 Effectiveness of amino-acids in the treatment of chemical burns in the stage of trophical disorders
Iryna Pshenychna, Kateryna Hrizhymalska, Olga Andrushkova *(Ukraine)*

569 F049 Contribution of voltage-gated sodium and calcium channels to the excitability of menthol-sensitive corneal nerve terminals in mice
Fernando Aleixandre-Carrera, Almudena Iñigo-Portugués, M Carmen Acosta, Juana Gallar, Victor Meseguer *(Spain)*

573 F050 Severe chemical injury of the cornea managed with amniotic membrane graft: a case report
Inês Mendo, Mariana Vaz, Filipe Moraes, Tomas Loureiro *(Portugal)*

575 F051 Corneal nerve fiber morphology is altered in central serous chorioretinopathy
Jean-Louis Bourges, Behar-Cohen Francine *(France)*

578 F052 Evaluation of cross-linking of donor corneas following therapeutic keratoplasty in cases of infectious keratitis
rf **Sushma Nandyala, Aafreen Bari, Himanshu Khandelwal, Namrata Sharma** *(India)*

580 F053 Conquering challenges in therapy-resistant mucocutaneous herpes simplex virus type 1 infection with severe herpetic keratitis and ocular graft-versus-host-disease
Leonie Menghesha, Jannik Stemler, Oliver Cornely, Alexander vom Stein, Hanna Ludwig, Malte Kiehl5 Tim Richardson, Eva Heger, Christof Scheid, Philipp Steven *(Germany)*

587 F054 Comparative evaluation of corneal and epithelial thickness measurements using spectral-domain and swept-source anterior segment optical coherence tomography in eyes with keratoconus
Mirza Karamovic, Marika Wahlberg Ramsay, Branka Samolov, Abinaya Venkataraman1 Alberto Dominguez-Vicent *(Sweden)*

600 F055 Monotherapy with polihexanide 0.08% for the treatment of acanthamoeba keratitis in complex cases
Jacqueline Fröhlich, Eleftherios Chatzimichail, Daniela Starosta, Konstantin Gugleta, Nicolas Feltgen, Zisis Gkatzioufas *(Switzerland)*

607 F056 Clinical proteomics characterized age- and tear secretion-associated molecular changes in dry eye syndrome
rf **Natarajan Perumal, Hao Lin, Anna Lindner, Adina Glasmacher, Bettina Multani, Caroline Manicam** *(Germany)*

613 F058 Extracellular vesicles and exosomes in corneal graft integration
rf **Grace Lin, Neethi Thathapudi, Mostafa Zamani-Roudbaraki, Marie-Claude Robert, May Griffith** *(Canada)*

623 F059 *rf*
Examination of the potential influence of baseline corneal fluorescein staining score on dry eye symptom improvement in patients treated with ciclosporin 0.1% cationic emulsion: analysis of data from the PERSPECTIVE study
Anita Reynolds[1], Elisabeth M. Messmer[2], Ines Lanzl[2] *([1]United Kingdom, [2]Germany)*

636 F060
Results of advanced surface ablation surgery for patients with myopia above 9 diopters who have been under observation for more than 2 years
Liudmyla Ivzhenko, Armen Prokipets *(Ukraine)*

663 F061 *rf*
Comparison between Keratograph 5M® and Antares® for ocular surface evaluation
Dayan Flores Cervantes, Inas Baoud Ould Haddi, Emilio Dorronzoro Ramírez, Vanesa Blázquez Sánchez, Cristina Bonnin Arias *(Spain)*

665 F062
Corneal crosslinking surgery following intrastromal corneal ring segment removal in progressive keratoconus: functional, tomographic and biomechanical improvement after one year of follow up
Júlio Brissos[1], Guilherme Almeida[1], Gonçalo Tardão[2], Renato Ambrósio Jr.[1] *([1]Portugal, [2]Brazil)*

690 F063 *rf*
The role of dECM hydrogel-nap against high glucose-induced inflammation on 3D-corneal epithelium
Grazia Maugeri, Nicoletta Palmeri, Agata Grazia D'Amico, Antonio Longo, Davide Scollo, Simona Casarella, Francesca Boccafoschi, Velia D'Agata *(Italy)*

706 F064
A 10-Year (2015-2025) retrospective review of fungal keratitis at a UK Tertiary referral centre: it remains a regular threat
Mohammed Talha Bashir, Parwez Nazir Hossain *(United Kingdom)*

712 F065
The SUNLIGHT trial: a double-blind Phase 1 safety and tolerability clinical trial of OC134 eye drops
Asya Petkova, Andreas G. Schatzlein, Ijeoma F. Uchegbu *(United Kingdom)*

POS Poster Session G

120 F066
Long-term evaluation of ocular surface disease signs in patients with open-angle glaucoma or ocular hypertension using the preservative-free 0.005% latanoprost eye drop emulsion: open-label extension data following a 3-month randomized study
Kai Kaarniranta[1], Francesco Oddone[2], Christophe Baudouin[3] *([1]Finland, [2]Italy, [3]France)*

133 F067
Retinal and choroidal structural changes in pseudoexfoliation syndrome: a potential early indicator of glaucoma and neurodegeneration
Pedro Mota-Moreira, Ana Faria Pereira, Inês Costa-Coelho, Rita Martins, Sérgio Estrela, Cláudia Ferreira *(Portugal)*

158 F068
Investigating the relationship between intraocular pressure and body mass index in project FOREVER
Christina Eckmann-Hansen, Jens Rovelt Andreasen, Josefine Freiberg, Arevak Saruhanian, Miriam Kolko *(Denmark)*

164 F069 *rf*
Galectin-3 is associated with Müller cells in glaucoma
Anne Rombaut, Alan Nicol, Rune Brautaset, Pete Williams, James Tribble *(Sweden)*

182 F070 *rf*
Evaluation of synthetically generated optical coherence tomography images
Damon Wong[1], Ashish Jith[1], Jacqueline Chua[1], Leopold Schmetterer[1,2] *([1]Singapore, [2]Austria)*

207 F071 *rf*
Proteomics analyses of ocular small extracellular vesicles in glaucoma
Ana Guzman Aranguez, Raquel Rejas-Gonzalez, Ana Montero-Calle, Rodrigo Barderas, Natalia Pastora Salvador, María José Crespo Carballes, Juan Snachez-Naves *(Spain)*

231 F072
Preservatives in glaucoma treatment: a comparative study of preserved and preservative-free latanoprost eye drops on conjunctival goblet cells
Nisa Lise Secim, Sille Ehlers Bonne, Umalbaninn Alnoor, Miriam Kolko *(Denmark)*

238 F073 *rf*
Impact of preserved and preservative-free latanoprost eye drops on calcium regulation in conjunctival goblet cells
Umalbaninn Alnoor[1], Jeffrey A. Bair[2], Steffen Heegaard[1], Miriam Kolko[1] *([1]Denmark, [2]USA)*

