26th EVER CONGRESS

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26th–28th October 2023 Valencia

PROGRAMME

EVER Board 2022-2023

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EOVS: Electrophysiology / physiological Optics / Vision Sciences	**Franziska RAUSCHER**, Leipzig (2019-2024)
G: Glaucoma	**Miriam KOLKO**, Copenhagen (2020-2025)
IM: Immunology / Microbiology	**Ester CARRENO SALAS**, Madrid (2021-2026)
LC: Lens and Cataract	**Andrzej GRZYBOWSKI**, Poznan/Olsztyn (2018-2023)
MBGE: Molecular Biology / Genetics / Epidemiology	**Christina ZEITZ**, Paris (2019-2024)
NSPH: Neuro-ophthalmology / Strabismology / Paediatric Ophthalmology / History of Ophthalmology	**Patrick YU WAI MAN**, Cambridge (2020-2025)
PO: Pathology / Oncology	**JWM BEENAKKER**, Leiden (2020-2025)
PBP: Physiology / Biochemistry / Pharmacology	**Pedro DE LA VILLA**, Madrid (2021-2026)
RV: Retina / Vitreous	**Francine BEHAR-COHEN**, Paris (2018-2023)

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EVER section travel grants

We are pleased to announce that the following members have received an EVER section travel grant of 500 EUR each:

- **COS – Yuliia Boieva – Ukraine**
  926 (F.077) - Our experience in managing patients with dry eye syndrome
- **EOVS – Sara Oliveira – Portugal**
  781 (S.053) - Sex-related differences in the visual function of an animal model of type 1 diabetes
- **G – Yun Jeong Lee – South Korea**
  12 (S.056) - A meta-analysis of surgical treatments for childhood glaucom
- **LC – Roukaya Chahir – Morocco**
  247 (T.016) - Epidemiological and clinical profile of lens ectopias in children: about 126 eyes
- **PBP – Christina Karakosta – Greece**
  827 (T.040) - Proteomic changes in age-related cataract and post-vitrectomy cataract
- **RV – Alvaro Plaza Reyes – Spain**
  838 (T.119) - Clinical-grade hPSC-derived RPE grafts for the treatment of age-related macular degeneration

Section Business Meetings

EVER Section Business Meetings of the scientific sections Friday, 17:45-18:15

ACB - COS - EOVS ..... Auditorium 1

G - IM - LC ..... Auditorium 2

MBGE ..... Calatrava 1

NSPH ..... Calatrava 2

PBP ..... Gaudi 1

PO ..... Gaudi 2

RV ..... Gaudi 3

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
PBP	=	Physiology / Biochemistry / Pharmacology
PO	=	Pathology / Oncology
RV	=	Retina / Vitreous

08:30-08:45| AUDitorium 1

PS **Welcome by the EVER President 2023**

Nora Szentmary *(Germany)*

08:45-09:10 | Auditorium 1

PS **EVER Acta Lecture**

Introduced by **Kai Kaarniranta** *(Finland)*

Why are we doing this?

Hannu Uusitalo *(Finland)*

We are all, no matter whether we are basic scientists or ophthalmologist, whether it is question of discovering of novel cellular pathways, drugable targets, new therapeutical tools or technological innovations, protecting of our visual system, treating diseases threatening its function or replacing these functions, working for vision. Good vision is one of the key elements of good health related quality of life (HRQoL). It is a factor of working ability and self-activity. It is important for individual development and education, understanding of the world. Poor vision on the other hand is related to decreased HRQoL, increased risk of accidents, increased use of health care services, early retirement, loss of productivity and problems for independent initiative. In this presentation I will describe the relationships of visual acuity, HRQoL, use of health care services, and socioeconomical cost based on data of nationwide health surveys and health care registers. The results clearly demonstrate the significant role of vision for individuals and societies. I hope, they further motivate us to work harder in our laboratories and clinics and hopefully also convince funding organizations and governments to understand, how by supporting our efforts, it is possible not only to increase the welfare but also save money in our societies.

09:10-09:40 | Auditorium 1

PS **EVER Lecture delivered by the Past President**

Introduced by **Nora Szentmary** *(Germany)*

Idiosyncratic responses of RGCs to injury and protection

Manuel Vidal-Sanz *(Spain)*

On this talk I will summarize some recent studies conducted in the Laboratory to explore the responses of different retinal ganglion cells to diverse injuries such as transient ischemia induced by acute ocular hypertension (AOH), excitotoxicity induced by intravitreal injection of 100mM N-methyl D Aspartate (NMDA) or intraorbital optic nerve transection (IONT), and protection with selective agonists of the tropomyosin related kinase B receptor (brain-derived neurotrophic factor BDNF or 7,8-Dihydroxyflavone DHF), or with a voltage-dependent calcium channel blocker (ITH12657). We found that three different RGC populations (Brn3a-, melanopsin- and osteopontin-expressing RGCs) respond distinctly to different injuries and neuroprotective strategies, further adding to the idea that each type of RGC has a unique response to injury and protection. Deciphering the molecular mechanisms of each RGC type will help to understand neuronal responses to injury and contribute to its possible prevention.

Thursday
26 October 2023

09:45-11:00 | Auditorium 1

SIS MBGE-30 - Genetic findings of inherited retinal disorders

Inherited Retinal Disorders (IRDs) are a major cause of blindness worldwide; together they have an incidence of 1:2000. However, those disorders are clinically and genetically heterogeneous. They can be stationary or progressive leading to complete vision loss. Many genes underlying these disorders have been identified but for ~30% of the cases the genetic defects are unknown. This special interest symposium aims to present prevalence studies of IRD cohorts and highlights to identify the missing genetic causes from different European countries.

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

09:45 Genetic findings of inherited retinal diseases in France
Christina Zeitz *(France)*

10:00 Genetic findings of individuals with inherited retinal diseases in Finland
Joni Turunen *(Finland)*

10:15 Genetic findings of inherited retinal diseases in Belgium
Elfride De Baere *(Belgium)*

10:30 Cost-effective smMIPs-based sequencing to provide a genetic diagnosis for patients with retinitis pigmentosa, Leber congenital amaurosis and macular diseases
Daan Panneman *(The Netherlands)*

10:45 Genetic findings of inherited retinal diseases in Aōtearoa / New Zealand
Andrea Vincent *(New Zealand)*

09:45-11:00 | Auditorium 2

C COS-78 - How corneal sensory nerves protect our eyes

Corneal sensory nerves (CSNs) are responsible of the conscious sensations evoked by corneal stimulation. Besides, CSNs are involved in the regulation of protective functions such as tearing and blinking, and the trophic maintenance of the ocular tissues. This course reviews the activity of CSNs, and how they are involved in the protective mechanisms in health and disease. Depending on the transducing channels they express in their membrane, CSNs are able to respond to different stimuli (mechanical, thermal, chemical) and evoke different conscious sensations (stinging, burning, pricking, freshness, dryness, pain, etc.). Reflex blinking and tearing are driven by activation of nociceptors, while their basal rate is regulated mostly by cold thermoreceptors. The action potentials generated at a CSN upon stimulation reach the central nervous system and also invade its peripheral nerve endings, thus releasing locally neuropeptides (SP, CGRP, etc.) that are important agents in maintaining corneal tissue integrity and promoting wound healing. The activity of corneal sensory nerves is modified after nerve damaged and under inflammatory conditions, also altering the regulation of the protective mechanisms they are involved in.

Organizer: **M. Carmen Acosta** *(Spain)*
Co-organizer: **Juana Gallar** *(Spain)*

09:45 Corneal sensory nerves function: an overview
Juana Gallar *(Spain)*

10:03 Role of corneal sensory nerves in tearing and blinking
M. Carmen Acosta *(Spain)*

10:21 Corneal nerves and wound healing: no gain without pain?
Giulio Ferrari *(Italy)*

10:39 Changes in corneal sensory nerves activity and the protective mechanisms during ocular surface pathologies
Illes Kovacs *(Hungary)*

09:45-11:00 | Calatrava 1

FP Free Paper Session 1

Moderators: **Stephen Schwartz** *(USA)*, **Anna Swiech** *(Poland)*

519 Effects of oral and intranasal resveratrol nanoparticle administration on neurodegeneration and neuronal dysfunction in a model of multiple sclerosis
Ehtesham Shamsher[1,2], Reas Khan[3], Benjamin Davis[1], Kimberly Dine[3], Vy Luong[1], Satyanarayana Somavarapu[1], Maria Francesca Cordeiro[1], Kenneth Shindler[3] *([1]United Kingdom, [2]Switzerland, [3]USA)*

596 Multi-omic study of a cellular model of the retinal pigment epithelium producing extracellular deposits
Ana Alvarez-Barrios, Jorge García Álvarez, Rosario Pereiro García, Hector Gonzalez-Iglesias, Lydia Álvarez *(Spain)*

88 Choroidal quantitative features in high myopia: characteristics and association with neovascular and atrophic complications
Alessandro Arrigo, Emanuela Aragona, Maurizio B. Parodi, Francesco Bandello *(Italy)*

185 Greater reduction in hyperreflective foci with faricimab compared to aflibercept in patients with diabetic macular edema
Esther von Schulthess[1], Andreas Maunz[1], Usha Chakravarthy[2], Nancy Holekamp[1,3], Rishi Singh[3], Katie Patel[3], Isabel Bachmeier[1], Siqing Yu[1], Kara Gibson[3], Jeffrey Willis[3], Carl Glittenberg[1], Sascha Fauser[1] *([1]Switzerland, [2]United Kingdom, [3]USA)*

474 Long-term efficacy of idebenone in patients with Leber hereditary optic neuropathy according to age at symptom onset and disease phase: Results from the LEROS study
Xavier Llòria[1], Patrick Yu-Wai-Man[2], Valerio Carelli[1], Livia Tomasso[1], Thomas Klopstock[3] *([1]Italy, [2]United Kingdom, [3]Germany)*

662 Influence of different fluid types on the development of fibrosis and atrophy in patients with nAMD
Guenther Weigert, Gabor Deak, Martin Michl, Gregor Reiter, Daniela Boryshchuk, Florian Frommlet, Stefan Sacu, Bianca Gerendas, Ursula Schmidt-Erfurth *(Austria)*

Thursday
26 October 2023

09:45-11:00 | Calatrava 2

SIS PBP-64 - Microglia in neurodegenerative diseases

Microglial cells have become the focus of many studies because of their involvement in maintaining central nervous system homeostasis in healthy and degenerative environments by clearing debris and repairing damage tissue. However, microglial cells also induce chronic inflammation by releasing pro- and anti-inflammatory cytokines and causing the disturbance of tissue integrity and loss of neurons. Therefore, microglial cells have both beneficial and detrimental effects and their function is not entirely clear. This fact highlights the importance of studying the behavour of microglial cell, which is a challenge for researchers. In this SIS we aim to update the new advances in the understanding of microglial cell functions using the retina as a model of central nervous system degeneration. Specifically, we will look at similarities and differences in the response of microglial cells in the retina after different types of degenerative procceses in animal models, as it is an axonal trauma, ocular hypertension or Alzheimer's disease.

Organizer: **Caridad Galindo-Romero** *(Spain)*
Co-organizer: **Raquel Boia** *(Portugal)*

09:45 Small extracellular vesicles derived from reactive microglia contribute to retinal neuroinflammation and neurodegeneration
Ana Raquel Santiago *(Portugal)*

10:10 Inflammatory response of both retinas and superior colliculi to unilateral optic nerve axotomy
Caridad Galindo Romero *(Spain)*

10:35 Microglia involvement in ocular hypertension
Elena Salobrar-Garcia *(Spain)*

09:45-11:00 | Gaudi 1

C G-40 - New initiatives to better manage patients with glaucoma

The management of glaucoma is challenging in many ways, including often late diagnosis, lack of neuroprotective treatments and, not least, lack of understanding of the cause of glaucoma development and exacerbation. With this course, we will touch upon some essential innovative approaches that can pave the way for better eye health among the growing glaucoma population. A new large cohort study will be presented that can provide the basis for new algorithms to risk classify glaucoma patients and thus support new methods for timely detection and initiation of treatment. Subsequently, new methods to assess the efficacy of potential neuroprotective treatments will be presented and discussed. Finally, human models for understanding the pathophysiological mechanisms underlying glaucoma will be presented. The course will feature two rapid presentations selected from the submitted abstracts, addressing current challenges and potential methods to prevent the unacceptable number of glaucoma patients who experience visual impairment.

Organizer: **Miriam Kolko** *(Denmark)*
Co-organizer: **Maria Francesca Cordeiro** *(United Kingdom)*

09:45 Finding ophthalmic risk and evaluating the value of eye exams and their predictive reliability - A cohort to risk stratify the glaucoma population
Miriam Kolko *(Denmark)*

10:10 DARC technology - where do we stand?
Maria Francesca Cordeiro *(United Kingdom)*

10:35 Patient pluripotent stem cells and retinal organoids to understand the pathophysiology of glaucoma
Maciej Daniszewski *(Poland)*

09:45-11:00 | Gaudi 2

C EOVS-39 - Basic principles of state-of-the-art ophthalmic instrumentation (Part I - Optical concepts)

This course is aimed at providing an overview of the basic optical principles of various state-of-the-art retinal-imaging systems, including scanning laser ophthalmoscopy, optical coherence tomography (OCT), as well as adaptive optics. Special emphasis is placed on OCT and the course will include a discussion of additional contrast mechanisms, including OCT-based angiography (OCT-A), along with future trends and cutting-edge developments. 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.

Organizer: **Kristina Irsch** *(France)*
Co-organizer: **Rui Bernardes** *(Portugal)*

09:45 Scanning laser ophthalmoscopy - Basic optical principles
Kristina Irsch *(France)*

10:03 Optical coherence tomography - Basic optical principles
Kristina Irsch *(France)*

10:21 Optical coherence tomography - Additional contrast mechanisms, future trends, and cutting-edge technological developments
Kristina Irsch *(France)*

10:39 Adaptive optics - Basic optical principles
Kristina Irsch *(France)*

09:45-11:00 | Gaudi 3

C ACB-57 - Publication in the prestique journal

Organizer: **Kai Kaarniranta** *(Finland)*
Co-organizer: **Einar Stefansson** *(Iceland)*

09:45 Acta ophthalmologica publication strategy
Kai Kaarniranta *(Finland)*

10:03 Important details when writing a high quality manuscript
Miriam Kolko *(Denmark)*

10:21 How I am working as a reviewer?
Andrzej Grzybowski *(Poland)*

10:39 Crosstalk between the chief editor, editorial board members and the corresponding author
Einar Stefansson *(Iceland)*

11:00-11:30 | Coffee Break

Thursday
26 October 2023

11:30-13:00 | Auditorium 1

SIS RV-77 - Vitreoretinal surgery in difficult cases

In the everyday practice, we are dealing with various level of difficulty, while performing vitreoretinal cases. There are some cases which require high level of skills and experience in order to perform successful and effective surgery. Refractory or myopic macular holes, optic disk pit cases, PVR cases, advanced proliferative diabetic retinopathy cases, trauma cases and pediatric vitreoretinal cases are some examples. The purpose of the SIS is a group of very experienced vitreoretinal surgeons with high volume of cases, to provide tips and pearls in to how to perform safer surgery, with the best results, anatomically and functionally. We will also provide advise into how to use chandelier additional lighting and how to use and remove heavy silicone oil and buckles.

Organizer: **Georgios Pappas** *(Greece)*
Co-organizer: **Sofia Androudi** *(Greece)*

11:30 Vitreoretinal surgery in difficult cases
Georgios Pappas *(Greece)*

11:45 Refractory macular holes
Sofia Androudi

12:00 Choroidal melanoma
Miltos Fiorentzsis *(Germany)*

12:15 Managing challenging pediatric vitreoretinal disease
Panagiotis Salvanos *(Greece)*

12:30 Trauma cases
Arne Viestemz *(Germany)*

12:45 The two extremes of retinal fold management
Theodor Stappler *(France)*

11:30-12:45 | Auditorium 2

SIS COS-41 - Congenital aniridia - potential pathogenesis and basic research aspects from the labs

Anirida is considered a rare disease, with a global prevalence of 1 in 40,000 to 1 in 100,000. There are PAX6 gene-associated and other forms. PAX6 is a master control gene for ocular development in early embryogenesis (weeks 6 to 12). Therefore, PAX6 haploinsufficiency-associated aniridia syndrome affects almost all eye structures, and between those limbal stem cells, resulting in aniridia asssociated keratopathy (AAK). Our symposium summarizes, how novel epithelial cell marker and microRNA expression analysis, multi-omics analysis as well as understanding of ocular surface inflammation in congenital aniridia support us in better understanding of its pathogenesis and in finding potential treatment options for AAK.