260 F074
The Influence of age-related changes of lamina cribrosa of sclera on neurofilaments susceptibility in optic neuropathy
Yuliya Huseva *(Belarus)*

270 F075 *rf*
Tolerability of preservative-free latanoprost/timolol fixed combination versus preserved bimatoprost/timolol in patients with open-angle glaucoma or ocular hypertension - The AdEQUATE study
Julian Garcia Feijoo[1], Leopold Schmetterer[2,3] *([1]Spain, [2]Singapore, [3]Austria)*

325 F076 *rf*
A clinical evaluation of a virtual reality headset-based visual field test compared to standard automated perimetry in healthy volunteers and glaucoma patients
Maribel Espinosa-Cabrera *(United Kingdom)*

327 F077
A qualitative assessment of open-angle glaucoma treatment from the perspectives of ophthalmologists
Cindy M.L. Hutnik[1], Pedro Corsino Fernandez Vila[2], Tarek Hassan[3], Shivani Ohri Vignesh[4]
([1]Canada, [2]Spain, [3]USA, [4]India)

334 F078
Relationship between macrophage inflammatory protein-1αand basic fibroblast growth factor concentrations in the anterior lens capsule and intraocular pressure in patients with primary open-angle glaucoma, pseudoexfoliation glaucoma and without glaucoma undergoing cataract surgery
Katarzyna Gontarz, Mariola Dorecka, Wojciech Garczorz, Tomasz Francuz *(Poland)*

339 F079
Hidden clues in micro eye movements - Tracking glaucoma progression with retinal eye-tracker NeuroFET
Aleksandra Gorczyca-Liczbik, Marta Skrok, Robert Konklewski, Martyna Gebska-Toloczko, Karolina Suwała, Maciej Nowakowski, Valentyna Pryhodiuk, Krzysztof Tołpa, Bogna Bylicka, Anna Szkulmowska, Katarzyna Zabel, Przemysław Zabel, Maciej Szkulmowski, Jakub Kaluzny *(Poland)*

351 F080 *rf*
How short is too short? Evaluating postoperative survival after glaucoma surgery in a real-world cohort
Bernardo Monteiro, Rafael Whitfield, Vasco Lobo, Emanuel Fernandes, Dina Costa, Nuno Amaro, Miguel Santos, André Diogo Barata, Rafael Correia Barão, Luis Abegão Pinto *(Portugal)*

377 F081
Our 3-year experience with the PAUL glaucoma implant
Evangelia Dalieraki, Georgios Dalianis, Alexandra Trivli, Chryssa Terzidou *(Greece)*

431 F082 *rf*
Exploring the associations of self-reported glaucoma and physical activity: findings from a danish eye and vision cohort - Project FOREVER
Thao Tran, Jens Rovelt Andreasen, Josefine Freiberg, Christina Eckmann-Hansen, Miriam Kolko *(Denmark)*

450 F083 *rf*
Sigma-1 receptor activation represents a novel therapeutic strategy for ocular hypertension
Judit Hodrea[1], Timea Medveczki[1], Tamas Lakat[1], Minh Tran[1], Akos Toth[1], Anna Takacsi-Nagy[1], Gyorgy Torok[1], Szabo Attila[1], Illes Kovacs[1,1], Dr. Fekete Andrea[1,2] *([1]Hungary, [2]USA)*

451 F084
Targeting taurine metabolism for neuroprotection in a rat model of ocular hypertensive glaucoma
Eleonora Daghini[1,2], Alan Nicol[1], Baninia Habchi[1], Evangelia Daskalakis[1], Craig Wheelock[1], Rosario Amato[2], Maurizio Cammalleri[2], Massimo Dal Monte[2], James Tribble[1], Pete Williams[1]
([1]Sweden, [2]Pisa)

452 F085 Sigma-1 receptor agonist fluvoxamine is protective against hyperglycemia-induced fibrosis in human trabecular meshwork cells
Alexandra Rozsahegyi[1], Judit Hodrea[1], Marcell Cserhalmi[1], Timea Medveczki[1], Balazs Besztercei[1], Illes Kovacs[1,2], Szabo Attila[1], Fekete Andrea[1] *([1]Hungary, [2]USA)*

455 F086 *rf* Challenges in glaucoma diagnosis: agreement in clinical diagnosis and deep learning glaucoma screening
Joana Pargana[1], Afonso Lima-Cabrita[1], Rafael Whitfield[1], Vasco Lobo[1], Bernardo Monteiro[1], Sanna Leinonen[2], Ana Miguel[3], Marta Pazos[4], Panayiota Founti[5], Rafael Correia Barão[1], Ingeborg Stalmans[6], Luis Abegão Pinto[1] *([1]Portugal, [2]Finland, [3]France, [4]Spain, [5]United Kingdom, [6]Belgium)*

457 F087 Effect of different treatments on retrobulbar and choroidal blood flow parameters in normal tension glaucoma: a OCT-A and Color Doppler Imaging study
Enrico Lupardi, Alice Galzignato, Catarina Coutinho, Monica Ferri, Gian Luca Laffi, Andrea Distefano, Marco Battista, Alfredo Sadun, Piero Barboni, Luigi Brotto, Emma Zuliani *(Italy)*

462 F088 *rf* Inhibitory effects of 3′,4′-dihydroxyflavonol in a rabbit model of minimally-invasive glaucoma surgery with PreserFlo Microshunt
Jennifer Fan Gaskin, Zoe Pasvanis, Roy Kong, Elsa Chan *(Australia)*

505 F089 Female life cycle stages and intraocular pressure variations: an analysis of a representative Korean population
Haryung Park, Yun Jeong Lee, Jin Wook Jeoung, Ki Ho Park, Young Kook Kim *(South Korea)*

534 F090 Glaucoma implant as salvage therapy in refractory glaucoma following gold shunt failure and recurrent corneal graft
Ariadna Garreta-Rafecas, Elena Milla *(Spain)*

542 F091 Neovascular glaucoma: a single unit retrospective consecutive series from 2003 to present day to evaluate clinical profile, management and outcomes in the anti-VEGF era
Tushar Hari, Alex Tanner, Kieran Teeluck, Jayne Lee, Muneeb Ahmad Khan, Nish Srikantha, Alastair Lockwood *(United Kingdom)*

545 F092 Minimally invasive surgery in late presentation hypotony after trabeculectomy for complete resolution of bilateral choroidal effusions: a case report
Tushar Hari, Jayne Lee, Alex Tanner, Kieran Teeluck, Muneeb Ahmad Khan, Nish Srikantha, Alastair Lockwood *(United Kingdom)*

554 F093 Dynamic optic disc coloboma as a mask of glaucoma - case series study
Bartłomiej Kocurek, Michał Głodzik, Adrian Smedowski *(Poland)*

555 F094 Selective laser trabeculoplasty (SLT) in practice: the promise of a drop-free future in the management of glaucoma and ocular hypertension?
Kieran Teeluck, Nish Srikantha, Tushar Hari, Alex Tanner, Jayne Lee, Muneeb Ahmad Khan, Alastair Lockwood *(United Kingdom)*