Organizer: **Nora Szentmary** *(Germany)*
Co-organizer: **Tanja Stachon** *(Germany)*

11:30 Genetic background of congenital aniridia
Fabian Fries *(Germany)*

11:45 Corneal epithelial cell markers in congenital aniridia
Nora Szentmary *(Germany)*

12:00 microRNAs as markers of congenital aniridia
Tanja Stachon *(Germany)*

12:15 Altered cell fates of limbal stem cells in aniridia associated with PAX6 mutations
Jo Zhou *(The Netherlands)*

12:30 Identification of Duloxetine to treat aniridia-related keratopathy: link to inflammation?
Neil Lagali *(Sweden)*

11:30-12:45 | Calatrava 1

RF Rapid Fire 1 - NSPH

Moderators: **Huban Attilla** *(Turkey)*, **Chiara La Morgia** *(Italy)*

335 F.149 Optic neuritis post SARS-CoV-2 infection and vaccination; a systematic review exploring the clinical features of optic neuritis after SARS-CoV-2 infection and vaccination
Iliana Georganta, Despoina Chasapi, Charlotte Smith, Konstantinos Kopsidas, Andrew Tatham *(United Kingdom)*

477 F.150 The ganglion cell complex thickness and visual function in leber hereditary optic neuropathy
Johan Hedström, Maria Nilsson, Martin Engvall, Abinaya Venkataraman *(Sweden)*

496 F.151 Archetypal analysis for dominant optic atrophy visual field loss
Catarina Coutinho, Ferdinando Zanchetta, Alice Galzignato, Marco Battista, Giorgio Lari, Stefano Albertini, Enrico Borrelli, Giacomo Savini, Maria Lucia Cascavilla, Francesco Bandello, Rita Fioresi, Piero Barboni *(Italy)*

511 F.152 Long-term efficacy of idebenone in patients with Leber hereditary optic neuropathy in the LEROS study: analyzing change in visual acuity according to causative mutation and disease phase
Patrick Yu-Wai-Man[1], Valerio Carelli[2], Xavier Llòria[2], Livia Tomasso[2], Thomas Klopstock[3] *([1]United Kingdom, [2]Italy, [3]Germany)*

515 F.153 Long-term efficacy of idebenone in patients with Leber hereditary optic neuropathy in the LEROS study: analyzing change in visual acuity over time according to age at symptom onset
Xavier Llòria[1], Patrick Yu-Wai-Man[2], Valerio Carelli[1], Livia Tomasso[1], Thomas Klopstock[3] *([1]Italy, [2]United Kingdom, [3]Germany)*

586 F.154 Optic nerve head dimension as biomarker in leber hereditary optic neuropathy
Marco Battista[1], Michele Carbonelli[1], Catarina P. Coutinho[1], Jonathan Oakley[2], Maria Lucia Cascavilla[1], Alice Galzignato[1], Giorgio Lari[1], Giulia Amore[1], Chiara La Morgia[1], Francesco Bandello[1], Valerio Carelli[1], Piero Barboni[1] *([1]Italy, [2]USA)*

706 F.155 Choroidal thickness as a biomarker for axial length change
Matilda Biba, Gareth Lingham, Emmanuel Kobia Acquah, James Loughman, Daniel Flitcroft *(Ireland)*

792 F.156 Retinal ganglion cells in a mouse model of Alzheimer´s disease: a temporal study
Lidia Sanchez-Puebla, Mar Gómez-Moreno, José A. Matamoros, José A. Fernández-Albarral, Rosa De Hoz, Juan Jose Salazar, Elena Salobrar-Garcia, Inés López-Cuenca, Carmen Nieto-Vaquero, María Isabel Cuartero, Ana I. Ramírez, Jose Manuel Ramirez *(Spain)*

11:30-12:45 | Calatrava 2

SIS PBP-93 - Nutritional supplements, the silent neuroprotection

The morphological, functional and molecular study of the retina, as part of the central nervous system, in the presence of pathologies or traumatisms opens new lines of study on protective therapies. The retina is particularly susceptible to oxidative stress due to its direct exposure to light and its high oxygen consumption and proportion of polyunsaturated fatty acids, which increases with ageing, due to the physiological decline of antioxidant control mechanisms. Therefore, the administration of nutrients and nutraceuticals with antioxidant, anti-inflammatory and anti-apoptotic properties to control the action of oxidative stress in the predisposition to retinal neuronal degeneration, as a potential neuroprotective treatment, is of great interest to researchers. In this SIS, the need to focus on the prevention of retinal pathologies will be discussed and speakers will present the effects of different nutritional supplements on retinal degeneration.

Organizer: **Francisco Javier Valiente-Soriano** *(Spain)*
Co-organizer: **Diego García-Ayuso** *(Spain)*

11:30 Natural food or nutraceutics. That is the question
Maria Dolores Pinazo-Duran *(Spain)*

11:45 Preventing retinal homocysteine dysregulation protects against retinal ganglion cell death
James Tribble *(Sweden)*

12:00 Resilience and neuroprotection: the efficacy of Saffron Repron® in counteracting the progression of Inherited retinal degeneration
Ilaria Piano *(Italy)*

12:15 On the potential therapeutic role of taurine in retinal degenerative diseases
Diego García-Ayuso *(Spain)*

12:30 Nutraceutical supplementation in inherited retinal dystrophies
Sheyla Velasco Gomariz *(Spain)*

11:30-12:45 | Gaudi 1

C G-47 - Why gonioscopy remains essential in the time of anterior segment OCT

Beside the examination of optic nerve head and retinal nerve fibre bundles, gonioscopy is the most important examinations we have to perform when performing structure analysis. The differentiation of angle closure, angle closure suspect and open angle is essential not only for the correct diagnosis, but as well 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 don´t allow to replace gonioscopy by this new examination. In the presentation we will show, what we can see in normal and pathological eyes and which findings can be seen in AS-OCT and which ones cannot been seen.

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

11:30 How to perform gonioscopy and normal findings in the angle
Doreen Schmiedl *(Austria)*

11:55 Pathologies of the anterior chamber angle
Clemens Vass *(Austria)*

12:20 Why gonioscopy remains essential in the time of anterior segment OCT
Anton Hommer *(Austria)*

11:30-12:45 | Gaudi 2

C EOVS-68 - Basic principles of state-of-the-art ophthalmic instrumentation (Part II - Machine learning aspects and applications)

This course aims to provide an overview of the basic principles of machine learning and its retina and brain applications, including support vector machines and neuronal networks by means of OCT data. Special emphasis is placed on their fundamental principles and differences and common pitfalls. The goal is to illuminate the underlying concepts and differences for clinicians and scientists, even when unfamiliar with the field.

Organizer: **Rui Bernardes** *(Portugal)*
Co-organizer: **Miguel Castelo-Branco** *(Portugal)*

11:30 Machine learning - Basic principles
Rui Bernardes *(Portugal)*

11:55 Machine learning applied to brain imaging data
Miguel Castelo-Branco *(Portugal)*

12:20 Machine learning applied to optical coherence tomography data from human and mouse models of disease
Rui Bernardes *(Portugal)*

11:30-12:45 | Gaudi 3

SIS ACB-29 - NLRP3 - Inflammasome in the eye diseases

NLRP3 inflammasome is an intracellular sensor that detects a broad range of microbial motifs, endogenous danger signals, and environmental irritants, resulting after activation of the secretion of IL-1beta and IL-18 leading to inflammation. The NLRP3 is widely studied in several conditions in the body, and the emerging data show that it is important in eye diseases as well. In this symposium, we present data on the involvement of NLRP3 in corneal and retinal diseases.

Organizer: **Joni Turunen** *(Finland)*
Co-organizer: **Anu Kauppinen** *(Finland)*

11:30 Pellino-2 and NLRP3 inflammasome activation in corneal disease
Ileana Cristea *(Norway)*

11:48 Keratitis fugax hereditaria caused by a pathogenic variant in NLRP3
Joni Turunen *(Finland)*

12:06 Reactive microglia as triggers and effectors of inflammasome activation in the retina
Thomas Langmann *(Germany)*

12:24 Inflammasome activation in retinal pigment epithelium cells
Anu Kauppinen *(Finland)*

12:50-13:20 | Auditorium 1

KN **de Laey EVER Keynote Lecture**

Introduced by **Gisele Soubrane**

Cone-directed strategies in retinal degenerations
José-Alain Sahel *(France)*

Inherited retinal dystrophies (IRDs) display remarkable genetic heterogeneity, with over 300 retinal disease genes mapped and/or identified. Profound vision loss and blindness, often from birth, is a common occurrence in these clinically heterogeneous disease conditions. The therapeutic options for IRDs are currently very limited but recent advancements in understanding mechanisms of retinal degeneration and technological progress paved the way towards development of novel therapies. Much progress has been made in moving from gene discovery to gene therapy. However, the genetic heterogeneity of IRDs represents a significant challenge for development of gene therapy. Many studies from our group have demonstrated that the survival of cones (responsible for diurnal and high resolution vision) depends on the presence of rods (responsible for vision at low light levels) that secrete a diffusible trophic factor identified as rod-derived cone viability factor (RdCVF). The discovery of RdCVF, of its receptor and mechanism of action, and the demonstration of its mutation-independent therapeutic potential in several animal models of IRDs paved the way to the development (with the start-up company Sparing Vision) of RdCVF neuroprotective gene therapy that entered in clinical trial in 2023. IRDs destroy photoreceptors but leave intact and functional a significant number of inner retinal cells. Using viral vectors, light-sensitive microbial opsins can be expressed in these remaining cells, making possible their conversion into "artificial photoreceptors". Our group in Paris, together with Botond Roska (IOB, Basel) and the biotech company GenSight, demonstrated that this technology, named optogenetics, can restore vision in secondary retinal neurons which can survive years after the degeneration of photoreceptors. Our groups established the foundation for the first-in-man clinical trial (NCT03326336) with the photoactivatable optogene ChrimsonR (developed by Ed Boyen at MIT) delivered in the eye via adeno-associated viral vectors and electronic goggles to intensify the light and provide adaptation. We demonstrated (Nat Med 2021) that optogenetics is a remarkably effective way to restore partial vision and provide useful vision restoration in blind people. Gene-independent approaches such as neuroprotection and optogenetics would allow for treatment of a broad spectrum of retinal dystrophies, even at advanced stages of disease, giving hope for vision rescue and vision restoration to approximately 2 million people with IRDs worldwide.

13:20-14:20 | Auditorium 2

CIS **Industry Sponsored Symposium**
not EACCME accredited

(see the dedicated session at page 102)

13:20 - 14:20 | Calatrava 1

CIS **Industry Sponsored Symposium**
not EACCME accredited

(see the dedicated session at page 103)

14:20-15:35 | Auditorium 1

SIS RV-80 - Retinal biomarkers in the era of multimodal imaging

To clarify the prognostic value of the biomarkers detected by multimodal imaging procedures as colored fundus imaging, fluorescein angiography, near infra-red imaging, fundus autofluorescence, SD-OCT, and OCT angiography to predict the response to therapy in different retinal diseases as diabetic macular edema, AMD, geographic atrophy and myopia. Recently, there has been an interest in determining the prognostic value of changes on optical coherence tomography (OCT) such as foveal intraretinal cysts and edema, including size and location, presence of subretinal fluid (SRF), sub-RPE fluid, subretinal hyper-reflective material, intraretinal hyper-reflective foci, photo-receptor integrity, vitreo-retinal interface, prechoroidal clefts and outer retinal tabulations, etc… OCT Angiography has added more information about the precise areas of capillary non-perfusion, presence of collaterals or retinal/optic nerve head neovascularization, and abnormalities of the FAZ. It can also differentiate between IRMA and neovessels. Finally, FAF has been studied recently in Diabetic Macular Edema, Geographic atrophy and hereditary retinal diseases which may help to monitor the disease progression and response to treatment. The speakers will present examples of multimodal imaging of different retinal disease entities and will highlight and discuss the biomarkers in the images that help in predicting the prognosis.

Organizer: **Zeinab Elsanabary** *(Egypt)*
Co-organizer: **Nihal Hassan** *(Egypt)*

14:20 Retinal biomarkers in the era of multimodal imaging biomarkers in diabetic macular edema
Zeinab Elsanabary *(Egypt)*

14:45 Biomarkers in age related macular degeneration
Nihal Hassan *(Egypt)*

15:10 Retinal biomarkers in vascular occlusion
Hebatalla Makled *(Egypt)*

14:20-15:35 | Auditorium 2

SIS COS-83 - Diagnosis and therapy of non-infectious corneal diseases

Corneal opacities include numerous of nosologic entities that differ from one another in character, appearance, and etiology. The concept of corneal degeneration means that previously intact tissues are slowly and gradually deteriorating, often leading to an inability to function properly. Corneal degeneration can mean deposition of certain substances, thinning of the tissue, vascularization, or a combination of these. What distinguishes them from corneal dystrophies is that they are not hereditary, are often unilateral, and their morphology and localization are much less regular. Dystrophies are genetic in origin, located in the center in a disc shape without any vascularization and sparing the periphery. In case of visual impairment, common solution is corneal transplantation using different techniques. This is particularly important in childhood to prevent amblyopia. In addition, cornea is considered a rare primary site for neoplasms, but it can be involved secondarily in a wide spectrum of pigmented and non-pigmented ocular surface tumors. Traditionally corneal neoplasms have been treated with surgical excision. However, non-surgical treatment options have been used increasingly.

Organizer: **László Modis** *(Hungary)*
Co-organizer: **Berthold Seitz** *(Germany)*

14:20 Corneal opacities in children
Nikolaos Kozeis *(Greece)*

14:35 Corneal degenerations
László Modis *(Hungary)*

14:50 The Newest IC^{3}D Classification of corneal dystrophies
Berthold Seitz *(Germany)*

15:05 Immune-related corneal disorders
Kostas Boboridis *(Greece)*

15:20 Corneal tumors
Eszter Szalai *(Hungary)*

14:20-16:00 | Calatrava 1

JM

EVER-CORONIS Foundation - Understanding ocular surface innervation: from sensory signaling and trophic interactions to clinical evaluation and therapeutic management (part I)

In early, traditional Ophthalmology the involvement of the non-visual, ocular sensory innervation in eye surface disorders did not receive much attention. This lack of interest changed rapidly in the last decades, due to an increasing concern about the presence of ocular discomfort and pain accompanying various common eye surface pathologies and the modern anterior segment surgery procedures. The clinical importance of ocular sensory innervation is further reinforced by the confirmation of a trophic dependence between eye tissues and peripheral sensory nerves, and of a dynamic crosstalk between the nervous and the immune system ocular elements, that often become maladaptive under pathological conditions. The 2023 Coronis Ocular Surface biennial Symposium starts with a Plenary Lecture and presentation of the Endre A. Balazs Medal to Dr. Anant Galor, recognizing her important contributions to the scientific understanding and clinical significance of human ocular pain. The first part of the symposium will offer an updated view of the molecular, cellular, and integrative properties of ocular surface trigeminal ganglion neurons, and their role in the building, in health and disease, of adaptive responses to protect the ocular surface of potentially adverse environmental challenges.

Organizer: **Carlos Belmonte** *(Spain)*

14:20 Introductory remarks
Carlos Belmonte *(Spain)*

14:25 Presentation of the Endre A. Balazs Medal 2023 to Professor Anat Galor
Wolfgang Müller-Lierheim *(Germany)*

14:30 Neuropathic ocular pain: what is it and what to do about it?
Anat Galor *(USA)*

15:15 Corneo-conjunctival sensory neuron types. Transduction channels and peripheral codification of nerve impulses
Juana Gallar *(Spain)*

15:30 Conscious sensations and protective reflexes driven by eye surface nerves in health and disease
M. Carmen Acosta *(Spain)*

15:45 Molecular and cellular changes underlying plasticity and regeneration of intact, injured and aged corneal nerves
Victor Meseguer *(Spain)*

14:20-15:35 | Calatrava 2

SIS PBP-98 - Retinal glial involvement in non-ocular pathology

Glial cells were considered in the past as passive elements in the nervous system; however, their location close to neurons and vessels is responsible for their involvement in vital tasks for neuronal survival. Under normal conditions these cells are responsible for the trophic and metabolic support of neurons, the maintenance of the homeostasis of the extracellular environment, the involvement in the blood-brain and -retinal barrier, the correct transmission of the nerve impulse as well as participating in the immune response. In the presence of tissue stress signals that could compromise neuronal survival, glial cells are activated, which is known as gliosis. The aim of this acute gliosis is to protect the nervous tissue, participating in the restoration of the extracellular environment and supplementing the neurons with factors that promote their survival. However, an uncontrolled response will have negative consequences for the neurons by triggering their death. The glial cells of the retina consist of astrocytes, Müller glia and microglia. It has been observed that since the retina is an extension of the central nervous system, any pathology with neurological implications will have an impact on retinal glia. Therefore, the purpose of this SIS will be to establish the possible changes that occur in retinal glial cells in pathologies in which the primary affectation is not the ocular tissue.

Organizer: **Ana Isabel Ramirez** *(Spain)*
Co-organizer: **Rosa De Hoz** *(Spain)*

14:20 Do retinal microglia respond to peripheral nervous system injury?
Marcelino Avilés-Trigueros *(Spain)*

14:38 Retinal glial cell response in a neurodevelopmental disease such as the Dravet syndrome
José A. Fernández-Albarral *(Spain)*

14:56 Microglial changes in the retina and optic nerve of Parkinson's disease patients
Xavier Sanchez Saez *(Spain)*

15:14 Is it possible to reduce glial activation in an old taupathia mouse model by deletion of microglial Hemoxygenase-1?
Elena Salobrar-Garcia *(Spain)*

14:20-15:35 | Gaudi 1

SIS G-13 - What about the ocular surface in glaucoma patients?

Anti-glaucomatous eye drops often come with significant side effects, and it is essential to minimize these as much as possible. However, there are major barriers, partly due to the many eye drops with preservatives and partly due to an increasing number of generic options. Preservatives create pronounced challenges to the ocular surface as they have been shown to be toxic. Generic eye drops are not identical and with frequent changes, patients may experience inappropriate adverse effects. In that context, there is an ongoing debate among healthcare providers about the safety and effectiveness of generic versus eye drops. While one would expect generics to be a true copy of the original eye drops, there is surprisingly little demand for the introduction of a generic eye drops to the market. Another lively debate concerns the use of preservatives in eye drops. Increasing literature indicates significant adverse effects of preservatives when used throughout life. This SIS will provide an overview of the ocular surface challenges that patients with glaucoma are exposed to when treated with eye drops. The SIS concludes with a plenary discussion on the advantages and disadvantages of both generics and preservative-containing eye drops.

Organizer: **Miriam Kolko** *(Denmark)*
Co-organizer: **Barbara Cvenkel** *(Slovenia)*

14:20 Impact of topical glaucoma medications on the ocular surface and adnexa
Elisabeth M. Messmer *(Germany)*

14:38 Adverse effects of BAK preservatives in glaucoma medications
Andrew Tatham *(United Kingdom)*

14:56 What about generic glaucoma medications and the ocular surface?
Miriam Kolko *(Denmark)*

15:14 Management of glaucoma in patients with ocular surface disease
Barbara Cvenkel *(Slovenia)*

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14:20-15:35 | Gaudi 2

SIS EOVS-87 - New technologies for eye care practitioners

The use of new technologies for the evaluation or treatment of different aspects of visual function is becoming increasingly common in clinical practice. The aim of this Special Interest Symposium is to get an overview of innovative ocular measurement tools that have been developed in recent years and that can be useful for the assessment of visual health in optometric and ophthalmic consultations. In particular, results of recent studies on telehealth for visual acuity testing, adaptive optics for refraction or virtual reality glasses for vision therapy will be presented. Moreover, potential challenges for the application of the technology in clinical settings and the appropriateness of its use will be discussed.

Organizer: **Caridad Galindo-Romero** *(Spain)*
Co-organizer: **Francisco Javier Valiente-Soriano** *(Spain)*

14:20 Clinical validation of an adaptive optics visual simulator (VAO), a new instrument for the clinic
Lucia Hervella *(Spain)*

14:45 Remote assessment of visual acuity during video consultations
Caridad Galindo-Romero *(Spain)*

15:10 New technologies for eye care practitioners
Santiago Martín *(Spain)*

14:20-15:35 | Gaudi 3

SIS LC-89 - New approaches in myopia control: Update 2023

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. Options have emerged for preventing the development of myopia or slowing myopic progression. The up-date of these different approaches will be presented.

Organizer: **Andrzej Grzybowski** *(Poland)*
Co-organizer: **Dominique Bremond-Gignac** *(France)*

14:20 Myopia risk factors. Update 2023
Carla Lanca *(Portugal)*

14:35 Benefits and limitations of the low dose atropine use. Update 2023
Andrzej Grzybowski *(Poland)*

14:50 Optical methods in myopia control
Dominique Bremond-Gignac *(France)*

15:05 Repeated low-level red-light therapy as a new myopia control strategy
Mingguang He *(Australia)*

15:20 7-methylxanthine for myopia control in Denmark - clinical results 2003-2023
Klaus Trier *(Denmark)*

15:35-16:00 | Coffee Break

16:00-16:45 | Poster Session 1

16:50-18:05 | Auditorium 1

SIS

RV-82 - Biomarkers in vitreoretinal conditions: a survival guide to improve functional outcomes

This course will provide ophthalmologists with a comprehensive overview of the use of biomarkers in vitreoretinal conditions. Topics covered will include the potential uses of biomarkers in vitreoretinal surgery and conditions, the current state of research in the field, and strategies for incorporating biomarkers into clinical practice to improve functional outcomes for patients. The course will also cover the use of biomarkers for the prediction of surgical outcomes and for the monitoring of disease progression. Attendees will leave with a solid understanding of the latest developments and best practices in the use of biomarkers in vitreoretinal surgery & conditions, and with practical strategies for incorporating these techniques into their own practice to improve patient outcomes. The topics which will be covered are as follows: overview of biomarkers in retinal diseases; biomarkers in retinal detachment surgery; biomarkers in macular hole surgery; biomarkers in epiretinal membrane surgery; biomarkers in diabetic retinopathy.

Organizer: **Paris Tranos** *(Greece)*
Co-organizer: **Georgios Panos** *(United Kingdom)*

16:50 Overview of biomarkers in vitreoretinal conditions
Georgios Panos *(United Kingdom)*

17:05 Visual recovery following retinal detachment surgery. How can we improve outcomes
Paris Tranos *(Greece)*

17:20 Biomarkers in macular hole surgery
Lorenzo Motta *(United Kingdom)*

17:35 Biomarkers in diabetic retinopathy
Anwar Zaman *(United Kingdom)*

17:50 Biomarkers in epiretinal membrane surgery
Thanos Vakalis *(Greece)*

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16:50-18:05 | Auditorium 2

SIS COS-33 - New research directions in rare ocular surface diseases

Rare Eye Diseases (REDs) collectively represent a major cause of visual impairment and blindness for children and young adults in Europe. But importantly, REDs also affect adults and the ageing population. Defective wound healing at the cornea and ocular surface, excessive inflammation, nerve degeneration, stem cell dysfunction, and aberrant vessel ingrowth are the common denominators in many REDs, representing a critical medical problem and an area of unmet medical need. The onset and progression of many REDs are characterised by common pathophysiologic mechanisms. The goal of many research groups is to disrupt these aberrant mechanisms with the aim of making therapy more effective. In this SIG, invited investigators will present their latest research (pre-clinical and clinical) relating to REDs such as: NK, LSCD, CoNV, oGvHD and aniridia.

Organizer: **Neil Lagali** *(Sweden)*
Co-organizer: **Thomas Ritter** *(Ireland)*

16:50 Modulation of steroid pathway to preserve corneal transparency
Francine Behar Cohen *(France)*

17:02 Modulating neuroinflammation to restore vision
Giulio Ferrari *(Italy)*

17:14 Identification of duloxetine to treat aniridia-related keratopathy: link to inflammation?
Daniel Aberdam *(France)*

17:26 Improving transparency and corneal wound healing in rare diseases by promoting corneal nerve regeneration
Juana Gallar *(Spain)*

17:38 Update in gene therapies or innovative therapies in AAK
Dominique Bremond-Gignac *(France)*

17:50 RESTORE VISION: Novel advanced and repurposed therapeutics for vision restoration in a group of severe rare ocular diseases - short introductory talk
Thomas Ritter *(Ireland)*

16:50-18:05 | Calatrava 1

JM EVER-CORONIS FOUNDATION - Understanding ocular surface innervation: from sensory signaling and trophic interactions to clinical evaluation and therapeutic management (part II)

In early, traditional Ophthalmology the involvement of the non-visual, ocular sensory innervation in eye surface disorders did not receive much attention. This lack of interest changed rapidly in the last decades, due to an increasing concern about the presence of ocular discomfort and pain accompanying various common eye surface pathologies and the modern anterior segment surgery procedures. The clinical importance of ocular sensory innervation is further reinforced by the confirmation of a trophic dependence between eye tissues and peripheral sensory nerves, and of a dynamic crosstalk between the nervous and the immune system ocular elements, that often become maladaptive under pathological conditions. A second group of presentations will report the new procedures developed for the exploration of the morphological and functional characteristics of ocular surface innervation in the clinical setting. Finally, the novel therapeutic strategies and tools for the treatment of sensory innervation disorders accompanying eye surface pathologies will be reviewed.

Organizer: **Carlos Belmonte** *(Spain)*

16:50 Clinical applications of confocal microscopy to corneal innervation
José Benitez del Castillo *(Spain)*

17:05 In vivo confocal microscopy – technical innovations and frontier applications
Oliver Stachs *(Germany)*

17:20 Blood-derived trophic factors for the treatment of ocular surface diseases
Piera Versura *(Italy)*

17:35 Medical and surgical management of neurotrophic keratopathy
Harminder S. Dua *(United Kingdom)*

17:50 Corneal innervation in congenital aniridia.
Nora Szentmary *(Germany)*

16:50-18:05 | Calatrava 2

RF Rapid Fire 2 - G

Moderators: **Miriam Kolko** *(Denmark)*, **Caroline Manicam** *(Germany)*

15 S.114 Clinical and optical coherence tomography evidence of aqueous humor outflow from supraciliochoroidal space to subconjunctival lymphatics
Vinod Kumar, Zarina Rustamova, Andrej Bezzabotnov, Kamal Abdulmuhsen Abu Zaalan, Galina Dushina, Ahmad Shradqa, Mikhail Frolov *(Russia)*

16 S.115 Long term results of valve cyclodialysis with implantation of a non-absorbable collagen implant in the supraciliary space with one end in the anterior chamber angle in surgical management of open angle glaucoma
Vinod Kumar, Ahmad Shradqa, Andrej Bezzabotnov, Galina Dushina, Zarina Rustamova, Mikhail Frolov *(Russia)*

336 S.116 Protective effects of neuropeptide Y treatment on retina in a mouse model of experimental glaucoma
Viswanthram Palanivel, Devaraj Basavarajappa, Vivek Gupta, Stuart Graham *(Australia)*

368 S.117 Primary open-angle glaucoma and its relationship with smoking: a systematic review and meta-analysis
Saajan Ramji, Sohail Daniel, Obeda Kailani *(United Kingdom*

372 S.118 Morphology-function correlation using available clinical parameters describing retinal ganglion cells in glaucoma suspects
Bartłomiej Kocurek, Katarzyna Kociołek, Anna Pacwa, Adrian Smedowski *(Poland)*

562 S.119 What artificial intelligence can bring us in the diagnosis and progression of glaucoma
Sara Ettouri, Daghouj Ghizlane, Reda Benchekroun, Kawtar El Hadi, Arab Lamiaa, Loubna El Maaloum, Bouchra Allali, Asmaa El Kettani *(Morocco)*

580 S.120 Biomechanical analysis of Corvis tonometry parameters in patients with hypotony after glaucoma filtering surgery
Rachid Bouchikh El Jarroudi, Jordi Loscos Arenas, Pau Romera Romero, Jessica Botella García *(Spain)*

606 S.121 Artificial Intelligence in glaucoma progression: a systematic review
Maria Concepcion Guirao-Navarro, Hong Kai Lim, Diandra Antunes, Rhea Suribhatla, Gurjeet Jutley *(United Kingdom)*

632 S.122 Association between functional parameter and structural, and vascular parameters in advanced glaucoma
Onur Özalp, Kubra Atay, Taylan Can Ozer, Mustafa Deger Bilgec, Eray Atalay *(Turkey)*

667 S.123 Sigma-1 receptor agonist ameliorates trabecular meshwork fibrosis by modulating extracellular matrix remodeling and increasing nitric oxide production
Judit Hodrea[1], Minh Tran[1], Balazs Besztercei[1], Timea Medveczki[1], Illes Kovacs[1,2], Xavier Gasull[3], Attila Szabo[1], Andrea Fekete[1] *([1]Hungary, [2]USA, [3]Spain)*

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16:50-18:05 | Gaudi 1

RF Rapid Fire 3 - ACB

Moderators: **Michael Backlund** *(Finland)*, **Anu Kauppinen** *(Finland)*

137 S.013 Altered corneal structures in form-deprived highly myopic chicks
Byung Soo Kang[1], Tsz-wing Leung[1], Sonal Vyas[2], Patience Ayerakwah[1], Jia Chun Lin[1], Yuanyuan Liang[1], William Stell[3], Chea-su Kee[1] *([1]Hong Kong, [2]USA, [3]Canada)*

554 S.014 P3HT:ITIC polymer based photovoltaic biointerfaces for neural photostimulation
Humeyra Nur Kaleli[1], Onuralp Karatum[1], Çiğdem Pehlivan[1], Cem Kesim[1], Erdost Yıldız[1,2], Afsun Sahin[1], Sedat Nizamoğlu[1], Murat Hasanreisoğlu[1] *([1]Turkey, [2]Germany)*

561 S.015 Insights into human choroid melanocyte and stromal cells
Michele Madigan, Chieh-Lin (Stanley) Wu, V. Cioanca, Robert Conway *(Australia)*

668 S.016 Mitophagy-reporter Muller cell line (MQ-MG2) as a novel platform for ocular drug discovery
Aidan Anderson, Kaouthar Bouzinab, Paula Rudzinska, Ian Ganley, Graham Wallace, Jose M. Romero *(United Kingdom)*

844 S.017 Nrf2 and HuR/ELAV1 as determinant factors for VEGF expression and secretion in ARPE-19 cells under stress stimuli
Giorgia Bresciani, Federico Manai, Stefano Govoni, Marialaura Amadio *(Italy)*

860 S.018 The size of the ciliary body in human enucleated chronic angle-closure glaucoma
Rahul Jonas, Jost Jonas, Songhomitra Panda-Jonas, Shefali Jonas *(Germany)*

903 S.019 PGC-1a inhibition promotes autophagy in induced pluripotent stem cell-derived retinal pigment epithelial cells generated from age-related macular degeneration patients
Maria Hytti[1], Anu Kauppinen[1], Heli Skottman[1], Janusz Blasiak[2], Kai Kaarniranta[1] *([1]Finland, [2]Poland)*

919 S.020 De novo pigmentation of amelanotic retinal pigment epithelium - An *Ex Vivo* model
Santosh Gupta[1], Lyubomyr Lytvynchuk[2,3], Taras Ardan[4], Hana Studenovska[4], Ljubo Znaor[5], Slaven Erceg[4,6], Knut Stieger[2], Jan Motlik[4], Goran Petrovski[1,5] *([1]Norway, [2]Germany, [3]Austria, [4]Czech Republic, [5]Croatia, [6]Spain)*

949 S.021 In situ distribution of markers for stemness, quiescence, proliferation and differentiation in the human cornea and limbus
Jovana Bisevac, Morten Carstens Moe, Goran Petrovski, Agate Noer *(Norway)*

16:50-18:05 | Gaudi 2

SIS MBGE-31 - Studies on high myopia-phenotyes, genotypes, animal models and treatment

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: **Isabelle Audo** *(France)*

16:50 The importance of precise phenotyping patients with high myopia
Isabelle Audo *(France)*

17:05 Myopia in mouse models
Wilmet Baptiste *(France)*

17:20 Do differentially expressed genes explain high myopia in congenital stationary night blindness?
Christina Zeitz *(France)*

17:35 Detection of the sign of defocus by the retina and its implication for myopia
Sarah Goethals *(France)*

17:50 Update of treatment for myopia
Dominique Bremond-Gignac *(France)*

16:50-18:05 | Gaudi 2

SIS LC-90 - New challenges in Artificial Intelligence in ophthalmology

Deep learning (DL), has shown promising diagnostic performance in image recognition, speech recognition and natural language processing. For DR screening, a number of DL systems for automatic analysis of fundus photographs have been developed in many countries. These aim to, at least partially, replace the specialty trained human graders, while providing a similar, level of accuracy. The session will provide the overview of some AI-based applications in Ophthalmology, present new directions and discuss challenges in AI application in the clinical setting.

Organizer: **Andrzej Grzybowski** *(Poland)*
Co-organizer: **Leopold Schmetterer** *(Singapore)*

16:50 AI-based studies using fundus images
Andrzej Grzybowski *(Poland)*

17:05 AI in ophthalmology: from invisible to visible
Mingguang He *(Australia)*

17:20 Generalizability of AI solutions
Leopold Schmetterer *(Singapore)*

17:35 AI in neuro-ophthalmology
Dan Milea *(Singapore)*

17:50 Ophthalmic evaluation of a population simulated with AI: epidemiology and future trends
Broder Poschkamp *(Germany)*

08:30-09:45 | Auditorium 1

C RV-100 - Introduction and application of retinal vessel analyses

This course will provide an overview and introduction to retinal vascular measurements and their applications.

Organizer: **Rebekka Heitmar** *(United Kingdom)*
Co-organizer: **Gerhard Garhofer** *(Austria)*

08:30 Introduction to static vessel analysis
Christian French *(United Kingdom)*

08:45 Introduction to dynamic retinal vessel analyses
Konstantin Kotliar *(Germany)*

09:00 Towards "normative" data and "standardized" protocols
Rebekka Heitmar *(United Kingdom)*

09:15 Neurovascular coupling as a potential biomarker
Gerhard Garhöfer *(Austria)*

09:30 Retinal microcirculatory parameters - clinical applications beyond ophthalmology
Boy Houben *(The Netherlands)*

08:30-09:45 | Auditorium 2

SIS COS-19 - TFOS lifestyle workshop report 1

Lifestyle choices in a rapidly changing world have a deep impact on many aspects of human health, including the ocular surface. For instance, environmental conditions including, humidity, pollution altitude, sunlight, air conditioning, or the use of different type of contact lenses can all affect ocular surface homeostasis. This Special Interest Symposium will also discuss the role of unprecedented climate/societal changes (pandemic response, migrant crisis, but also driving accidents, acid attacks among others) on the maintenance of ocular surface homeostasis and/or initiation of ocular surface disease.