564 F095 Short-term high-dose nicotinamide treatment across glaucoma subtypes reveals increased mitochondrial DNA content and minimal metabolomic changes in blood
Simon Gustavsson[1], Antoni Vallbona Garcia[2], James Tribble[1], Pete Williams[1], Gauti Johannesson[1], Theo Gorgels[2], Birke Benedikter[2], Hubert Smeets[2], Patrick Lindsey[2], Carroll Webers[2] *([1]Sweden, [2]The Neterlands)*

565 F096 Non-prostaglandin analogue as glaucoma therapeutic: pre-clinical safety & efficacy study
Madhu Nath, Nabanita Halder, Kamare Alam, Tanuj Dada, Thirumurthy Velpandian *(India)*

568 F097 A highly accessible, low-cost, dynamic training model for trabeculectomy surgery
Alexander Tanner, Francesco Della Lena, Tushar Hari, Kieran Teeluck, Jayne Lee, Nish Srikantha, Alastair Lockwood *(United Kingdom)*

582 F098 Retinal nerve fibre layer and ganglion cell complex thickness in patients with metabolic syndrome
Ieva Simkiene[1], Jacqueline Chua[2], Gabriele Tarutyte[1], Jolita Badariene[1], Rimvydas Asoklis[1], Leopold Schmetterer[2] *(Lithuania, [2]Singapore)*

625 F099 A new technique to make glaucoma surgery possible in those patients whose posture would normally preclude this
Alastair Lockwood, Muneeb Ahmad Khan, Kieran Teeluck, Tushar Hari, Alex Tanner, Jayne Lee, Nish Srikantha *(United Kingdom)*

633 F100 Regional disparities in glaucoma diagnosis and surgery in Denmark: urgent need for increased resources
Jeppe Samuelsen, Christina Eckmann-Hansen, Kim Holmgaard, Hadi Kjærbo, Miriam Kolko *(Denmark)*

642 F101 Ensuring reliable glaucoma detection with deep learning: the critical role of calibration and evaluation practices
rf
Marcel Reimann, Peter Tejlgaard Kampen, Josefine Vilsbøll Sundgaard, Miriam Kolko Anders Bjorholm Dahl *(Denmark)*

648 F102 Outcome for primary PAUL glaucoma implantation using tube ligature technique without intraluminal stent: a prospective observational single surgeon study
Mohamed Geneid, Jyri-Pekka Koskinen, Mika Harju, Juha Valimaki *(Finland)*

658 F103 Selective laser trabeculoplasty as an effective method of reducing intraocular pressure in a patient with primary angle-closure glaucoma after laser peripheral iridotomy in a 3-month follow-up period – a case report
Mariola Dorecka, Katarzyna Gontarz, Adrian Smedowski, Dorota Wyględowska-Promieńska *(Poland)*

659 F104 Mid-term outcomes of combined cataract surgery and iStent Inject W
Emanuel Fernandes, Afonso Lima-Cabrita, Bruno Guerreiro Dias, Susana Duarte, André Diogo Barata, Luis Abegão Pinto, Rafael Correia Barão *(Portugal)*

692 F105 Initial efficacy results of Latanoprost 0.005% + Netarsudil 0.02% combination drops, from a single centre
Bhavani Selvarasu, Eleanor Carr, Kleonikos Tsakiris *(United Kingdom)*

700 F106 "It's not always glaucoma": a misdiagnosed case of a carotid-cavernous fistula
Pedro Lopes, Joana Ferreira, Ricardo Costa-Gertrudes, Tiago Das Neves, Catarina Rodrigues *(Portugal)*

711 F107 The role of mitochondrial quality control and neuroinflammation in pathogensis of Glaucoma.
Anjali Kalwar, Aleksandra Trifunovic *(Germany)*

POS Poster Session LC

77 F108 Refractive errors after cataract surgery
rf
Rym Maamouri, Molka Ferchichi, Riahi Souhir, Aouni Jaafer, Monia Cheour *(Tunisia)*

79 F109 Comparison of corneal power assessment methods for true corneal power after myopic small-incision lenticule extraction
rf
Xiaoling Fang, Jiannan Huang, Leilei Wang, Wenwen Xue, Xia Chen *(China)*

93 F110 Accuracy of twenty intraocular lens power calculation formulas in long eyes
rf
Wiktor Stopyra[1], Oleksiy Voytsekhivskyy[2], Andrzej Grzybowski[1] *([1]Poland, [2]Ukraine)*

102 F111 Comparison between two extended depth of focus intraocular lenses
Kyungmin Koh *(South Korea)*

105 F112 rf
Ophthalmological manifestations and visual outcomes of electical and lightning trauma: a systematic review
Maria Piedrahita, Felipe Pineda, Felipe Moreno, Maria Estevez, Nicolas España, Viviana Infante, Germán Mejía-Salgado, Carlos Cifuentes, Diana Rey, Laura Rodriguez-Camelo, Alejandra de-la-Torre *(Colombia)*

249 F113
Comparison of surgically induced astigmatism after cataract surgery in post-LASIK eyes and virgin eyes with long axial length
Xia Chen, Xiaoling Fang, Wenwen Xue, Jiannan Huang, Jingjing Wang, Xiangui He, Leilei Wang *(China)*

256 F114 rf
Influence of axial length on target refraction after intraocular lens implantation in children under 2 years of age
Alejandro Alcaide Costa, Eva Calpe, Gemma Julio, Rafael Barraquer *(Spain)*

301 F115 rf
Systemic medications associate with cataract surgery in patients over 50 years
Sirpa Loukovaara, Antti Riikonen, Tuomas Lilius, Jari Haukka *(Finland)*

348 F116
Quantitative cataract grading based on blue-light autofluorescence confocal imaging
Alessandro Arrigo, Emanuela Aragona, Francesco Bandello *(Italy)*

494 F117 rf
Historical overwiev of the studies about epidemiolgy of myopia
Olavi Pärssinen *(Finland)*

503 F118
Exploring the use of pre- and retro-pupillary artisan IOLs for managing complex crystalline lens dislocation: a long-term study of visual and endothelial outcomes
Windsor Chao[1], Howard Wen-Haur Chao[1], Penbai Haui[2], Hsiao-Ming Chao[2] *([1]United Kingdom, [2]Taiwan)*

516 F119 rf
Impact of cataract surgery on scotopic and photopic mydriasis
Inês Mendo, Mariana Vaz, João Vaz, Filipe Moraes, Inês Machado, Tomas Loureiro, Nuno Campos *(Portugal)*

551 F120 rf
Effect of the corneal spherical aberrations on the selection of extended range intraocular lenses
Dayan Flores Cervantes, Inas Baoud Ould Haddi, Emilio Dorronzoro Ramírez, Vanesa Gerena Arevalo, Cristina Bonnin Arias, Vanesa Blázquez Sánchez *(Spain)*