Organizer: **Giulio Ferrari** *(Italy)*
Co-organizer: **Edoardo Villani** *(Italy)*

08:30 TFOS Lifestyle Report: effects of environmental conditions on the ocular surface
Edoardo Villani *(Italy)*

08:48 TFOS Lifestyle Report: effects of Contact Lenses on the Ocular Surface and Adnexa.
Helena Prior Filipe *(Portugal)*

09:06 Societal challenges
Afsun Sahin *(Turkey)*

09:24 Tear Film Ocular Surface Lifestyle Report: lifestyle challenges.
Giulio Ferrari *(Italy)*

08:30-09:45 | Calatrava 1

SIS PBP-28 - Mesenchymal stromal cell therapy for retinal neurodegeneration

Advanced cell therapy using mesenchymal stromal cells (MSCs) or their derivatives for the treatment of ophthalmological diseases is currently the subject of intense research. MSCs are ideal candidates for neuroprotection of retinal neurons. They are isolated from adult donors, have immunomodulatory properties, and secrete trophic factors. The symposium will explore the use of MSCs for the treatment of retinal ganglion cell and photoreceptor degeneration.

Organizer: **Marta Agudo-Barriuso** *(Spain)*
Co-organizer: **Ivan Fernandez-Bueno** *(Spain)*

08:30 Basis for the use of MSCs in optic nerve diseases
Jose Carlos Pastor Jimeno *(Spain)*

08:48 Neuroprotective effects of syngeneic bone marrow-derived mononuclear stem cell trasplantation and intraperitoneal minocycline in the treatment of inherited photoreceptor retinal degeneration
Johnny Di Pierdomenico *(Spain)*

09:06 Evaluating the neuroprotective potential of MSC secretome for retinal neurodegenerative diseases
Ivan Fernandez-Bueno *(Spain)*

09:24 Effect of the transplantation type on the neuroprotective properties of mesenchymal stromal cells
Marta Agudo-Barriuso *(Spain)*

08:30-09:45 | Calatrava 2

C NSPH-65 - Visual Fields - The forgotten art in optic neuropathy diagnosis

In the era of rapid development of medical sciences, ophthalmology is the one discipline employing multiple automated technologies that make diagnostic process easier and more detailed. However the automatization of diagnostic process and omnipresent color coding of results, very often lead to limitation of physician participation that may result in diagnostic bias and misconducts. The visual field is one of the oldest techniques of visual pathway investigation that is placed on the border of ophthalmology and neurology. Interpretation of visual fields requires broad knowledge of neuroanatomy and neurophysiology that allows to link specific scotomas with certain pathologies. Correct interpretation of visual field abnormalities allows to diagnose and follow up glaucoma, ischemic processes, microcirculation disturbances, inflammatory changes, demyelinizations, central nervous system tumors and many others. Correctly interpreted visual fields may become a tool that determines direction of further investigation of patients' symptoms. Over time, visual fields has become an obsolete and forgotten art and very often loses competition with easier and more automatized methods, such as optical coherent tomography. Here, we would like to bring visual fields back to life and remind about its unique importance in ophthalmology.

Organizer: **Adrian Smedowski** *(Poland)*
Co-organizer: **Patrick Yu-Wai-Man** *(United Kingdom)*

08:30 Where visual fields coming from? - Introduction from neurophysiology point of view
Joanna Lewin-Kowalik *(Poland)*

08:48 Glaucoma or not glaucoma? - How to navigate problematic cases
Adrian Smedowski *(Poland)*

09:06 Identification of the characteristic visual field loss patterns in optic neuropathies
Piero Barboni *(Italy)*

09:24 The future of visual fields
Andrew Tatham *(United Kingdom)*

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08:30-09:45 | Gaudi 1

SIS G-6 - Myopia and glaucoma

The SIS will cover aspects of the epidemiology, histology and clinical features of myopia in general and in particular of the association of myopia and glaucoma in relationship to the clinics and anatomy.

Organizer: **Jost Jonas** *(Germany)*
Co-organizer: **Konstantin Gugleta** *(Switzerland)*

08:30 Laser/MIGS in myopic glaucoma
Konstantin Gugleta *(Switzerland)*

08:55 Refractive surgery in myopic glaucoma, good or bad?
Alain Bron *(France)*

09:20 The optic nerve in glaucoma
Jost Jonas *(Germany)*

08:30-09:45 | Gaudi 2

C IM-50 - Masquerade syndromes - the bane of uveitis specialist

Benign and malign masquerade syndromes can be very challenging as they usually present as uveitis not reacting well to standard treatment regimens. The Course will focus on the new concepts of diagnosis and treatment of benign and especially malign masquerade syndromes, as those can be not only sight but also life threatening.

Organizer: **Jarmila Heissigerova** *(Czech Republic)*
Co-organizer: **Ester Carreño Salas** *(Spain)*

08:30 Benign masquerade syndromes - an overview
Ester Carreño Salas *(Spain)*

08:55 Malign masquerade syndromes
Jarmila Heissigerova *(Czech Republic)*

09:20 Intraocular lymphoma
Petra Svozilkova *(Czech Republic)*

08:30-09:45 | Gaudi 3

C ACB-37 - Simulator-based training for students and physicians (not only) in ophthalmology

In the past, few ophthalmoscopy findings were taught to medical students on specifically selected patients and pig eyes served as a model to learn first surgical steps for ophthalmology residents. Nowadays, there exist multiple possibilities of integrating simulator-based teaching and training in ophthalmological curricula. The aim of this session is to give an overview of the possible applications of simulators in ophthalmology teaching for medical students and surgical training of residents and specialists.

Organizer: **Elias Flockerzi** *(Germany)*
Co-organizer: **Berthold Seitz** *(Germany)*

08:30 Low-cost fundoscopy simulation for everyone? Evaluation of knowledge gain and student satisfaction with the Kyoto Kagaku Model
Albéric Sneyers *(Germany)*

08:48 Does the eyesi direct ophthalmoscope increase interest in ophthalmology?
Elias Flockerzi *(Germany)*

09:06 Medical students` learning experience with the Eyesi slit lamp simulator
Yaser Abu Dail *(Germany)*

09:24 Simulator approaches in otorhinolaryngology – Looking beyond the ophthalmological horizon
Veronika Flockerzi *(Germany)*

09:50-10:20 | Auditorium 1

KN Soubrane EVER Keynote Lecture

Introduced by **Gisele Soubrane**

Soubrane Lecture
Isabelle Audo *(France)*

10:20-10:45 | Coffee Break

10:45-11:30 | Poster Session 2

11:30-12:45 | Auditorium 1

C RV-16 - Survival guide in uveitis

The participants will be updated on the current, evidence-based trends in diagnosis and management of common and more rare inflammatory conditions. The objective of the course is to provide the optimal approach of challenging uveitis cases and to discuss certain controversial issues which are frequently encountered in daily clinical practice. In addition, flow charts and treatment algorithms will be presented at the end of each lecture. Finally, the audience will have the opportunity to interact with the speakers by answering multiple choice questions which will summarize the key points of each topic. At the conclusion of the course the attendee will be more competent in managing individuals with inflammatory conditions in a safe and effective manner. The topics which will be covered are as follows: Essentials in clinical presentation, lab tests and treatment options in uveitis - How imaging can make challenging cases in uveitis easy - 10 common mistakes in uveitis. A guide to escape disasters - Dealing with the complications of uveitis - Vitreoretinal complications of uveitis. The role of vitrectomy .

Organizer: **Paris Tranos** *(Greece)*
Co-organizer: **Chrysa Koutsiouki** *(Greece)*

11:30 Effective monitoring of inflammation in uveitis patients. New trends
Paris Tranos *(Greece)*

11:45 How imaging can make challenging cases in uveitis easy
Chrysa Koutsiouki *(Greece)*

12:00 10 common mistakes in uveitis. A guide to escape disasters
Paris Tranos *(Greece)*

12:15 Dealing with the complications of uveitis
Dimitris Koufakis *(Greece)*

12:30 Vitreoretinal complications of uveitis. The role of vitrectomy
Thanos Vakalis *(Greece)*

11:30-12:45 | Auditorium 2

SIS COS-42 - From cell culture to the ocular surface, EVER-DOG Symposium

Our joint EVER-DOG Symposium brings novel results of scientists from the German Ophthamological Society (DOG) and from EVER regarding ocular surface disease. Our topics are drug delivery through contact lens, human pluripotent stem cells as limbal stem cell source, corneal endothelial cell layer bioengineering and aniridia mouse model and patient data.

Organizer: **Thomas Fuchsluger** *(Germany)*
Co-organizer: **Nora Szentmary** *(Germany)*

11:30 Development of a novel contact lens for drug delivery purposes
Thomas Fuchsluger *(Germany)*

11:45 Human pluripotent stem cells as a scalable source for limbal stem cells - from basic biology towards clinical applications
Heli Skottman *(Finland)*

12:00 Induced pluripotent stem cells as tool for cornea study in regenerative medicine
Pierre Balmer *(Switzerland)*

12:15 The limbal stem cell niche in development, insights from mouse models and children with aniridia
Neil Lagali *(Sweden)*

12:30 Aniridia cohort data from the Schwiete Center
Nora Szentmary *(Germany)*

11:30-12:45 | Calatrava 1

SIS PBP-59 - Exercise and the eye: a look at an emerging research topic

The ocular effects of physical activity and exercise is and emerging topic in eye research. This Special Interest Symposium aims to present a current overview of some of the reported effects of physical activity or exercise, either after acute sessions or chronic interventions, on the eye and its functioning. The invited talk aim to: a) give an introduction about the terminology related to physical activity and exercise to non-specialists in the field; b) to summarize the major findings of previous literature, as well as to present on-going work; and, c) to identify potential scientific questions to be addressed in the future. This SIS is aimed also to foster networking among attendees interested in the topic.

Organizer: **Juan Gonzalo Carracedo Rodriguez** *(Spain)*
Co-organizer: **Adolfo Aracil-Marco** *(Spain)*

11:30 Basic concepts of Exercise Physiology for the vision and eye research community.
Adolfo Aracil-Marco *(Spain)*

11:45 The benefits of physical exercise on glaucoma management: evidence-based recommendations for eye care providers
Jesus Vera Vilchez *(Spain)*

12:00 The effects of physical exercise on ocular blood flow.
Beatriz Redondo *(Spain)*

12:15 Can physical exercise influence the ocular surface homeostasis?
Maria Serramito Blanco *(Spain)*

12:30 The effect of physical exercise on myopia progression.
Carlos Carpena Torres *(Spain)*

11:30-12:45 | Calatrava 2

SIS NSPH-25 - Mitochondrial optic neuropathies SIS I - expanding phenotypes and genetics

Mitochondrial optic neuropathies are a group of blinding genetic disorders in which optic atrophy secondary to loss of retinal ganglion cells is a key clinical feature. The commonest causes worldwide are mutations in mitochondrial DNA (causing Leber's hereditary optic neuropathy: LHON) and OPA1 mutations (causing Autosomal Dominant Optic Atrophy: ADOA). Based on published data from different geographical populations, 60-80% of patients with ADOA have mutations in the OPA1 gene. Although inherited optic neuropathies are considered as 'orphan' diseases, grouped together, the prevalence is about 1 in 10,000 – representing an important cause of blindness in both the paediatric and young adult population. Recent trials of drugs and gene therapy in patients with LHON, have shown the first glimmer of hope for the treatment of this group of patients. At this exciting time, this SIS will focus on disease mechanisms and clinical phenotyping and potential avenues towards novel and effective therapies.

Organizer: **Marcela Votruba** *(United Kingdom)*
Co-organizer: **Patrick Yu-Wai-Man** *(United Kingdom)*

11:30 Known genes, new genes and new phenotypes in mitochondrial eye diseases
Neringa Jurkute *(United Kingdom)*

11:48 LHON spectrum disorder: phenotype and genes
Piero Barboni *(Italy)*

12:06 The natural history of LHON
Thomas Klopstock *(Germany)*

12:24 The yin and the yang of molecular decompensation in LHON
Valerio Carelli *(Italy)*

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11:30-12:45 | Gaudi 1

SIS G-53 - Molecular approach to glaucoma diagnosis and treatment

Glaucoma is a treatable disease if detected early and therapy can stop visual loss however if damage has already occurred it cannot be reverted. To identify a genetic cause associated with glaucoma is not only beneficial for the patient but also to detect asymptomatic carriers among the family-relatives which will be susceptible for early treatment. Pharmacogenetics is rapidly evolving to identify the most efficient, safe treatment for our patients. Lately, different SNPs responsible for the different response to the most used ocular hypotensive drugs have been identified. This fact opens the door to a future personalized therapy in glaucoma. Glaucoma is a neurodegenerative multifactorial,chronic disease in which neuroprotection results of great interest. Effective neuroprotective therapy can be achieved with the use of biodegradable microspheres containing different neuroprotective substances. Müllerian glia play an important role in the death of RGCs in glaucoma. We propose that in the periphery of the retina, where RGCs are more sensitive to IOP, Müllerian glia may be involved in the death of RGC

Organizer: **Elena Milla** *(Spain)*
Co-organizer: **Meritxell Jodar Bifet** *(Spain)*

11:30 Importance of genetic studies in the diagnosis of glaucoma
Sara Carlota Labay Tejado *(Spain)*

11:48 Pharmacogenetic basis of glaucoma
Elena Milla *(Spain)*

12:06 Differences in Müller's glia between the central and peripheral retina and its effect in glaucoma
Elena Vecino *(Spain)*

12:24 Multiloaded drug delivery devices for the treatment of glaucoma
Marco Brugnera *(Spain)*

11:30-12:45 | Gaudi 2

SIS EOVS-62 - Myopia: more than a refractive error, a significant public health issue

Myopia is a refractive defect defined as an equivalent spherical refraction ≤ -0.50 dioptres (D) when ocular accommodation is relaxed. Although it is now known that there is no safe level of myopia, high myopia (defined as a spherical equivalent refraction ≤ -6.00D or an axial length > 26mm) is associated with an excessive axial elongation of the eye that can lead to loss of visual acuity due to structural changes in the posterior pole, namely pathologic myopia. Myopia is estimated to affect 30% of the world´s population, with projections estimating that around half of the world´s population will suffer myopia by 2050. This is likely to increase its global burden and societal cost due to the increased risk of secondary complications of pathologic myopia, which is becoming one of the leading causes of irreversible blindness in the world. Consequently, there is a growing interest in understanding the causes underlying the onset and progression of myopia, but also in the search for strategies aimed at preventing the development and progression of myopia and axial length growth as it is the main modifiable risk factor for the pathologic consequences of myopia. In this first SIS, speakers will discuss the causes, risk factors and some of the consequences of myopia.

Organizer: **Diego García-Ayuso** *(Spain)*
Co-organizer: **Francisco Javier Valiente-Soriano** *(Spain)*

11:30 Myopia, what causes it and can it be avoided
Olavi Pärssinen *(Finland)*

11:45 Prevention and public awareness of myopia
Cristina Alvarez-Peregrina *(Spain)*

12:00 Clinical and histological characteristics of axial myopia
Jost Jonas *(Germany)*

12:15 Optic treatments to myopia management
Juan Gonzalo Carracedo Rodriguez *(Spain)*

12:30 Inhibiting myopia development by digital chromatic filters
Barbara Swiatczak *(Switzerland)*

11:30-12:45 | Gaudi 3

SIS LC-9 - Seeing through posterior capsule opacification

Posterior capsule opacification (PCO) is the most common complication following cataract surgery and limits the long-term postoperative visual outcome of millions of patients. PCO is a consequence of the wound-healing response of residual lens epithelial cells (LEC) residing in the capsular bag post cataract surgery. Following surgery, LECs undergo hyper-proliferation and fibrotic changes, such as transdifferentiation into myofibroblasts, matrix depositions and matrix contractions, leading LECs to migrate to the posterior capsule over the visual axis and the newly implanted intraocular lens (IOL). All of this contributes to light scatter and the need for Nd:YAG laser-assisted posterior capsulotomy for the clinical treatment of symptomatic PCO, however, this procedure increases the risks of complications, such as glaucoma, retinal diseases, uveitis, and IOL pitting. Therefore, it is of great importance to better understand how PCO develops and determine the best approaches to manage or prevent it. With that in mind, the aim of this SIS is to highlight some new information on the development and treatment of PCO. Such as current experimental models used in PCO research, the efficacy of newly developed IOL technologies to prevent PCO, and other potential therapeutic interventions.

Organizer: **Justin Christopher D'Antin** *(Spain)*
Co-organizer: **Rafael Barraquer** *(Spain)*

11:30 Soemmerring's rings developed in-vivo can present internal transparent areas
Justin Christopher D'Antin *(Spain)*

11:45 IOL's materials and PCO
Andrzej Grzybowski *(Poland)*

12:00 The human capsular bag model as a pre-clinical evaluation tool for IOLs
Michael Wormstone *(United Kingdom)*

12:15 Simulation of the effect of capsular opacification on retinal illumination
Achim Langenbucher *(Germany)*

12:30 Indomethacin and bromfenac may be effective in the prevention of posterior capsule opacification
Ke Yao *(China)*

12:45-13:10 | Auditorium

PS European Ophthalmic Heritage Lecture

Introduced by **Andrzej Grzybowski** *(Poland)*

The anatomy of the anterior interface revisited
Marie-Josè Tassignon *(France)*

With the advent of the intraoperative OCT in 2015, the anterior interface could be visualized during cataract surgery. This technology allowed better understanding of the anterior interface that was considered for so many years as being virtual. Based on the intraoperative OCT device we were able to describe a new type of congenital cataract based on a dysgenesis of the anterior interface which we called AVLID : anterior vitreo-lenticular interface dysgenesis. This type of congenital cataract is responsible for about one third of the newborn cataract in developed countries. It also allowed us to observe that the anterior interface was not large enough to accommodate the bag-in-the-lens in some eyes with childhood cataract. We then developed a new capsule stretching technique to enlarge the anterior interface per operatively. In addition, we observed the presence of anterior vitreous detachment (AVD) in adults starting from 45 years on. We found an incidence of 60% AVD in adult eyes and were able to study the consequences on accommodation of AVD. The anterior interface was given the name of Berger, an Austrian anatomist from Graz (1887). However, the most important structure of the anterior interface is the ligament of Wieger. Wieger was an ophthalmologist and described the hyaloidal-capsular ligament in his thesis which he defended in Strassbourg (1884). It is this ligament that influences accommodation and as a result the name of Wieger should be recognized as such.

13:10 - 14:10 | Auditorium 2

CIS Industry Sponsored Symposium

not EACCME accredited
(see the dedicated session at page 104)

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13:10 - 14:10 | Calatrava 1

CIS **Industry Sponsored Symposium**
not EACCME accredited
(see the dedicated session at page 105)

14:10-15:25 | Auditorium 1

SIS **RV-56 - Ocular pharmacological neuroprotection. Present and future**

During aging, the retina and optic nerve are at high risk of various degenerative disorders, among them glaucoma, diabetic retinopathy and age-related macular degeneration, major causes of visual impairment and blindness worldwide. Strong evidence supports the role of neuroprotection, that may possitively impact on the affected ocular tissues. In fact, many neurochemical modulators of ocular system damage have been recently described. A better comprehension of neuroprotection will be offered in this Symposia, to reduce or avoid visual impariment and to improve the quality-of-life related to vision.

Organizer: **Maria Dolores Pinazo Duran** *(Spain)*
Co-organizer: **Carlo Nucci** *(Italy)*

14:10 Combined use of neuroprotective molecules: a new treatment strategy for patients with glaucoma
Alessio Martucci *(Italy)*

14:25 Photoreceptor rescue in retinal degenerative diseases
Maria Paz Villegas Perez *(Spain)*

14:40 Autophagy in eye diseases
Rossella Russo *(Italy)*

14:55 Immunonutrition in glaucoma patients: a new microbiota-based treatment.
Vicente Zanon-Moreno *(Spain)*

15:10 Glaucoma Farmacogenetics. Role in Neuroprotection
Elena Milla *(Spain)*

14:10-15:25 | Auditorium 2

SIS **COS-52 - Cornea & Glaucoma - Meeting Point "Endothelium"**

The focus of this Special Interest Symposium is the corneal endothelium, which represents the meeting point for both glaucoma and cornea. Experts in the field will analyse the effect of antiglaucomatous eye drops and glaucoma surgical procedures on corneal endothelium and they will also share their experience in decision-making for glaucoma surgery in patients with vulnerable corneal endothelium. Finally, they will highlight aspects of post-keratoplasty glaucoma and pseudoexfoliation-associated keratopathy in an evidence-based manner.

Organizer: **Zisis Gkatzioufas** *(Switzerland)*
Co-organizer: **Konstantin Gugleta** *(Switzerland)*

14:10 Effect of antiglaucomatous eye drops on corneal endothelium
Konstantin Gugleta *(Switzerland)*

14:25 The effect of glaucoma surgical procedures on corneal endothelium
Panagiotis Georgoudis *(United Kingdom)*

14:40 Post-keratoplasty glaucoma-diagnosis and treatment
Efthymios Karmiris *(Greece)*

14:55 Keratopathy in Pseudoexfoliation Syndrom
Stylianos Kandarakis *(Greece)*

15:10 Glaucoma Surgical Procedure Choice in Vulnerable Corneal Endothelium
Zisis Gkatzioufas *(Switzerland)*

14:10-15:25 | Calatrava 1

SIS RV-72 - Macula pigment optical density and other pre-receptor filters in the eye: effects on visual performance

Organizer: **Rebekka Heitmar** *(United Kingdom)*
Co-organizer: **Marisa Rodriguez-Carmona** *(United Kingdom)*

14:10 Effect of pre-receptor filters on chromatic sensitivity and other visual functions in the eye
John Barbur *(United Kingdom)*

14:28 Effect of macular pigment optical density on Yellow-Blue and Red-Green colour discrimination
Marisa Rodriguez-Carmona *(United Kingdom)*

14:46 Size of the foveal blue scotoma related to the shape of the foveal pit but not to macular pigment
Frank Schaeffel *(Switzerland)*

15:04 Macular pigment profile characteristics and stability over periods of up to 25 years
Anthony G. Robson *(United Kingdom)*

14:10-15:25 | Calatrava 2

SIS NSPH-26 - Mitochondrial optic neuropathies SIS II: from bench to bedside

Mitochondrial optic neuropathies are a group of blinding genetic disorders in which optic atrophy secondary to loss of retinal ganglion cells is a key clinical feature. The commonest causes worldwide are mutations in mitochondrial DNA (causing Leber's hereditary optic neuropathy: LHON) and OPA1 mutations (causing Autosomal Dominant Optic Atrophy: ADOA). Based on published data from different geographical populations, 60-80% of patients with ADOA have mutations in the OPA1 gene. Although inherited optic neuropathies are considered as 'orphan' diseases, grouped together, the prevalence is about 1 in 10,000 – representing an important cause of blindness in both the paediatric and young adult population. Recent trials of drugs and gene therapy in patients with LHON, have shown the first glimmer of hope for the treatment of this group of patients. At this exciting time, this SIS will focus on disease mechanisms and clinical phenotyping and potential avenues towards novel and effective therapies.

Organizer: **Marcela Votruba** *(United Kingdom)*
Co-organizer: **Patrick Yu-Wai-Man** *(United Kingdom)*

14:10 Molecular mechanisms that cause cell death in LHON
Alfredo Sadun *(USA)*

14:28 New insights into idebenone therapy in relation to NQO1
Chiara La Morgia

14:46 Management of LHON - an update
Patrick Yu-Wai-Man *(United Kingdom)*

15:04 What OPA1 models teach us about potential therapy
Marcela Votruba *(United Kingdom)*

14:10-15:25 | Gaudi 1

SIS G-54 - Glaucoma management across Eastern Europe: key points, challenges, approaches and solutions

Glaucoma prevention and treatment still remains a major focus of international directives to avoid irreversible blindness in Europe, as well as worldwide. Nevertheless, glaucoma care is diverse in Europe, mainly due to financial differences. Similarities and disparities among different Western European countries were already presented by some glaucoma societies. However, there are a lot of challenges in certain Eastern European countries like a higher incidence of more advanced disease at presentation, a higher risk of progressing to irreversible blindness, limited access to glaucoma care outside urban areas, lack of awareness, and encountering extremely complicated cases that have not previously been widely reported. Furthermore, a lack of an exact data on incidence, diagnosis and treatment results of different types of glaucoma complicates the agreement between national regulations, despite European Glaucoma Guidelines. This SIS aims to present different management approaches in Eastern Europe, to attract more glaucoma specialists from this world region, and to create active glaucoma network with development of models for comprehensive glaucoma care and local glaucoma awareness programs. Thus, it could be possible to evaluate the current status of glaucoma management in Eastern Europe, to conduct variable multicenter collaborative glaucoma research studies in the future, and to find the ways to address the related challenges.

Organizer: **Fidan Aghayeva** *(Germany)*
Co-organizer: **Natalia Palarie** *(Moldova)*

14:10 Glaucoma care and surgical management in Azerbaijan
Fidan Aghayeva *(Germany)*

14:25 Different techniques in transscleral cyclophotocoagulation
Natalia Palarie *(Moldova)*

14:40 Application of gonioscopy-assisted transluminal trabeculotomy (GATT) in the management of refractory glaucoma in Poland
Ewa Kosior-Jarecka *(Poland)*

14:55 Pseudoexfoliation syndrome and pseudoexfoliation glaucoma in Georgia
Nino Kobakhidze *(Georgia)*

15:10 Challenges of glaucoma management in Kosovo
Qëndresë Daka *(Kosovo)*

14:10-15:25 | Gaudi 2

RF Rapid Fire 4 - COS

Moderators: **Giulio Ferrari** *(Italy)*, **Neil Lagali** *(Sweden)*

176 F.081 Polihexanide 0.8 mg/ml eyedrops as new treatment for severe *Acanthamoeba keratitis*
Chiara De Gregorio, Mariateresa Laborante, Andrea De Luca, Antonio Di Zazzo, Marco Coassin *(Italy)*

198 F.082 Is it really Keratoconus - Topographic mimicry
Agata Wykrota, Berthold Seitz, Elias Flockerzi *(Germany)*

387 F.083 Clinical phase 1 safety and tolerability evaluation of sustained release silica composite eye drops in human subjects
Kai Kaarniranta, Marcus Reay, Lasse Leino, Sari Kievari, Arto Hartikainen, Oona Martikainen, Benjam Kemiläinen *(Finland)*

462 F.084 New non-toxic fluorescent marker for quantifying the viability of corneal endothelial cells
Corantin Maurin, Marielle Mentek, Hanielle Vaitinadapoule, Gilles Ulrich, Antoinette De Nicola, Corentin Maret, He Zhiguo, Gilles Thuret, Philippe Gain *(France)*

527 F.085 Development of a novel multi-stimulus ocular surface aesthesiometer system
Paul Murphy, Melanie Mungalsingh, Sean Peterson, Ben Thompson *(Canada)*

723 F.086 Advancing In vivo modeling and delivery systems for triplet repeat expansion-mediated corneal endothelial dystrophy: Implications in AntimiR therapy
Diego Piqueras-Losilla, Isabel Campillo, Laura Perea-Galera, Sandra López-Domènech, Milagros Rocha-Barajas, Maria Jose Roig-Revert, Cristina Peris-Martinez, Clara Barbera-Fuset, Aline Huguet, Genevieve Gourdon, Beatriz Llamusí, Estefanía Cerro-Herros *(Spain)*

14:10-15:25 | Gaudi 3

SIS LC-71 - Positive and negative dysphotopsia

Organizer: **Jan-Willem Beenakker** *(The Netherlands)*
Co-organizer: **Andrzej Grzybowski** *(Poland)*

14:10 Negative and positive dysphotopsia
Andrzej Grzybowski *(Poland)*

14:25 Anatomical and optical origins of negative dysphotopsia
Jan-Willem Beenakker *(The Netherlands)*

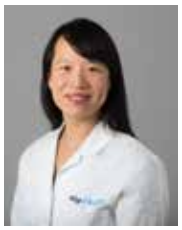
14:40 IOL exchange for positive and negative dysphotopsia
Gregorius Luyten *(The Netherlands)*

14:55 Direct observation of negative dysphotopsia in a physical model of the pseudophakic eye
Harilaos Ginis *(Greece)*

15:10 Retrospective analysis of negative dysphotopsia after cataract surgery
Kata Mihaltz

15:30-16:00 | Auditorium 1

KN Missoten EVER Keynote Lecture



Introduced by **Manuel Vidal-Sanz** *(Spain)*

Retinal circuit disassembly, plasticity, and repair in glaucoma
Yvonne Ou *(USA)*

Precise connections between synaptic partners are shaped during development to ensure proper neural circuit function, but how these connections are disassembled and rearranged after injury is less well understood. In glaucoma, a neurodegenerative disease of the optic nerve, the ganglion cell is injured but very little is known about how the presynaptic circuitry is perturbed. Furthermore, the ability to diagnose and treat glaucoma at an optimal stage before irreversible retinal ganglion cell loss occurs requires a comprehensive understanding of inner retina circuit disassembly and plasticity. This lecture will provide insights into retinal circuit disassembly and plasticity, the role of microglia in synapse disassembly, and the opportunities for retinal repair of inner retinal circuitry in glaucoma. These findings expand knowledge of how adult neural circuits react and rearrange in the face of injury, and permit the design of novel psychophysics testing paradigms and retinal ganglion cell regeneration or neuroprotection strategies.

16:00-16:30 | Coffee Break

16:30-17:45 | Auditorium 1

SIS RV-38 - New insights in the management of epiretinal membrane

With new technology, vitrectomy has become a much safer surgical procedure. Serious complications, such as the retinal detachment following vitrectomy are less frequent. Surgeons become more confident to decide early surgery to preserve more vision for patients. Combined surgery for comorbid pathologies such as cataract is debatable between surgeons. The optical coherence tomography is a tremendously useful tool which highlights changes that may provide important information regarding surgical prognosis. Questions regarding the surgical procedure, like the necessity of internal limiting membrane removal remain to be answered.

Organizer: **Tina Xirou** *(Greece)*
Co-organizer: **Rafael Martinez-Costa** *(Spain)*

16:30 Idiopathic epiretinal membrane and when to operate
Evgenia Kontou *(Greece)*

16:45 Management of idiopathic epiretinal membrane (iERM) combined phacovitrectomy versus a 2-step sequential surgery
Tina Xirou *(Greece)*

17:00 The role of optical coherence tomography biomarkers in predicting the outcome of epiretinal membrane removal surgery
Odysseas Georgiadis *(Greece)*

17:15 ILM Peel?
Rafael Martinez-Costa *(Spain)*

17:30 Presentation of cases who underwent vitrectomy for the management of idiopathic epiretinal membranes (iERM)
Ilias Gkizis *(Greece)*

16:30-17:45 | Auditorium 2

SIS COS-11 - Modern advances in eye banking

In the past, the role of eye banks was limited to collection and preservation of corneal tissues prior to transplantation. In the last decades, continuous improvements of preservation techniques and new approaches of tissue analysis in eye banks extend storage time and provide better tissue quality. Moreover, increasing number of keratoplasty techniques and the high demand for "ready-to-use" tissue is challenging eye banks to improve and develop new preparation techniques. These new challenges are propelling eye banks into a new Era of modern eye banking. This Special Interest Symposium focuses on the following aspects: Advances in corneal preservation using active storage machine - Contribution of artificial intelligence in endothelial cell counting and cornea guttate detection in the eye bank - Pre-stripped and pre-loaded tissues for DMEK - Sterile donor tomography for improvement of refractive results after keratoplasty.

Organizer: **Loïc Hamon** *(Germany)*
Co-organizer: **Berthold Seitz** *(Germany)*

16:30 Advances in corneal preservation using active storage machine
Gilles Thuret *(France)*

16:48 AI detection of cornea guttata
Loïc Hamon *(Germany)*

17:06 Clinical outcome of organ-cultured preloaded DMEK compared to standard DMEK - A single center study
Annekatrin Rickmann *(Germany)*

17:24 Sterile donor tomography for improvement of refractive results after keratoplasty
Loïc Hamon *(Germany)*

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16:30-17:45 | Calatrava 1

SIS Women in EVER

Women in EVER is made possible by EVER's overall Programme Secretary Dr. Marta Agudo Barriuso (Instituto Murciano de Investigación Biosanitaria Pascual Parrilla, and University of Murcia, Spain). Organized by Dr. Franziska Rauscher (Leipzig University, Germany) and Dr. Rebekka Heitmar (Huddersfield University, UK), the session centers around meeting up, networking and forming new connections.
Five distinguished and accomplished women scientists and leading clinician experts will facilitate a round table discussion during an exciting informal get-together with EVER delegates to inspire, foster ideas, aid career decisions, connect with peers and mentors, nurture and share experience.
Prof. Dr. Gisèle Soubrane (Department of Ophthalmology, Université Paris Est Creteil XII, Paris, France), Prof. Dr. Yvonne Ou (School of Medicine, University of California San Francisco, San Francisco, USA), Prof. Dr. Isabelle Audo (Sorbonne Université, INSERM, CNRS, Institut de la Vision, and Centre Hospitalier National d'Ophtalmologie des Quinze-Vingts, Paris, France), Prof. Dr. Marcela Votruba (Consultant Ophthalmologist University Hospital Wales, and School of Optometry & Vision Sciences, Cardiff University, UK), Prof. Dr. Marie-José Tassignon (Department of Ophthalmology, Antwerp University Hospital and University of Antwerp, Edegem-Antwerp, Belgium).
Please join us for this exciting session!
Topics of this round table discussion and informal get-together will focus on matters close to your heart and questions raised by your interest. Please find some stimulating and thought-provoking questions under the five headings below. Multifaceted discussion may include all of the following and more!