558 F121 rf
An algorithmic approach to refractive aim following cataract surgery in the National Health Service setting
George Liu, Christopher Liu *(United Kingdom)*

638 F122
Chlorpromazine: a psychiatrist's ally, an ophthalmologist's adversary
Alaa Ghorbel, Sellem Ilhem, Ben abderrahmen Syrine, Ghorbel Mohamed *(Tunisia)*

709 F123
Determining the presence of TRPV4 channels and their influence on calcium signaling in human lens epithelium
Sofija Andjelic, Dasa Sarman, Bernarda Kinkela, Taja Vita Petrovic, Katarina Mestrovic, Marko Gosak, Marko Hawlina *(Slovenia)*

Poster Session 3

12:05-13:20

POS Poster Session EOVS

89 S001 Optical image quality of two toric extended depth of focus intraocular lenses based on wavefront engineering technology
rf
Martina Vacalebre, Elena Anastasi, Renato Frison, Simon Federico Spanò, Benedetta Castroflorio, Maria Cristina Curatolo *(Italy)*

90 S002 Evaluation of a virtual reality headset at a tertiary care ophthalmology setting
rf
Catherine Dang[1], Hong-An Nguyen[1], Soumya Podury[1], Matthew Quinn[1], Catherine Tsilfidis[1], Rustum Karanjia[1,2] *([1]Canada, [2]USA)*

91 S003 Defocus incorporated mulitiple segment spectacle lenses for myopia control: a retrospective study in a Turkish cohort
rf
Nilay Akagun, Emrah Altiparmak *(Turkye)*

170 S004 Association between building density and screening myopia in children and adolescents: a five-year longitudinal study from China
rf
Jingjing Wang, Xiangui He *(China)*

173 S005 Visual activity enhances neuronal excitability in thalamic relay neurons
rf
Aurore Aziz, Dumenieu Mael, Fronzaroli-Molinieres Laure, Naudin Lois, Bonnaure Cecile, Wakade Anushka, Zanin Emilie, Ankri Norbert, Incontro Salvatore, Denis Daniele, Marqueze Beatrice, Brette Romain, Debanne Dominique, Russier Michael *(France)*

190 S006 Comparison of refractive errors in patients with Parkinson's disease and normal people
AbbasAli Yekta, Reyhaneh Shariati, Mehdi Khabazkhoob, Ali Shoeibi, Hadi Ostadimoghaddam, Akbar Derakhshan, Hasan Hashemi, Javad Heravian Shandiz, Asieh Ehsaei, Abbas Azimi Khorasani, Reihaneh Yekta, Yeganeh Yekta *(Iran)*

212 S007 Use of L-tyrosine supplementation to support retinal function in a mouse model of deprivation myopia
rf
Bartosz Machna, Klaudia Mroz, Monika Katan, Anna Gasiorek, Anna Pacwa, Maciej Oseka, Mikołaj Górka, Joanna Lewin-Kowalik, Adrian Smedowski *(Poland)*

268 S008 The relationship between the cellular retinal structure measured with adaptive optics scanning laser ophthalmoscope and retinal function measured with multifocal electroretinogram in late-onset retinal degeneration
Stephanie Quinn, Penny Lawton, Andrew Browning, Laura Young *(United Kingdom)*

330 S009 Influence of head movement of fixation stability and eye angle changes during virtual reality perimetry
rf
Hsin-yang Chen[1], Raphael Sznitman[1], Jan Darius Unterlauft[2], Martin Zinkernagel[1], Nathanael Urs Häner[1] *([1]Switzerland, [2]Germany)*

359 S010 Assessing retinal function in an Alzheimer´s disease mouse model APPNL-F/NL-F using electroretinography
rf
Lidia Sánchez-Puebla[1], Santiago Milla Navarro[1], Inés López-Cuenca[1], José A. Matamoros[1], Elena Salobrar-Garcia[1], José A. Fernández-Albarral[1], Lorena Elvira-Hurtado[1], Ana I. Ramírez[1], Juan Jose Salazar[1], Takaomi C. Saido[2], Takashi Saito[2], Carmen Nieto-Vaquero[1], María Ángeles Moro[1], Rosa De Hoz[1], Pedro De La Villa[1], Jose Manuel Ramirez[1] *([1]Spain, [2]Japan)*

397 S011 Quantitative analysis of retinal vasculature in patients with autoimmune connective tissue disorders by retinal vessel analysis
Dmitri Artemiev, Margarita Todorova *(Switzerland)*

427 S012 Early pupillary dysfunction in optic neuropathies detected by chromatic pupillometry
Rocco Mastromartino[1], Martial Geiser[2], Fabian D'Apolito[1], Michele D'Ambrosio[1], Andrea Cusumano[1], Benedetto Falsini[5] *([1]Italy, [2]Switzerland, [3]USA)*

471 S013 Variability and age-related changes in retinal layer thicknesses in healthy individuals - correlation with loss of flicker and chromatic sensitivity
Aiman Hafeez, Alison Binns, Irene Ctori, John L. Barbur *(United Kingdom)*

525 S014 Retinal colour vision: revisiting the limits of retinal mechanisms in colour perception
Sohail Daniel *(United Kingdom)*

581 S015 Retina-brain neurovascular coupling connection
rf
Rui Bernardes[1], João Jordão[1], João Figueira[1], Miguel Morgado[1], Pedro Guimarães[1], Pedro Serranho[1], Delia DeBuc[2], Michel Paques[3], Miguel Castelo-Branco[1] *([1]Portugal, [2]USA, [3]France)*

626 S016 The pulvinar's role in visual hierarchy communication and cortical integration
rf
Christian Casanova, William Thomas, Nelson Cortes Hernandez *(Canada)*

639 S017 Comparative performance of six large language models in the self-assessment test of the American Academy of Ophthalmology
rf
Andrea Taloni, Antonia Carmen Sangregorio, Filippo Lixi, Mario Troisi, Francesco Paolo Mancini, Valerio Calabresi, Feyza Çukurova, Raphael Kilian, Valentino De Ruvo, Luigi De Rosa, Giulia Coco, Massimo Busin, Giuseppe Giannaccare *(Italy)*

677 S018 Evidence for altered color adaptation in autism spectrum disorder
rf
Miguel Castelo-Branco, João Castelhano, Francisca Matias *(Portugal)*

691 S019 Age-related changes in cone-mediated dark adaptation
Beatriz Sánchez Gavilán, Maria Cinta Puell Marin, Shrinivas Pundlik *(USA)*

POS Poster Session PBP

129 S020 Implementation of and ex vivo assay for corneal permeation and irritation: evaluation of proparacaine hydrochloride as a case study
Natalia Carolina Gonzalez Jimenez, Yolima Baena Aristizabal, Maria Lozano Alvarez *(Colombia)*

130 S021 Multiple neural pathways light-independently drive TH2 wide-field amacrine cells in the developing and mature retina
Dao-Qi Zhang, Wenqiu Wang *(USA)*