Organizer: **Rebekka Heitmar** *(United Kingdom)*
Co-organizer: **Franziska G. Rauscher** *(Germany)*

16:30 Fostering an international network of women scientists and clinicians, encouraging open dialogue, and inspiring future women scientists in Ophthalmology and Vision Science.
Gisèle Soubrane *(France)*

16:45 It is our joint task to translate into reality a more equal and connected world for women scientists in all their diversity
Yvonne Ou *(USA)*

17:00 We would like to especially recognize the creativity, energy, and substantive contributions from all women in ophthalmology and vision science! You have brought a fresh and much needed perspective to EVER
Isabelle Audo *(France)*

17:15 WOMEN in EVER is supporting women researchers, clinicians, and academic staff in their career development with a goal to prepare them for leadership roles in the scientific community
Marcela Votruba *(United Kingdom)*

17:30 This WOMEN in EVER session is connecting early-career and leading women scientists from all over Europe to tackle the underrepresentation of women in science by increasing visibility
Marie-Josè Tassignon *(France)*

16:30-17:45 | Calatrava 2

SIS NSPH-81 - Ocular biomarkers in neurodegenerative diseases

New technologies have made it possible to demonstrate the existence of ocular biomarkers of many of the neurodegenerative diseases, contributing to their diagnosis, classification and even to the control of responses to treatments. This SIS aims to update some of the ocular findings of diseases such as Multiple Sclerosis, Alzheimer's, or Amyotrophic Lateral Sclerosis. Essential aspects of techniques such as OCT and eye-tracker will be addressed. Emphasis will be placed on the standardization of OCT for a correct application in neuro-ophthalmology and on the possible uses of eye-tracker systems to give information on alterations in eye movement control systems.

Organizer: **Jose Carlos Pastor Jimeno** *(Spain)*
Co-organizer: **Elena Salobrar-Garcia** *(Spain)*

16:30 Analysis of vitreous by OCT as biomarker in neurodegenerative diseases
Maria Jesus Rodrigo *(Spain)*

16:45 Usefulness of eye tracking systems in multiple sclerosis
Carla Daniela Guantay *(Spain)*

17:00 Use of OCT in the search for biomarkers in neurodegenerative diseases
Elena Salobrar-Garcia *(Spain)*

17:15 Protocolization of data collection by OCT
Jose Carlos Pastor Jimeno *(Spain)*

16:30-17:45 | Gaudi 1

SIS G-55 - Natural food versus nutraceutics. That is the question

The important choice of eating healthy may help counteracting the development/progression of important ocular diseases. Nutritional habits influence the risk of suffering a wide spectrum of disorders, among them ocular surface dysfunction, glaucoma, myopia, diabetic retinopathy, hypertensive retinopathy and optic neuropathies. Several randomized, controlled clinical trials as well as experimental models, have been recently set up to evaluate the efficacy of natural food as first-line coadyuvant treatments for the above ocular diseases. Bioactive nutrients have been identified as protective factors against eye diseases. Epigenome is the primary goal of modulations in gene expression related to the molecular nutrients, including vitamins, poly-unsaturated fatty acids, phenolics, carotenoids, and oligoelements. Nutraceutical approaches to the eyes and vision are growing up since these seem to help in preventing inflammation, angiogenesis, apoptosis and neurodegeneration. This symposia aims to summarize current understanding and the areas of ongoing research about the management of eye pathologies with the help of natural food and/or oral supplementation.

Organizer: **Maria Dolores Pinazo Duran** *(Spain)*
Co-organizer: **Gianluca Scuderi** *(Italy)*

16:30 Gut microbiome in ocular health and disease
Gianluca Scuderi *(Italy)*

16:45 Walnuts for the eyes and vision.
Ricardo Casaroli *(Spain)*

17:00 Saffron and Glaucoma. Effects of active components of an old natural neuroprotector
José A. Fernández-Albarral *(Spain)*

17:15 Antioxidants. Pros and cons for ocular diseases
Jose Javier Garcia-Medina *(Spain)*

17:30 Omics approaches for assessing nutrition and ocular health in the modern era
Irene Andrès-Blasco *(Spain)*

16:30-17:45 | Gaudi 2

SIS IM-96 - Drug induced uveitis

Uveitis maybe induced by the use of various medications known. Drug-induced uveitis (DIU), has become particularly important and more frequently seen because of the advent of biologic therapies such as immune checkpoint inhibitors (ICPIs), BRAF, and MEK inhibitors, anti- vascular endothelial growth factor agents, and antitumor necrosis factor agents. Both systemic and local therapy can thus lead to DIU. Ocular inflammation can be in the form of anterior, intermediate, posterior or pan uveitis. Most cases of DIU respond promptly to discontinuation of the suspected agent in conjunction with topical corticosteroid and cycloplegic therapy. This SIS will briefly focus on the drugs that are strongly associated with uveitis and emphasize new observations about these associations. Identification of these inciting drugs will simplify work-up and management of patients with uveitis and improve visual outcomes.

Organizer: **Francois Willermain** *(Belgium)*
Co-organizer: **Dorine Makhoul** *(Belgium)*

16:30 Immunotherapy induced uveitis
Dorine Makhoul *(Belgium)*

16:48 Vaccine induced uveitis
Francois Willermain *(Belgium)*

17:06 Anti-microbial drugs induced uveitis
Jarmila Heissigerova *(Czech Republic)*

17:24 Brociluzimab and other anti-Vegf induced intraocular inflammation
Julio J. Gonzalez-Lopez *(Spain)*

16:30-17:45 | Gaudi 3

SIS LC-85 - Cataract surgery in complex cases

Cataract surgery is one of the most common and successful procedure performed worldwide. Techniques for cataract surgery have undergone significant improvement and refinement with excellent visual outcomes during the past decades. Although many cataractous patients present with concomitant diseases, the most common of these are corneal diseases, glaucoma, vitreoretinal abnormalities, and age-related macular degeneration. Usually these comorbidities also require intervention, surgery if conservative treatment is ineffective. In these cases, biometry and intraocular lens calculation can be a challenge. The decision to perform either separate cataract or combined surgery depends upon the status of the eye and the severity of the coexisting ocular disorders. In addition, there is also no consensus on the timing and sequence of interventions. Generally, the surgeon has to decide which approach may be best suited for a particular patient. Ultimately, with advances in surgical techniques combined cases can be successfully managed and can be calculated with a predictable outcome.

Organizer: **László Modis** *(Hungary)*
Co-organizer: **Rafael I. Barraquer** *(Spain)*

16:30 IOL calculation in complex cases
Achim Langenbucher *(Germany)*

16:45 Cataract surgery and keratoplasty
Rafael I. Barraquer *(Spain)*

17:00 Combined cataract and glaucoma surgery
Andrew Tatham *(United Kingdom)*

17:15 Combined cataract and vitreoretinal surgery
László Modis *(Hungary)*

17:30 Cataract surgery in AMD patients
Andrzej Grzybowski *(Poland)*

17:45-18:15

BM Business Meetings

ACB - COS - EOVS	Auditorium 1
G - IM - LC	Auditorium 2
MBGE	Calatrava 1
NSPH	Calatrava 2
PBP	Gaudi 1
PO	Gaudi 2
RV	Gaudi 3

18:15-19:30 | Auditorium 2

SIS COS-22 - TFOS lifestyle workshop report 2

Population growth and aging, combined with behavior, lifestyle changes, and urbanization will dramatically increase the number of people with eye problems and blindness in the coming decades. Tear Film & Ocular Surface Society (TFOS) is an international nonprofit organization that promotes progress in research and educational aspects related to ocular surface diseases. The next TFOS workshop, now being published, is focused on the consequences of the lifestyle choices we make, directly or indirectly, on the ocular surface. This Special Interest Symposium will discuss the influence of digital device use, the impact of cosmetic products and procedures, the effects of nutrition, and explore the influences of self- and elective medications and elective surgical procedures on our eyes.

Organizer: **Piera Versura** *(Italy)*
Co-organizer: **Giuseppe Giannaccare** *(Italy)*

18:15 TFOS Lifestyle Report: effects of the digital environment on the ocular surface and adnexa
Anna Nowińska *(Poland)*

18:33 TFOS Lifestyle Report: effects of cosmetic products and procedures on the ocular surface and adnexa
Piera Versura *(Italy)*

18:51 TFOS Lifestyle Report: effects of nutrition on the ocular surface and adnexa
Piera Versura *(Italy)*

19:09 TFOS Lifestyle Report: effects of elective medications and procedures on the ocular surface and adnexa
Elisabeth M. Messmer *(Germany)*

Friday 27 October 2023

18:15-19:30 | Calatrava 1

RF Rapid Fire 5 - LC

Moderators: **Rafael Barraquer** *(Spain)*, **Laszlo Modis** *(Hungary)*

115 T.015 Risk factors associated with visual performance of enhanced monofocal intraocular lens
Da Ran Kim *(South Korea)*

247 T.016 Epidemiological and clinical profile of lens ectopias in children: about 126 eyes
Roukaya Chahir, Daghouj Ghizlane, Loubna Elmaaloum, Bouchra Allali, Asmaa Elkettani *(Morocco)*

537 T.017 Prospective clinical study of a new intraocular lens with extended depth of focus: ISOPURE, 1 year follow up
Dounia Bradly, Salik Dany, Motulsky Elie *(Belgium)*

664 T.018 Changes in visual acuity and quality of life following lens surgery in Alport syndrome
Aida Kafai Golahmadi, Kirsty Clarke, Edward Bloch, Zaid Shalchi, Manoharan Shunmugam, Helen Storey, Frances Flinter, Moin Mohamed, Omar Mahroo *(United Kingdom)*

774 T.019 Extended depth of focus versus trifocal for intraocular lens implantation: an updated systematic review and meta-analysis
Mohammad Karam[1,2], Nahlaa AlKhowaiter[3], Ali Alkhabbaz[1], Ahmad AlDubaikhi[3], Abdulmalik Alsaif[3], Eiman Shareef[1], Rand Alazaz[3], Abdulaziz Alotaibi[1], Mona Koaik[2], Samir Jabbour[2,4] *([1]Kuwait, [2]Canada, [3]Saudi Arabia, [4]USA)*

807 T.020 Unbalanced redox status network as an early pathological even in congenital cataracts
Eloy Bejarano[1], Elizabeth A. Whitcomb[2], Rebecca L. Pfeiffer[2], Kristie L. Rose[2], José Antonio Rodríguez-Navarro[1], Alejandro Ponce-Mora[1], Antolin Cantó[1], Inmaculada Almansa[1], Kevin L. Schey[2], Bryan W. Jones[2], Allen Taylor[2], Sheldon Rowan[2] *([1]Spain, [2]USA)*

834 T.021 Changes in peripheral visual field perception after intraocular lens implantation
Luc Van Vught, Gregorius Luyten, Jan-Willem Beenakker *(The Netherlands)*

18:15-19:30 | Calatrava 2

FP Free Paper Session 2

Moderators: **Raquel Boia** *(Portugal)*, **Ali Koskela** *(Finland)*

85 Neuroprotection and axon regeneration in glaucoma models by gene therapy using modified tyrosine kinase receptors
Takayuki Harada, Kazuhiko Namekata, Akiko Sotozono, Youichi Shinozaki, Xiaoli Guo, Chikako Harada *(Japan)*

235 Proteomic profiling of tear fluid from offspring of keratoconus patients: new insights into pathways and molecular drivers of disease development
Maite López-López, Uxía Regueiro, Tania Alvite-Piñeiro, Elío Díez-Feijoo, Isabel Lema *(Santiago de Compostela)*

308 TNF-a/IL-1B cytokine licensing enhances immunomodulatory potential of allogeneic mesenchymal stromal cells
Aoife Canning, Ellen Donohoe, Jiemin Wang, Seyedmohammad Moosavizadeh, Oliver Treacy, Aideen Ryan, Thomas Ritter *(Ireland)*

339 Novel melanin binding carbonic anhydrase II inhibitor for long-acting topical glaucoma treatment
Annika Valtari, Stanislav Kalinin, Janika Jäntti, Katja Stenberg, Kati-Sisko Vellonen, Elisa Toropainen, Marika Ruponen, Arto Urtti *(Finland)*

342 One therapy to protect them all: controlling diabetic eye disease in anterior and posterior segment via mitophagy-activating drugs
Heather Wood, Aidan Anderson, Dulani Wimalachandra, Kaouthar Bouzinab, Paula Rudzinska, Nada Alfahad, Ian Ganley, Graham Wallace, Saaeha Rauz, Lisa Hill, Jose Hombrebueno *(United Kingdom)*

355 Analysis of fixation patterns among glaucoma patients using a superfast eye tracking system
Aleksandra Gorczyca, Szymon Tamborski2, Michał Meina, Przemysław Zabel, Martyna Gębska-Tołoczko, Katarzyna Zabel, Karolina Suwała, Maciej Szkulmowski, Jakub Kaluzny *(Poland)*

Friday
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18:15-19:30 | Gaudi 1

SIS MBGE-76 - The cellular and molecular mechanisms of eye development

This SIS will cover studies of the cellular and molecular mechanisms governing formation of all major ocular tissues and will link these studies to congenital retinal, lens and corneal abnormalities. Formation of the eye field and transition into the 3D optic vesicles is a complex morphogenetic process critical for our understanding of retinal development and human retinal organoids. Studies of eye development are driven by dissecting the critical roles of specific transcription factors and regulation of their activities by extracellular signaling in specific compartments of the eye. Emerging studies of RNA-binding proteins provide novel insights into the genetic control of eye development at posttranscriptional level. Mapping of cell trajectories and cell fate decisions during human corneal development will shed new light into genetic control of this complex process. Critical gaps and novel research opportunities in our understanding of gene function during normal and abnormal eye development will be summarized and discussed in the context of understanding of ocular cell and tissue homeostasis. Multiple model systems will be presented, including human, mouse, chicken and zebrafish studies. Collectively, these five proposed presentations will add novel insights into understanding of eye development, regenerative potential of multiple ocular tissues, and rational design of therapies to correct genetic abnormalities within the eye.

Organizer: **Ales Cvekl** *(USA)*
Co-organizer: **Zbynek Kozmik** *(Czech Republic)*

18:15 Systems biology approaches to understand gene specification networks in the zebrafish retina
Juan Ramon Martínez Morales *(Spain)*

18:30 Transcriptional control of retina development
Zbynek Kozmik *(Czech Republic)*

18:45 Multi - omics studies of eye and lens development
Ales Cvekl *(USA)*

19:00 RNA-binding proteins and their downstream regulatory networks in lens development and cataract
Salil Lachke *(USA)*

19:15 Deciphering cell fates of the human cornea with a multi-omics meta atlas
Jo Zhou *(The Netherlands)*

18:15-19:30 | Gaudi 2

SIS EOVS-73 - Detection of earliest vision changes in glaucoma

Glaucoma is a collective term for a complex group of conditions that cause progressive optic neuropathy, resulting in irreversible loss of visual function. Early detection of Glaucoma leads to earlier treatment start, saving patients from developing irrecoverable damage. Since most forms of glaucoma develop continuously over years before becoming clinically apparent, there is a necessity for early assessment paradigms aiding clinical diagnosis. Rapid flicker and chromatic sensitivity loss is often present in diseases of the optic nerve even when high contrast acuity is largely spared. Early glaucomatous damage effects selected retinal layers enabling. Optical coherence tomography (OCT) and adaptive optics (AO) examine retinal morphology with high resolution in order to detect early changes and to monitor their changes over time. This session highlights various aspects of early diagnosis, management and progression of primary and secondary glaucoma.

Organizer: **Franziska G. Rauscher** *(Germany)*
Co-organizer: **Gordon Plant** *(United Kingdom)*

18:15 New methods for detection of early loss of rapid flicker, spatial vision, and chromatic sensitivity in glaucoma
Aiman Hafeez *(United Kingdom)*

18:30 The value of assessing progressive loss of red/green and yellow/blue chromatic sensitivity in glaucoma
Franziska G. Rauscher *(Germany)*

18:45 Short-term intraocular pressure fluctuation in primary angle closure glaucoma
Shaoying Tan *(Hong Kong)*

19:00 Diagnosis and management of secondary glaucoma: dural fistula and intracranial hypotension
Gordon Plant *(United Kingdom)*

19:15 Late detection of glaucoma and the relationship with deprivation: lessons from big data from hospital eye services in England
Mehal Rathore *(United Kingdom)*

18:15-19:30 | Gaudi 3

SIS **LC-91 - Clinical applications of Artificial Intelligence in ophthalmology**

Deep learning (DL), has shown promising diagnostic performance in image recognition, speech recognition and natural language processing. For DR screening, a number of DL systems for automatic analysis of fundus photographs have been developed in many countries. These aim to, at least partially, replace the specialty trained human graders, while providing a similar, level of accuracy. The session will provide review of developments of AI use in diabetic retinopathy, glaucoma, retinopathy of prematurity, and the use of smartphone-based AI algorithms in the clinical setting.

Organizer: **Andrzej Grzybowski** *(Poland)*
Co-organizer: **Ningli Wang** *(China)*

18:15 Cost effectiveness simulation of AI screening for DR in Japan
Ryo Kawasaki *(Poland)*

18:30 Applications of Artificial Intelligence in glaucoma
Ningli Wang *(China)*

18:45 Using off line AI on a smart phone to screen diabetic retinopathy - The way to go
Sundaram Natarajan *(India)*

19:00 AI in retinopathy of prematurity
Peter Campbell *(USA)*

19:15 Deployment of autonomous artificial intelligence testing for diabetic eye disease in the United States: current trend and improvement in outcome measures
Alvin Liu *(USA)*

19:30-20:00 | Auditorium 1

PS **EVER General Assembly**

20:00-20:30 | General Assembly Reception

08:30-09:45 | Auditorium 1

C RV-32 - AMD update

This course will review the current care of age-related macular degeneration, with presenters from Europe and the US. Specific topics reviewed include imaging modalities, including angiography, OCT, and OCT angiography; anti-VEGF for neovascular AMD, including faricimab; emerging therapies for geographic atrophy, including complement inhibitors pegcetacoplan and avacincaptad; the role of genetic testing in routine clinical care; and the surgical use of intraocular magnifying devices. Many cases will be presented and there will be ample opportunities for discussion.