193 S022 Comparative proteomic analysis of aqueous humour, anterior capsules and crystalline lenses in different human cataract subtypes versus healthy controls
rf
Christina Karakosta[1,2], Martina Samiotaki[1], Anastasios Bisoukis[2], Nantieznta Kyriakidou[1], Konstantinos Moschou[1], Marilita Moschos[1] *(1Greece, 2United Kingdom)*

224 S023 Pharmacogenomics of steroid-induced ocular hypertension
Stephen Schwartz, Zeyuan Song, Satyabrata Pany, Jonathan Huang, Tatsuo Itakura, Arpan Mazumder, Anastasia Gurinovich, Francis Price, Jr., W. Daniel Stamer, Srinivasan Senthilkumari, Colin Willoughby, Ronnie George, Srujana Chitipothu, Sudha Iyengar, Paola Sebastiani, Marianne Price, M. Elizabeth Fini *(USA)*

286 S024 Protective effects and mechanism of modified Qiju Dihuang Formula in experimental choroidal neovascularisation rats
rf
Leilei Wang, Xiaoling Fang, Xia Chen, Wenwen Xue, Jiannan Huang, Xiaowei Tong *(China)*

288 S025 Magnetically actuated and biodegradable robotic intraocular dexamethasone implants
Erdost Yıldız[1], Ugur Bozuyuk[1], Eray Yildiz[2], Fan Wang[1], Mertcan Han[1], Alp Karacakol[1], Devin Sheehan[1], Yan Yu[1], Metin Sitti[1] *([1]Germany, [2]Turkye)*

314 S026 Re-evaluating the role of preservative-containing eyedrop formulations: a review of recent data
Cindy M.L. Hutnik[1], Andrew J. Tatham[2], Andrzej Grzybowski[3], José António Dias[4], Pedro Corsino Fernández Vila Fernández Vila[5] *([1]Canada, [2]United Kingdom, [3]Poland, [4]Portugal, [5]Spain)*

329 S027 Patient perspectives on handling single dose versus multi-dose eye drops
José António Dias, Joao Filipe, Nuno Lopes, Mario Cruz, Paulo Margarido *(Portugal)*

361 S028 SPARC initiates gliosis via integrin α5β3/FAK/ERK signaling and mitochondrial dysfunction in early diabetic retinopathy
rf
Shubhrajit Barman, Senthil Kumar Ganesan *(India)*

392 S029 An in-depth overview on retinal morpho-functional and molecular features of the 5xFAD murine model
rf
Lorenzo Guidotti, Martina Lucchesi, Rosario Amato, Giuseppe Neri, Silvia Marracci, Claudia Gargini, Ugo Borello, Maurizio Cammalleri, Giovanni Casini, Massimo Dal Monte *(Italy)*

406 S030 Local thyroid hormone system in retinal cell resilience to metabolic stress
Rosario Amato *(Italy)*

407 S031 Astrocyte-mediated protection of the hypoxic retina: involvement of beta3-adrenoceptors
rf
Alessio Canovai, Lorenza Di Marsico, Massimo Dal Monte, Paola Bagnoli, Maurizio Cammalleri *(Italy)*

416 S032 Rescruing mitochondria functioning by antioxidant agent to prevent the onset of age-related macular degeneration
Darin Zerti, Luigi Donato, Ignacio Babiloni Chust, Giulia Carozza, Rosalia D'Angelo, Lucia Poggi, Maurizio Passacantanto, Rita Maccarone *(Italy)*

419 S033 Early retinal involvement in amyotrophic lateral sclerosis: functional and molecular characterization in SOD1G93A mice
rf
Lorenza Di Marsico, Eleonora Daghini, Rosario Amato, Angela Cannavale, Alessio Canovai, Giuseppe Neri, Ugo Borello, Claudia Gargini, Maurizio Cammalleri, Massimo Dal Monte *(Italy)*

434 S034 Single oral dose of dronabinol enhances optic nerve head blood flow in patients with glaucoma
rf
Gerhard Garhöfer, Theresa Lindner, Viktoria Pai, Marihan Abensperg-Traun, Leopold Schmetterer, Doreen Schmidl *(Austria)*

438 S035 Shear-stress dependent viscous properties of hyaluronic-based lubricants
rf
Leopold Schmetterer, Gerhard Garhöfer *(Austria)*

454 S036 Toxicity of tranexamic acid in Müller cells: oxidative stress and inflammatory pathways
rf
Dammak Azza, Nadine Gubernath, Wolf Armin *(Germany)*

488 S037 Global trends in climate change and sustainability in ophthalmology literature
Anna March De Ribot, Francesc March De Ribot *(New Zealand)*

510 S038 Extracellular vesicle therapy for sepsis-induced neurodegeneration: influence of host sex and transplant compatibility
Jhoana Abigail Guarnizo-Campoverde, Kristy Tatiana Rodríguez Ramírez, David García Bernal, Fernando Lucas-Ruiz, Jesus Isais Gil Chinchilla, Caridad Galindo-Romero, Maria José Ruiz-Pastor, Marta Agudo-Barriuso *(Spain)*

529 S039 Spatiotemporal characterization of advillin retinal ganglion cell degeneration following optics nerve injury
Manuel Salinas-Navarro, José Antonio Gómez-Sánchez, Andreea Delia Necula, Juan Sáez-Sánchez, Manuel Vidal-Sanz, Marcelino Avilés-Trigueros *(Spain)*

566 S040 Safety and neuroprotective effects of intravitreal transplatation of bone-marrow-derived mononuclear cells exosomes to animal model of retinal degeneration
rf
Johnny Di Pierdomenico, Ana Martínez Vacas, Andreea Delia Necula, David García Bernal, Maria Paz Villegas Perez, Diego García-Ayuso *(Spain)*

570 S041 Corneal endothelium protective effect of taurine-based ophthalmic surgical devices
rf
Francesca Lazzara, Federica Conti, Grazia Maugeri, Erika Giuffrida, Claudio Bucolo *(Italy)*

572 S042 Design of selective PI3K delta inhibitors for diabetic retinopathy
rf
Chiara Bianca Maria Platania, Carmela Bonaccorso, Cristina Munzone, Isabel La Rosa, Francesca Lazzara, Claudio Bucolo *(Italy)*

616 S043 Ocular disposition of bio-therapeutics and the role of peptide transporters in blood ocular barriers
Tapas Roy, Nabanita Halder, Rohit Saxena, Thirumurthy Velpandian *(India)*

617 S044 Investigating the cellular impact of silicone oil exposure in retinal cells: insights from cone oil droplet in vertebrate retina
Dammak Azza, Lara Catherine Kutschbach, Wolf Armin *(Germany)*

620 S045 Dual serotoninergic ligand exerts protective effect in an in vitro model of blood retinal barrier breakdown
Claudio Bucolo, Chiara Bianca Maria Platania, Francesca Lazzara *(Italy)*

683 S046 Cigarette smoking and ocular diseases
Zahra Javdani, Frank Goes, Guido Vanhal, Deborah Herrera *(Belgium)*

704 S047 A preclinical tool for proliferative retinopathy and retinal fibrosis based on a mouse model of pericyte immaturity
Nekane Maritorena-Hualde, Catalina Prats-Lluís, Hielke Van Splunder, Anabel Martínez-Romero, Xavier Vallvé, Emma Cerrato, Ana Méndez, Luis Arias-Barquet, Eloi Montañez, Mariona Graupera, Pilar Villacampa *(Spain)*

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97 S048 Photobiomodulation as protective strategy against hydrogen peroxide induced oxidative stress and mitochondrial dysfunction in retinal pigment epithelial cells
Zehra Canbulat, Ayse Dilara Aydemir, Murat Hasanreisoğlu *(Turkye)*

100 S049 OCT-A as a highly sensitive biomarker to study retinal change in the early phase of Alzheimer's disease
Claudio Iacobucci, Bernardo Billi, Eleonora Lacorte, Patrizia Lorenzini, Paola Piscopo, Anna Elisa Castellano *(Italy)*

124 S050 Bone morphogenetic protein signaling and retinal fibrosis
rf
Mohamed Al-Shabrawey[1], Sonali Sharma[1], Ikbal Karkoukli[1], Alee Asaaf[1], Muhammad Haque[1], Gieth Alahdab[1], Mohamed Tarek[1,2], Yuji Mishina[1] *([1]USA, [2]Egypt)*

157 S051 Biodegradable ultrathin nanofibrous carrier for retinal tissue engineering: optical, mechanical and degradation properties
rf
Hana Studenovska, Mourad Souibgui, Jitka Nováčková, Vladimír Proks, Jiří Hodan, Věra Cimrová *(Czech Republic)*

171 S052 Diabetes and diabetic retinopathy in Finland during 2000-2017 based on nationwide survey and register data
rf
Petri Purola, Seppo Koskinen, Hannu Uusitalo *(Finland)*

192 S053 Beyond the algorithm: challenges and future paths in ai-driven geographic atrophy segmentation
Eirini Maliagkani[1], Aikaterini Chatzara[1], Dimitra Mitsopoulou[2], Andreas Katsimpris[2], Ioannis Apostolopoulos[1], Elpiniki Papageorgiou[1], Ilias Georgalas[1] *([1]Greece, [2]United Kingdom)*

196 S054 Uveal effusion and serous retinal detachment following cataract surgery in a patient with nanophthalmos
Konstantinos Tyrlis, Paraskevi Kotrogianni, Thomas Chontos, Constantine Angelidis, Ilias Georgalas *(Greece)*

197 S055 Golgman Favre syndrome complicated with choroidal neovascularisation: case series
Amira Mabrouk, Nabi Wijdene, Boubaker Cyrine, Khochtali Sana, Jelliti Bechir *(Tunisia)*

203 S056 From skin to sight: sequelae in Hansen's disease
Maria Piedrahita, Eduardo Cadena, Maria Estevez, Felipe Moreno, Fernando Godin *(Colombia)*

206 S057 *Escherichia coli* Nissle 1917 as an adjuvant therapy reduces inflammation severity in experimental autoimmune uveitis
rf
Klara Dusova, Petra Prochazkova, Aneta Klímová, Monika Rova, Nikolina Canova, Jarmila Heissigerova, Miloslav Kverka, Radka Roubalova, Janet Jezkova, Michaela Brichova, Petra Svozilkova *(Czech Republic)*

214 S058 Follow-up report of a case of focal choroidal excavation secondary to COVID-19 infection
Leilei Wang, Xiaoling Fang, Xia Chen, Wenwen Xue, Jiannan Huang, Xiaowei Tong *(China)*

216 S059 Macular pigmentary changes in diabetic eyes without diabetic retinopathy
Alessandro Arrigo, Emanuela Aragona, Gianpaolo Zerbini, Pasquale Aragona, Francesco Bandello *(Italy)*

217 S060 Retinal vascular changes in mild cognitive impairment using SD-OCT angiography: pilot study
rf
Lorena Elvira-Hurtado, Inés López-Cuenca, Lidia Sánchez-Puebla, José A. Matamoros, José A. Fernández-Albarral, Mario Salas-Carrillo, Pedro Gil, Ana Isabel Ramirez, Juan Jose Salazar, Rosa De Hoz, Jose Manuel Ramirez, Elena Salobrar-Garcia *(Spain)*

221 S061 Detecting retinal alterations in vascular dementia using OCT and OCTA
rf
Lorena Elvira-Hurtado, Inés López-Cuenca, Lidia Sánchez-Puebla, José Antonio Matamoros, José A. Fernández-Albarral, Mario Salas-Carrillo, Pedro Gil, Ana I. Ramírez, Juan Jose Salazar, Rosa De Hoz, Jose Manuel Ramirez, Julian Garcia Feijoo, Elena Salobrar-Garcia *(Spain)*

222 S062 Evaluation of two novel riboflavin-based dyes for safe and effective vitreoretinal staining
rf
Mario Troisi, Ciro Caruso, Carmine Ostacolo, Ciro Costagliola *(Italy)*

239 S063 Deep learning-based evaluation of heavy liquid-assisted retinal flattening on postoperative anatomical retinal reattachment in macular-involving rhegmatogenous retinal detachment treated with pars plana vitrectomy
Yan Gong, Meng Li *(China)*

251 S064 Advancing retinal imaging with artificial intelligence: evaluating performance in geographic atrophy segmentation
Aikaterini Chatzara[1], Eirini Maliagkani[1], Dimitra Mitsopoulou[2], Andreas Katsimpris[2], Ioannis Apostolopoulos[1], Elpiniki Papageorgiou[1], Ilias Georgalas[1] *([1]Greece, [2]United Kingdom)*

263 S065 Bleeding honeycomb - A rare case of malattia leventinese
Inês Ludovico, Pedro Lopes, Joana Ferreira, Maria Elisa Luís, Rita Anjos *(Portugal)*

284 S066 Single-center evaluation of response to treatment with intravitreal faricimab injections in cases with neovascular age-related macular degeneration
Stamatina Kabanarou, Nikolaos Bitzanakis, Petros Fragkiskos, Christina Garnavou-Xirou, Evgenia Kontou, Ilias Gkizis, Tina Xirou *(Greece)*

290 S067 Automated quantification of macular perfusion in Behçet's uveitis using optical coherence tomography angiography
Cigdem Ardic[1], Almila Sarigul Sezenöz[1], Erdost Yıldız[2], Sirel Gür Güngör[1] *([1]Turkye, [2]Germany)*