Organizer: **Andrzej Grzybowski** *(Poland)*
Co-organizer: **Stephen Schwartz** *(USA)*

08:30 Update on AMD imaging - initial diagnosis, follow-up
Maciej Gawęcki *(Poland)*

08:45 Anti-VEGF for wet AMD – which drug and how often?
Anna Swiech *(Poland)*

09:00 Emerging therapies for geographic atrophy
Andrzej Grzybowski *(Poland)*

09:15 Is there a role for genetic testing in AMD care?
Stephen Schwartz *(USA)*

09:30 The Implantable Miniature Telescope (IMT) new developments: The US and UK experience
Marc Levy *(USA)*

08:30-09:45 | Auditorium 2

SIS COS-66 - Ocular pain: mechanisms and impact of a silent epidemic

Pain is a cardinal sign of inflammation. Yet, its role in highly prevalent ocular surface diseases is just starting to emerge. This symposium will review basic mechanisms of ocular surface pain, its classification, epidemiology and clinical impact. Finally, the link(s) between inflammation and pain (i.e. neuroinflammation) will be discussed, with the final goal to provide better understanding for clinician and basic scientists.

Organizer: **Giulio Ferrari** *(Italy)*
Co-organizer: **Juana Gallar** *(Spain)*

08:30 Mechanisms of ocular surface pain
Juana Gallar *(Spain)*

08:48 Measuring corneal pain in the clinic
Anat Galor *(USA)*

09:06 Structure and function of damaged and regenerating corneal nerves
Mark Rosenblatt *(USA)*

09:24 Neuroinflammation: the missing link between pain and immunity
Giulio Ferrari *(Italy)*

08:30-09:45 | Calatrava 1

SIS COS-95 - Corneal collagen crosslinking "out of the box"

This Special Interest Symposium will focus on 'out of the box' aspects of corneal collagen crosslinking (CXL). Experts in the field will demonstrate the effect of CXL on corneal angiogenesis with regard to high-risk keratoplasty, and debate on the role of CXL in the treatment of infectious keratitis. Moreover, they will analyse the myths and facts related to CXL in children and present novel applications of artificial intelligence for the prediction of the keratoconus progression and, subsequently, the need of CXL. Finally, the indications, efficacy and clinical outcomes of repeated CXL will be highlighted.

Organizer: **Zisis Gkatzioufas** *(Switzerland)*
Co-organizer: **Francesco Aiello** *(Italy)*

08:30 Cornea on fire: PACK-CXL in the treatment of infectious keratitis
Francesco Aiello *(Italy)*

08:45 CXL in children - Myths and facts
Giuseppe Giannaccare *(Italy)*

09:00 Big data enabled keratoconus care
Ji-Peng Olivia Li *(United Kingdom)*

09:15 CXL in thin corneas
Guillermo Rodriguez Iranzo *(Spain)*

08:30-09:45 | Calatrava 2

SIS LC-101 - Biometry and intraocular lens power calculation today

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

08:30 Acoustic and optical biometry
Oliver Stachs *(Germany)*

08:42 IOL calculation in standard situations
Timo Eppig *(Germany)*

08:54 Pearls and pitfalls in IOL power calculations
Achim Langenbucher *(Germany)*

09:06 Toric lens power calculation
Jaime Aramberri *(Spain)*

09:18 IOL power calculation after corneal refractive surgery
Wiktor Stopyra *(Poland)*

08:30-09:45 | Gaudi 1

RF Rapid Fire 6 - EOVS

Moderators: **Rebekka Heitmar** *(United Kingdom)*, **John Barbur** *(United Kingdom)*

383 S.045 Analysis of the relation between facial asymmetry and users' preference between standard versus customized inset progressive addition lenses
Oscar Garcia Espinilla, Irene Sánchez Pavón, Raúl Martín Herranz *(Spain)*

395 S.046 The use of colour and rapid flicker sensitivity tests for early detection and monitoring of vision changes in diabetes
Megan Vaughan, Sajni Bohra, Emily Patterson, Marisa Rodriguez-Carmona, John Barbur *(United Kingdom)*

445 S.047 Are there any indicative signs in Colour Doppler Imaging of de novo development thyroid orbitopathy after radioiodine treatment
Dorota Walasik-Szemplińska, Grzegorz Kamiński, Iwona Sudoł-Szopińska *(Poland)*

497 S.048 Neurovascular coupling reflex from contralateral stimulation: system setup
João Jordão[1], Hugo Quental[1], Miguel Morgado[1], João Figueira[1], Daniela Castro-Farías[2], Delia Cabrera DeBuc[3], Miguel Castelo-Branco[1], Michel Paques[2], Rui Bernardes[1] *([1]Portugal, [2]France, [3]USA)*

525 S.049 The effects of post-saccadic oscillations on visual processing time
Emsal Llapashtica, John Barbur *(United Kingdom)*

532 S.050 Changes in visual function in long-term type 1 diabetic patients without diabetic retinopathy using full-field electroretinogram
Marta Arias Álvarez, Guisela Fernández-Espinosa, Maria Sopeña-Pinilla, Cristina Tomas-Grasa, Sofia Bielsa Alonso, Ana Boned-Murillo, Inés Vicente Garza, Diego Rodríguez Mena, Elvira Orduna Hospital, Isabel Pinilla *(Spain)*

602 S.051 Relationships between regional retinal sensitivities assesed by microperimetry and their corresponding retinal layer thicknesses in healthy middle-aged subjects
María Puell, Melisa Remis-Gonzalez, Carolina Moreira-Estebaranz, Juan Cedrun-Sanchez *(Spain)*

659 S.052 A comparison of visual electrophysiology measures in optic neuropathy.
Dorothy Thompson, Katrina Prise, Lisa Tucker, Dermot Roche, Sian Handley, Oliver Marmoy *(United Kingdom)*

781 S.053 Sex-related differences in the visual function of an animal model of type 1 diabetes
Sara Oliveira, Elisa Julião Campos, Rosa Fernandes, Rui Bernardes, Paulo Matafome, António Francisco Ambrósio *(Portugal)*

856 S.054 ZOSPy, a python package for ray tracing simulations
Luc Van Vught, Corné Haasjes, Jan-Willem Beenakker *(The Netherlands)*

08:30-09:45 | Gaudi 2

C

IM-51 - Understanding uveitis through imaging

The objective of this course is providing the audience with a useful and practical view of the old and new imaging techniques in uveitis, not only the aid in the diagnosis and monitoring, but also is role on unveiling the pathophysiology of uveitic entities. This course will organize a panel of uveitis and imaging specialists with a substantive experience in uveitis disorders and will present didactic lectures and interactive cases with extensive discussion in order to provide course attendees with the tools and skill set to manage challenging cases that incorporate both retinal and uveitic disease findings.

Organizer: **Ester Carreño Salas** *(Spain)*
Co-organizer: **Alejandro Follonosa** *(Spain)*

08:30 Analising OCT and OCT-A
Ester Carreño Salas *(Spain)*

08:48 Fundus autofluorescence a key for diagnosis and follow-up
Alejandro Follonosa *(Spain)*

09:06 Retinal oximetry in vascular diseases
Martin Sin *(Czeck Republic)*

09:30 No dye, no glory: FFA and ICGA in uveitis
Julio J. Gonzalez-Lopez *(Spain)*

08:30-09:45 | Gaudi 3

SIS

ACB-58 - State-of- the art retinal disease models as a path toward therapies

Cell and animal models for retinal diseases have made significant progress lately toward therapeutic solutions by increasing knowledge of certain pathologies and offering a platform for preclinical testing and therapeutic screening. Human cell models based on induced pluripotent stem cell (iPSC) technology offer a significant advantage for testing therapeutics in human unique genetic background. Zebrafish offer an unprecedented platform for genetic manipulation and in vivo imaging. Rodent models are golden standard for in vivo analyses of underlying pathological processes and testing therapeutic approaches. The aim of this SIS is to provide an overview of currently used models and discuss their limitations, necessity of standardization and share thought about the future steps in their improvement.

Organizer: **Dunja Lukovic** *(Spain)*
Co-organizer: **Soile Nymark** *(Finland)*

08:30 In vitro and in vivo evaluation of genetically corrected RPE cells for autologous cell therapy for hereditary retinal distrophies
Slaven Erceg *(Spain)*

08:45 Cell and animal models of age-related macular degeneration: focus on oxidative stress and protein aggregation
Ali Koskela *(Finland)*

09:00 The importance of having a relevant model system to investigate splicing modulation in the retina: the unforeseen cases of the intronic variants in RPE65 and IMPG2 genes
Irene Vázquez Domínguez *(The Netherlands)*

09:15 Retinal delivery of nanotherapeutics in a model of inherited retinal dystrophy
Regina Rodrigo *(Spain)*

09:30 Live imaging of photoreceptor outer segment phagocytosis in zebrafish
Soile Nymark *(Finland)*

09:45-10:15 | Coffee Break

10:15-11:00 | Poster Session 3

11:00-11:30 | Auditorium 1

PS Special Recognition Lecture

Introduced by **Manuel Vidal Sanz** *(Spain)*

Mitochondria and vision - A life in mitochondria always on the move
Marcela Votruba *(United Kingdom)*

Mitochondrial disease is amongst the most common form of inherited neurological disorder, with a minimum prevalence of 1:5,000 and few if any effective treatments or cures. Mitochondria are highly dynamic organelles undergoing coordinated cycles of fission and fusion, referred as 'mitochondrial dynamics', in order to maintain their shape, distribution and size. Mitochondrial dysfunction is seen in numerous diseases, including rare primary genetic mitochondrial diseases, many affecting the eye and vision, and various common degenerative disorders. Mitochondrial dysfunction is implicated in the ageing process and also contributes to ischaemic cardiac disease and cancer. Mitochondrial dysfunction has been well documented in neurodegenerative diseases, such as amyotrophic lateral sclerosis, Alzheimer's disease, Parkinson's disease, glaucoma and age-related macular degeneration. Consequently, it is now becoming a major target for new therapeutic development. To date, however, there have been few if any successes. The problems faced in addressing mitochondrial dysfunction range from identifying suitable targets to lack of methods that reliably transfect mitochondria. There may be huge potential in taking an advanced therapy medicinal products (ATMPs) approach, developing medicines for human use that are based on genes, tissues or cells. A novel approach in the literature is the transplantation of fully functional mitochondria directly into defective cells. Could this be the more generic solution that would address the diverse range of mitochondrial defects in disease.

11:30-12:45 | Auditorium 1

Saturday
28 October 2023

RF Young Investigators Award Session 1

Moderators: **Juana Gallar** *(Spain)*, **Marcela Votruba** *(United Kingdom)*

851 S.022 Drusen of the retinal pigment epithelium of the parapapillary region
Rahul Jonas, Jost Jonas, Songhomitra Panda-Jonas, Shefali Jonas *(Germany)*

857 S.023 A microbial infection-resistant 3D bioprinted material for corneal stroma regeneration
Gerard Boix Lemonche[1], Essi M. Niemi[1], Georgina Faura Muñoz[1], Hanne Scholz[1], Barbara Skerlavaj[1], Goran Petrovski[1,2] *([1]Norway, [2]Croatia)*

43 S.129 Transcriptomic analyses reveal the molecular mechanisms underlying the ocular surface damage in treated glaucoma patients
Cristina Irigoyen, Javier Moreno Montañes, Elena Carnero, Miguel Naveiras, Miriam de la Puente, Maria Fraga de la Viesca, Jorge Gonzalez Zamora *(Spain)*

413 S.055 Visual acuity testing in preschool children: Freiburg Acuity Test (FrACT) vs LEA Symbols Test
Navid Farassat, Vanessa Jehle, Sven Heinrich, Wolf Lagrèze, Michael Bach *(Germany)*

545 S.130 External testing of an established glaucoma screening AI on a glaucoma clinic population from Finland
Ruben Hemelings[1,2], Leopold Schmetterer[1], Ingeborg Stalmans[2], Anja Tuulonen[3] *([1]Singapore, [2]Belgium, [3]Finland)*

428 S.139 Brain-derived neurotrophic factor alleviates clinical symptoms of experimental autoimmune uveoretinitis and supports retinal regeneration
Miloslav Zloh, Andrea Štofková *(Czech Republic)*

889 F.087 Vitamin D supplementation reduces systemic modulation of oxidative stress and collagen degradation in keratoconus patients
Giuseppe Suanno, Romina Mayra Lasagni Vitar, Philippe Fonteyne, Karl Anders Knutsson, Federico Bertuzzi, Laura Galli, Paolo Rama, Giulio Ferrari *(Italy)*

7 F.088 Meibomian gland dysfunction in people who have been in the refuge for a long time during the hostilities in Ukraine
Liudmyla Ivzhenko, Pavel Bezditko, Yuliia Boieva *(Ukraine)*

11:30-12:45 | Auditorium 1

SIS COS-45 - Management of complications and future perspectives in neurotrophic keratopathy

Neurotrophic keratopathy is a condition caused by decreased corneal sensation and poor corneal healing. It can result to corneal ulceration, infection, corneal perforation and severe loss of vision. The management of complications and future perspectives for treatment is presented.

Organizer: **Zisis Gkatzioufas** *(Switzerland)*
Co-organizer: **Panagiotis Georgoudis** *(United Kingdom)*

11:30 Neurotrophic keratopathy - Complications, management and future perspectives
Panagiotis Georgoudis *(United Kingdom)*

11:48 Treatment of corneal ulcers in neurotrophic keratopathy
Georgios Kontadakis *(Greece)*

12:06 Treating corneal perforation related to neurotrophic keratitis
Mayank Nanavaty *(United Kingdom)*

12:24 Future perspectives in neuropathic keratopathy
Antonio Di Zazzo *(Italy)*

11:30-12:45 | Calatrava 1

SIS COS-86 - ARVO-EVER SIS: innovations in anterior ocular diagnostics and therapeutics

This symposium will provide an overview over latest innovations in anterior ocular segment diagnostics and therapeutics. Stem cell biology and therapeutic potential will be elucidated, anterior ocular segment reconstruction using corneal transplantation and artificial iris following severe ocular trauma demonstrated. Furthermore, the potential of modern biomaterials for corneal replacement will be displayed, the potential of AI-based diagnostics explained.

Organizer: **Thomas Fuchsluger** *(Germany)*
Co-organizer: **Andrzej Grzybowski** *(Poland)*

11:30 Corneal epithelial cell markers and microRNAs as markers of congenital aniridia
Nora Szentmary *(Germany)*

11:45 Chromatic swept-source corneal confocal Microscopy - a breakthrought Innovation?
Oliver Stachs *(Germany)*

12:00 Endothelial renewal after severe anterior segment trauma
Thomas Fuchsluger *(Germany)*

12:15 Artificial Cornea – recent developments
May Griffith *(Canada)*

12:30 Artificial intelligence in cataract and refractive surgery
Andrzej Grzybowski *(Poland)*

11:30-12:45 | Calatrava 2

RF Rapid Fire 7 - G

Moderators: **Barbara Cvenkel** *(Slovenia),* **Maria Dolores Pinazo Duran** *(Spain)*

639 S.124 Isolated versus combined XEN-implant surgery
Maria Victoria Navarro Abellán, Luis Eloy Pérez González, Juan Antonio Sánchez Perea, Manuel Almarcha Menargues, Carmen Miquel López, María De Los Reyes Retamero Sánchez, José Javier García Medina *(Spain)*

673 S.125 Syndromic congenital glaucoma clinical features and thrapeutic results
Hanane Imad, El Harrar Assia, Hamza Alaoui, Ghizlane Daghouj, El Maaloum Loubna, Allali Bouchra, El Kettani Asmaa *(Morocco)*

763 S.126 Analysis of the impact of different schemes of preparation to trabeculectomy on the healing markers using in vitro model of the Tenon fibroblast cultures isolated directly from the patient
Ewa Kosior-Jarecka, Joanna Piłat, Agata Przekora, Dominika Wróbel-Dudzińska, Tomasz Żarnowski *(Poland)*

785 S.127 EyeLife: a prospective glaucoma screening study with double-blind genetic pre-screening conducted within the population-based Lifelines cohort
Nomdo Jansonius, Anna Neustaeter, Ilja Nolte, Harold Snieder *(The Netherlands)*

901 S.128 Deep learning model detects the retinal pigmental epithelium central limit in eyes with peripapillary atrophy
Konstancija Kisonaite, Zhaohua Yu, Per Soderberg *(Sweden)*

11:30-12:45 | Gaudi 1

RF Rapid Fire 8 - PBP

Moderators: **Diego Garcia-Ayuso** *(Spain),* **Francisco Javier Valiente-Soriano** *(Spain)*

201 T.034 Retinal oxygen extraction and hyperemic response in patients with type II diabetes at different stages of non-proliferative diabetic retinopathy
Theresa Lindner[1], Nikolaus Hommer[1], Doreen Schmidl[1], Martin Kallab[1], Andreas Schlatter[1], Kinga Howorka[1], René M. Werkmeister[1], Leopold Schmetterer[2], Gerhard Garhöfer[1] *([1]Austria, [2]Singapore)*

277 T.035 A novel approach for measurement of retinal oxygen extraction based on laser speckle flowgraphy and retinal oximetry
Viktoria Pai[1], Theresa Lindner[1], Patrick Janku[1], Liudmyla Pylypenko[1], Anton Hommer[1], Leopold Schmetterer[2], Doreen Schmidl[1], Gerhard Garhöfer[1] *([1]Austria, [2]Singapore)*

439 T.036 Antioxidant insights of wild olive (acebuche) oil ophthalmic nanoemulsions against arterial hypertension
Álvaro Santana-Garrido, Matilde Durán-Lobato, Alfonso Mate, Lucía Martín-Banderas, Carmen María Vázquez *(Spain)*

617 T.037 Intraocular pressure change during and after core strength isometric exercise
Ines Lanzl, Fidan Aghayeva, Abdelrahman Assaf *(Germany)*

674 T.038 Catapol might protect against retinal ischaemia by anti-oxidation, anti-ischaemia, Wnt pathway inhibition and VEGF downregulation
Howard Wen-Haur Chao, Hsiao-Ming Chao *(United Kingdom)*

801 T.039 Study of the single or combined action of three different neuroprotection strategies in an acute hypertension model in mice
Francisco Javier Valiente-Soriano, Alejandro Gallego Ortega, María Norte Muñoz, Cristobal De Los Rios, Marta Agudo-Barriuso, Manuel Vidal-Sanz *(Spain)*

827 T.040 Proteomic changes in age-related cataract and post-vitrectomy cataract
Christina Karakosta, Martina Samiotaki, Anastasios Bisoukis, Dimitrios Papakonstantinou, Marilita Moschos *(Greece)*

676 T.041 The effect of S-allyl L-cysteine on retinal ischaemia: the role of MCP-1 and PKM2
Windsor Wen-Jin Chao[1,2], Hsiao-Ming Chao[1,3] *([1]United Kingdom, [2]Canada, [3]Taiwan)*

11:30-12:45 | Gaudi 2

SIS EOVS-27 - New insights from visual electrophysiology

Whilst significant advances have been made in ophthalmic imaging, such techniques yield information mainly relating to anatomical structure. Visual electrophysiology, in contrast, permits direct, objective and quantitative functional evaluation of the retina and visual pathway. In this special interest symposium, expert scientists and clinicians will cover the basics of the relevant electrophysiological tests and discuss novel insights relating to genetic and acquired diseases of the retina and visual pathway. The session will be of interest to those already making use of such techniques and those who are keen to learn to adopt these methods to answer pertinent clinical and scientific questions relating to human vision.