311 S068 *rf*
Long-term outcomes of bilateral injection of lenadogene nolparvovec gene therapy for leber hereditary optic neuropathy
Nancy Newman[1], Patrick Yu-Wai-Man[2], Prem Subramanian[1], Sarah Thornton[1], An-Guor Wang[3], Sean Donahue[1], Bart Leroy[4], Valerio Carelli[5], Valérie Biousse[1], Catherine Vignal-Clermont[6], Alfredo Sadun[1], Robert Sergott[1], Gema Rebolleda Fernández[7], Bart Chwalisz[1], Rudrani Banik[1], Magali Taiel[6], José-Alain Sahel[1] *([1]USA, [2]United Kingdom, [3]Taiwan, [4]Belgium, [5]Italy, [6]France, [7]Spain)*

315 S069
Innovative automated imaging approach for quantitative analysis of retinal glial cells
Lidia Sánchez-Puebla, Miguel A. Sánchez-Puebla, Ana Granados, Valentín Moreno, Ana Isabel Ramirez, Jose Manuel Ramirez, Juan Llorens, Inés López-Cuenca *(Spain)*

322 S070
Lower retinal arteriolar and venular fractal dimension are associated with higher risk of incident dementia - The UK Biobank (n = 65,727)
Frank van der Heide[1], Anthony Khawaja[2], Seray van Montfort[1], Archana Singh-Manoux[1], Pearse Keane[2], Dan Milea[1] *([1]France, [2]United Kingdom)*

323 S071
Relationship of macrophage-like cells and retinal ganglion cells in healthy eyes
Matteo Belletti[1,2], Ester Carreño Salas[2], Francesco Pichi[3,4] *([1]Italy, [2]Spain, [3]United Arab Emirates, [4]USA)*

335 S072
The enigma of frosted branch angiitis: an unexpected challenge in hematologic malignancies
Arturo Real Arellano, Bruno Taboada Moreno *(Mexico)*

338 S073
A deep learning algorithm for classifying diabetic retinopathy using optical coherence tomography angiography
Gahyung Ryu *(South Korea)*

344 S074
Evaluating annotation efficiency and consistency in autofluorescence imaging: a comparison of tools
Adam Threlfall, Barbra Hamill, Catherine Jamison, Alan Anderson, Enrico Pellegrini, Kereen Johnston, Iain Gourlay, Niall Strang, Tom MacGillivray, Gavin Robertson *(United Kingdom)*

362 S075
Retrofoveolar neovascular AMD complication: FARICIMAB(Vabysmo) injections(IVT) treatment with PROREACTIVE protocol
Corinne Gonzalez *(France)*

364 S076 *rf*
Structural, morphology and evolution study of AMD drusenoid deposits with OCT and morphology-structural software
Corinne Gonzalez *(France)*

366 S077
Intravenous thrombolysis in central retinal artery occlusion: a case report
Chrysa Agapitou, Alexia Risi-Koziona, Stamatios Lampsas, Panagiotis Theodossiadis, Irini Chatziralli *(Greece)*

367 S078
Microvascular changes on the macula and optic disc in patients with type 1 diabetes mellitus
Alexia Risi-Koziona, Chrysa Agapitou, Stamatios Lampsas, Konstantinos Pappelis, Panagiotis Theodossiadis, Irini Chatziralli *(Greece)*

369 S079 *rf*
Randomized, controlled study to investigate the efficacy and safety of resveratrol vitamin supplements in patients with non-proliferative diabetic retinopathy without macular edema (REVOLUTION study)
Chrysa Agapitou, Alexia Risi-Koziona, Eleni Dimitriou, Stamatios Lampsas, Panagiotis Theodossiadis, Irini Chatziralli *(Greece)*

376 S080
Detection of choroidal neovascularization using swept-source optical coherence tomography angiography after half-fluence photodynamic therapy in chronic central serous chorioretinopathy: a three-year follow-up
Inmaculada Herrero Sanchez, Olivia Esteban, Pablo Tejada González, Edurne De La Cámara Sahuquillo, Ana María Abad Pascual, Javier Ramos Duarte, Luca Manuel Bueno Borghi, Cristina Calvo Simón, Carla Sánchez Remacha, Julia Aramburu Clavería, Miguel Castillo Fernández, Marta Suñer Martínez, Francisco Javier Ascaso *(Spain)*

378 S081
Long-term visual outcomes in complete susac syndrome: a 15-year follow-up
Ariadna Garreta-Rafecas, Elena Milla *(Spain)*

389 S082 Optimisation of the daily living tasks dependent on vision questionnaire in the setting of patients being treated for macular diseases
Francis Sanders, Eirini Skiadaresi, Colm Mcalinden *(United Kingdom)*

390 S083 Outcome of different surgical repair techniques for rhegmatogenous retinal detachment - A health economic analysis in the Split-Dalmatia County, Croatia
Ivan Borjan[1], Ivna Plestina-Borjan[1], Silvia N. W. Hertzberg[2], Alen Sinicic[1], Ljubo Znaor[1], Beáta Éva Petrovski[2], Goran Petrovski[2] *([1]Croatia, [2]Norway)*

391 S084 *rf* Early onset progressive loss of rod bipolar cells accompanied by ubiquitin punctae in Cln3delta7/8 mice
Tommi Torsti, Kai Kaarniranta, Anu Kauppinen, Markus M. Forsberg *(Finland)*

394 S085 Retinal layers in parkinson's disease: preliminary OCT biomarker analysis
Alessandra Mancini, Giovanna Carnovale Scalzo, Massimiliano Borselli, Domenico Chisari, Lorenzo Rijillo, Luca Bifezzi, Maria Angela Romeo, Armando Celia, Raffaella Gioia, Andrea Lucisano, Vincenzo Scorcia, Gennarina Arabia, Aldo Quattrone, Adriano Carnevali *(Italy)*

398 S086 3 years of functional recovery quantified by multifocal electroretinogram after macular hole surgery
Thibaud Garcin, Nicolas Abihaidar, Houssem Fadli, Mathilde Kaspi, Borderie Vincent, Nacim Bouheraoua *(France)*

436 S087 Transplantation of human iPSC-derived RPE cells with the corrected MERTK mutation into minipig eyes
Taras Ardan[1], Slaven Erceg[2], Anna Brýmová[1], Hana Studenovska[1], Brigitte Mueller[3], Knut Stieger[3], Goran Petrovski[4,5], Lyubomyr Lytvynchuk[3], Zbyněk Straňák[1], Miroslav Veith[1], Štefan Juhás[1], Jana Juhasová[1], Yaroslav Nemesh[1], Zdeňka Ellederová[1], Jan Motlik[1] *([1]Czech Republic, [2]Spain, [3]Germany, [4]Norway, [5]Croatia)*

440 S088 Lutein-in-extra-virgin-olive-oil as a peroral intervention in an animal model of retinopathy of prematrutity
Xiaoyuan Ye[1], Kwok Fai So[1], Jetty Chung Yung Lee[1], Wai Ching Lam[2], Amy Cheuk Yin Lo[1] *([1]China, [2]Canada)*

442 S089 *rf* Impact of ectopic internal retinal layers in postoperative outcomes of idiopathic epiretinal membrane
João Castro Cabanas, Daniel Ferreira Cardoso, Pedro Martins, Catarina Ferreira, Filipe Sousa Neves, Miguel Bilhoto, Paula Sepúlveda *(Portugal)*

447 S090 Evaluating the consequences of appointment delays on AMD progression at the Western Eye Hospital during the COVID-19 lockdown
Inés López-Cuenca[1], Lorenzo Fabozzi[2], Saad Younis[2], Ahmad Ali[2], Francesca Cordeiro[2] *([1]Spain, [2]United Kingdom)*

463 S091 Tackling macular edema and dislocated IOL: the fluocinolone-loaded iOL with scleral suspension (FLISS) technique
Pedro Martins, João Castro Cabanas, Daniel Ferreira Cardoso, Miguel Bilhoto, Paula Sepúlveda, Filipe Sousa Neves *(Portugal)*

475 S092 Retinal and choroidal vascular parameters in patients with Raynaud's syndrome assessed by SS-OCT and OCT-A: a cross-sectional study
Edurne De La Cámara Sahuquillo, Olivia Esteban, Inmaculada Herrero Sánchez, Pablo Tejada González, Ana María Abad Pascual, Javier Ramos Duarte, Cristina Calvo Simón, Luca Manuel Bueno Borghi, Carla Sánchez Remacha, Julia Aramburu Clavería, Miguel Castillo Fernández, Marta Suñer Martínez, Francisco Javier Ascaso *(Spain)*

476 S093 Subthreshold micropulse laser for central serous chorioretinopathy: functional and anatomical outcomes
Pablo Tejada González, Inmaculada Herrero Sanchez, Edurne De la Camara Sahuquillo, Luca Manuel Bueno Borghi, Carla Sanchez Remacha, Cristina Calvo Simon, Miguel Castillo Fernández, Julia Aramburu Claveria, Marta Suñer Martinez, Ana Maria Abad Pascual, Javier Ramos Duarte, Olivia Esteban, Francisco Javier Ascaso *(Spain)*

481 S094 Evaluation of macular and optic disc nerve blood flow velocity in acute central serous chorioretinopathy measured with laser speckle flowmetry
Bogumiła Sędziak-Marcinek, Adam Wylegala, Natalia Lange, Jarosław Piłat, Edward Wylegala *(Poland)*

485 S095 Alpha-melanocyte-stimulating hormone protects neurons by inhibiting ferroptosis in experimental retinal ischemia/reperfusion injury
Lu Xiang[1], Andrew Taylor[2], Amy Cheuk Yin Lo[1] *([1]China, [2]USA)*

489 S096 Pars plana vitrectomy in optic pit maculopathy
Luise Grajewski, Beate Wittkowski, Lothar Krause *(Germany)*

491 S097 Artificial intelligence in the treatment of diabetic retinopathy: a scoping review
Muneeb Ahmad Khan, Diya Baker *(United Kingdom)*

515 S098 Microvascular remodeling in macular edema secondary to retinal vein occlusion
Amina El Mayel, Mohamed Ben Hadj Khelifa, Rim Kmiha, Ghassen Marzouk, Amel Chebbi *(Tunisia)*

531 S099 Unilateral macular edema with mild inflammation: Look for the virus!
Aurelie Le, Majda Rachdi, Youssef Afifi, Maria Fernanda Flores Herrera, Dorine Makhoul, Younes Azzagnuni *(Belgium)*

550 S100 Resolution of submacular hemorrhage treated with intravitreal tissue plasminogen activator, pneumatic displacement, and faricimab – a case report
Olgierd Duchniewicz, Michał Orski *(Poland)*

583 S101 Management of persistent macular hole retinal detachment following wide-based inverted internal limiting membrane flap surgery in high myopia (mean axial length 30 mm): a modified surgical approach
Howard Wen-Haur Chao[1], Windsor Chao[1], Penbai Haui[2], Cheng-Kuo Cheng[2], Hsiao-Ming Chao[2] *([1]United Kingdom, [2]Taiwan)*

595 S102 Investigating vision-related quality of life and functionality in patients with low vision
Anna Nikolaidou, Stavroula Almpanidou, Persefoni Talimtzi, Diamantis Almaliotis, Vasileios Karampatakis *(Greece)*

621 S103 Predictive factors of final visual outcome in patients with Leber hereditary optic neuropathy treated with lenadogene nolparvovec gene therapy
Piero Barboni[1], Nancy Newman[2], Valérie Biousse[2], Patrick Yu-Wai-Man[3], Valerio Carelli[1], Catherine Vignal-Clermont[4], Constant Josse[5], Magali Taiel[5], José-Alain Sahel[6], Robert Sergott[6] *([1]Italy, [2]USA, [3]United Kingdom, [4]France, [6]USA)*

630 S104 Choroidal calcification revealing phosphocalcic metabolism disorder
Rym Maamouri, Ben Nacef Ibtissem, Aouni Jaafer, Rojbani Eya, Maaloul Sahar, Monia Cheour *(Tunisia)*

643 S105 Acute retinal necrosis: a retrospective evaluation of four cases
Eda Gumrukcuoglu, Sedat Özmen *(Turkye)*

651 S106 The proteome signatures of the retinal cellular response to psychosocial stress
Caroline Manicam, Franziska Neubauer, Norbert Pfeiffer, Marianne Müller, Natarajan Perumal *(Germany)*

668 S107 Diagnostic value of swept-source optical coherence tomography angiography in retinal lipemia
Saoussen Chebbah, Bouraoui Rim, Taha Koutheir Bizani, Mohamed Hassen Ben Salem, Iness Hachicha, Khaled El Matri, Chebil Ahmed, Rim Limaiem *(Tunisia)*

693 S108 MicroRNA-21 (miR-21) as a new player in retinal fibrosis
Manuela Bartoli *(USA)*

702	S109	Management of type 1 idiopathic macular telangiectasia **Saoussen Chebbah, Yasmine Houmane, Taha Koutheir Bizani, Emna Baklouti, Fatma Sakji, Rania Lazreg, Chebil Ahmed, Rim Limaiem** *(Tunisia)*
703	S110	The unknown sign of concentric macular rings in albinism **Marta Caminal, Jaume Catala, Jesus Diaz Cascajosa, Eduard Pedemonte, Albert Saladrigas, Santiago Conversa** *(Spain)*
710	S111	Bidirectional association between coronary artery disease and exudative age-related macular degeneration: a nationwide cohort study in Korea **Jee Myung Yang, Seung Won Lee** *(South Korea)*
713	S112	Lipidomic profiling of murine models of photoreceptor degeneration reveals distinct fatty acid alterations **M.J. Ruiz-Pastor, C. Sánchez-Castillo, L. Vidal-Gil, E. Missonnier, M. Pastor-Mas, M. Agudo-Barriuso, P. Lax, N. Cuenca** *(Spain)*