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

11:30 Update on the range of visual electrophysiology tests and their application with clinical examples
Anthony G. Robson *(United Kingdom)*

11:48 New insights from paediatric electrophysiology
Dorothy Thompson *(United Kingdom)*

12:06 Visually evoked potentials in neuro-ophthalmology
Gordon Plant *(United Kingdom)*

12:24 New applications and analyses in ERGs
Omar Mahroo *(United Kingdom)*

12:45-13:15 | Auditorium 1

PS **Ophthalmic Recognition Lecture**

Introduced by **Leopold Schmetterer** *(Singapore)*

Functional changes in the myopic retina compromize emmetropization
Frank Schaeffel *(Switzerland)*

During emmetropization, the retina analyzes the focus of the image and generates appropriate biochemical signals to control choroidal thickness and scleral growth. Using commercially available optical low coherence interferometry (the Lenstar LS 900), changes in eye length in the micrometer range can be picked up already after 30 minutes when young human subjects watch movies that were digitally filtered. We found that the emmetropic retina can distinguish real optical positive defocus from simulated/calculated defocus. It triggered choroidal thickening in the first case, and thining in the second. Strikingly, the myopic retina was not responsive and the choroid became thinner in both cases. Longitudinal chromatic aberration (LCA) would be a perfect signal to tell the retina where the focal plane is. We simulated chromatic defocus in our movies. Either the red or the blue plane of the RGB format was spatially filtered to simulate chromatic defocus. When blue was "in focus", eyes became longer, but when red was "in focus" eyes became shorter. Again, myopic eyes did not respond, suggesting that the myopic retina no longer responded to LCA. Taken together, we found that the myopic retina had undergone functional changes such that no growth inhibiting signal was generated. As a consequence, eye growth would become open loop, explaining why myopia does not inhibit itself.

14:15-15:30 | Auditorium 1

RF Young Investigators Award Session 2

Moderators: **Marta Agudo-Barriuso** *(Spain)*, **Oliver Stachs** *(Germany)*

359 T.022 Systemic effects of intracameral epinephrine during cataract surgery
Cecilia Diez-Montero, Javier Montero-Moreno, Raquel Iglesias-Blanco, Maria Eugenia Sanchis, Clara Gonzalez Urueña, Rosario Hernandez-Fernandez, Elisabet Cañibano-Pérez *(Spain)*

405 T.023 Evaluation of pan-epithelial viability in the whole porcine lens
Sylvain Poinard, Louise Coulomb, Oliver Dorado Cortez, Justin Thomas, Zhiguo He, Chantal Perrache, Alice Ganeau, Fabien Forest, Frederic Mascarelli, Philippe Gain, Gilles Thuret *(France)*

542 T.042 Anti-inflammatory and anti-apoptotic activity of a TSPO ligand in slowing retina neurodegeneration in a model of retinitis pigmentosa
Francesca Corsi, Emma Baglini, Elisabetta Barresi, Alessia Galante, Federico Da Settimo Passetti, Sabrina Taliani, Claudia Gargini, Ilaria Piano *(Pisa)*

495 T.154 The inflammatory potential of diet is associated with the risk of age-related eye diseases
Joëlle Vergroesen[1], Eric Thee[1], Tosca de Crom[1], Jessica Kiefte-de Jong[1], Trudy Voortman[1], Caroline Klaver[1,2], Wishal Ramdas[1] *([1]The Netherlands, [2]Switzerland)*

471 F.109 Genetic landscape of inherited retinal dystrophies in a welsh tertiary referral centre
Francis Sanders, Marcela Votruba *(United Kingdom)*

209 F.157 Current status & outcomes of the Welsh national cohort of patients with leber's hereditary optic neuropathy treated with idebenone
Francis W.B. Sanders, Marcela Votruba *(United kingdom)*

703 F.158 Presentations patterns of acute onset binocular diplopia among pediatric population in the emergency department: retrospective analysis and systematic review of the literature
Paula Boned Fustel, Laura Fernández García, M Ángeles Ruth Bort Martí, Honorio Barranco González *(Spain)*

859 S.151 Promising preclinical efficacy of intravitreally administered tafasitamab and anti-Hu CD199 on immunocompetent murine model of primary intraocular lymphoma
Eva Skrlova, Eva Uherkova, Aneta Klimova, Diana Malarikova, Petra Svozilkova, Petr Matous, Vit Herynek, Tomas Kucera, Pavel Klener, Jarmila Heissigerova *(Czech Republic)*

14:15-15:30 | Auditorium 2

SIS COS-63 - Pediatric and adult ocular surface inflammation: basic mechanisms and clinical manifestations

Ocular surface inflammation is a very common sign in most corneal and ocular surface diseases. However, the role of aging, and the methods use to quantify ocular surface inflammation are still object of extensive debate. This symposium will review emerging evidence of how age can impact the inflammatory process. Moreover, we will discuss the clinical manifestations of sterile/infectious inflammation in pediatric congenital diseases. Finally, novel ways of staging ocular surface inflammation and neovascularization will be reviewed.

Organizer: **Giulio Ferrari** *(Italy)*
Co-organizer: **Dominique Bremond-Gignac** *(France)*

14:15 Ocular surface inflammation in congenital eye diseases
Dominique Bremond-Gignac *(France)*

14:30 Basic mechanisms and clinical implications of ocular surface inflammation
Giulio Ferrari *(Italy)*

14:45 Staging corneal neovascularization to guide treatment
Vito Romano *(Brescia)*

15:00 Virus-induced ocular surface inflammation
Antoine Rousseau *(France)*

15:15 Non infectious ocular surface inflammation: pediatric GVHD
Huban Atilla *(Turkey)*

14:15-15:30 | Calatrava 1

SIS COS-84 - Updates on corneal restoration technologies

We aim to provide a snapshot of several latest technological developments for stimulating corneal regeneration and restoring function. COVID-19 has irreversibly changed many things, including how we need technologies that are simple to deliver and aimed at reaching the masses. COVID has also emphasized the need to democratize both knowledge and medical technologies. This session, co-hosted by Christopher Liu and May Griffith, aims to present a series of connected talks by leading experts in different areas. Christopher Liu will start the session by speaking about the "Needs for new corneal restoration technologies in a post-COVID world." May Griffith follows with by discussing "Synthetic solutions for re-growing human corneas ."For a world of mounting problems with antibiotic-resistant bacteria, Thomas Fuchsluger will present "Cold plasma to treat therapy-refractive corneal ulcerations ."For treating viral infections, Rimvydas will speak on "Cationic human defence peptides and cornea HSV-1 infections: results of a rabbit study". The session will be rounded off with Che Connon presenting "Novel alternatives to stem cell transplantation for limbal stem cell disorders", where he will be focussing on his biomechanical modulation therapy.

Organizer: **May Griffith** *(Canada)*
Co-organizer: **Christopher Liu** *(United Kingdom)*

14:15 Needs for new corneal restoration technologies in a post-COVID world
Christopher Liu *(United Kingdom)*

14:30 Synthetic solutions for re-growing human corneas
May Griffith *(Canada)*

14:45 Cold plasma to treat therapy-refractive corneal ulcerations
Thomas Fuchsluger *(Germany)*

15:00 Cationic human defence peptides and cornea HSV-1 infections: results of a rabbit study
Rimvydas Asoklis *(Lithuania)*

15:15 Biomechanical modulation therapy: a novel alternative to stem cell transplantation for limbal stem cell disorders
Che Connon *(United Kingdom)*

14:15-15:30 | Calatrava 2

SIS COS-99 - Advances and challenges in contact lenses technology

The opportunities from the front of the eye are endless. They are not restricted to the treatment of diseases of the anterior of the eye. Actually, the development of topical strategies to treat retinal diseases has been pursued as an attractive solution. Furthermore, the eye contains critical physiological information (e.g., intraocular pressure) as well as a library of fingerprint biomarkers (e.g., glucose). Contact lenses have been developed for noninvasive and continuous sensing and monitoring of various essential parameters, as well as for drug delivery to treat ocular diseases. The advances in nanotechnology and electronics are powering the functions of contact lenses and will open further opportunities for unique uses of contact lenses. The global market size of contact lenses is estimated to expand during this decade. In this SIS, researchers, clinicians, and industry will discuss the advances and challenges that will shape the future of contact lenses.

Organizer: **Elisa Julião Campos** *(Portugal)*
Co-organizer: **Andreia Rosa** *(Portugal)*

14:15 Drug-delivery contact lenses
Ana Paula Serro *(Portugal)*

14:33 A nanotechnology-based solution for epi-on corneal cross-linking
Rita Pais *(Portugal)*

14:51 Pharmacokinetics and contact lenses: drug release, delivery and fate
Eva Maria del Amo *(Finland)*

15:09 Contact lens-related problems and complications
Celso Costa *(Portugal)*

14:15-15:30 | Gaudi 1

RF Rapid Fire 9 - MBGE

Moderator: **Ales Cvekl** *(USA)*, **Christina Zeitz** *(France)*

238 F.102 Transcriptional profilling to identify the inhibitor effect of trehalose as an alternative natural therapeutic agent on pterygium cells
Uğur Yılmaz, Yasin Durkal, Onur Tokgün, Kubilay İnci *(Turkey)*

351 F.104 Effect of melatonin-induced exosomes on proregenerative and antifibrotic pathways involved in corneal scarring
Burcugül Altuğ Tasa, Merve Nur Soykan, Ayla Eker Sarıboyacı, Onur Ozalp, Eray Atalay *(Turkey)*

607 F.105 The miRNA-mRNA interactome of human trabecular meshwork cells treated with TGF- beta1
Anton Roodnat, Breedge Callaghan, Chelsey Doyle, Sarah Atkinson, Colin Willoughby *(United Kingdom)*

666 F.106 Kruppel-like factor 5 (KLF5) as a genetic factor associated with the etiopathogenesis of keratoconus
Uxía Regueiro, Yaiza Pastoriza, Maite López-López, Wouter Venema, Isabel Lema, Jonas Kuiper, Robert Wisse *(Spain)*

802 F.107 Towards the preclinical diagnosis of diabetic retinopathy and diabetic macular oedema using tear samples
Víctor Alegre Ituarte, Irene Andrés-Blasco, Alex Gallego-Martínez, Ricardo Casaroli, Salvatore Di Lauro, David Galarreta-Mira, Vicente Zanón-Moreno, Maria Dolores Pinazo-Duran *(Spain)*

841 F.108 Serum microRNAs as biomarkers associated with the course of diabetic macular edema
Emanuela Aragona, Alessandro Arrigo, M'Hammed Aguennouz, Pasquale Aragona, Francesco Bandello *(Italy)*

14:15-15:30 | Gaudi 2

JM EOVS-88 - Anterior-segment transparency and loss: optics, characterization, and correction

Vision as well as retinal imagery is dependent upon the transparency of intervening ocular media, most notably the cornea and crystalline lens (anterior segment), which deteriorates with age. Extreme loss of such transparency, when scattering of light is further increased as a result of infections, pathology, trauma or surgery, also remains a leading cause of blindness worldwide. However, means to assess anterior-segment transparency are limited and in current ophthalmology practice usually involve a subjective and qualitatively observation of opacities by means of slit-lamp biomicroscopy. This SIS will cover the optical principles of why the cornea is transparency. It will also give an overview of the development of objective means to quantify corneal and crystalline lens transparency. The SIS will conclude with ongoing work towards enabling compensation for loss of crystalline lens transparency and a panel discussion.

Organizer: **Kristina Irsch** *(France)*
Co-organizer: **Ireneusz Grulkowski** *(Poland)*

14:15 Optics and quantitative assessment of corneal transparency
Karsten Plamann *(France)*

14:30 Objective and independent measurement of scattering caused by the cornea and crystalline lens
Meritxell Vilaseca *(Spain)*

14:45 Quantitative analysis of crystalline lens and vitreous opacities
Ireneusz Grulkowski *(Poland)*

15:00 Towards optical correction of cataract opacities
Pablo Artal *(Spain)*

15:15 Panel discussion
Kristina Irsch *(France)*

14:15-15:30 | Gaudi 3

SIS NSPH-92 - A life devoted to ophthalmology

The session will provide a fascinating travel along the History. We will learn about the cataract operation in Mexico, during XVI-XVIII centuries; Dorothy Tiffany Burlingham, who directed the Research Group on the Study of Blind Children at the Hampstead Clinic in London, during the 1960s and 70s; the Spanish ophthalmologist Ramón Castroviejo, who dedicated his life to corneal transplantation; Waclaw Szuniewicz, the Polish missionary-priest ophthalmologist pioneered refractive surgical procedures at Yale University although they were started initially in China; Ali Asghar Khodadoust, an Iranian eye surgeon specializing in corneal transplantation, who worked at different eye clinics in the U.S., and in whose honor the Khodadoust rejection line is named.

Organizer: **Andrzej Grzybowski** *(Poland)*
Co-organizer: **Francisco Javier Ascaso** *(Spain)*

14:15 Cataract operation in Mexico, during XVI-XVIII centuries
Rolando Neri-Vela *(Mexico)*

14:30 Dorothy Tiffany Burlingham and the Psychology of the Blind Child
Stephen Schwartz *(USA)*

14:45 Ramón Castroviejo (1904-1987): the father of the modern corneal transplantation
Francisco Javier Ascaso *(Spain)*

15:00 Father Waclaw Szuniewicz: unknown pioneer of refractive surgery
Andrzej Grzybowski *(Poland)*

15:15 Professor Khodadoust and his sign
Seyed Ghazi-Nouri *(United Kingdom)*

16:00-17:15 | Auditorium 1

FP Free Paper Session 3

Moderator: **Jarmila Heissegerova** *(Czech Republic)*

114 Development and validation of a new colour vision screener: a multi-centre study
Benjamin Evans, Marisa Rodríguez-Carmona, Emsal Llapashtica, John Barbur *(United Kingdom)*

588 Sitagliptin, an anti-diabetic drug, inhibits the pro-inflammatory microglia reactivity via dipeptidyl peptidase-4 (DPP4)
Hélène Léger, Cristiana Leote, Lucia Bufano, Raquel Boia, Ana Raquel Santiago, Rosa Fernandes, António Francisco Ambrósio *(Portugal)*

697 PINK1-mitophagy activator (PA-01) overcomes mitochondrial hyperfusion conferring retinal neuroprotection in type-1 diabetes
Aidan Anderson, Nada Alfahad, Dulani Mudiyanselage, Kaouthar Bouzinab, Paula Rudzinska, Heather Wood, Ian G. Ganley, Saaeha Rauz, Tim M Curtis, Graham Wallace, Jose M. Romero *(United Kingdom)*

699 Are red/green colour vision deficient individuals at altered risk of myopia?
Gareth Lingham[1,2], Matilda Biba[1], Siofra Harrington[1], David Mackey[2], James Loughman[1] *([1]Ireland, [2]Australia)*

760 Optimising diagnostic success for vitreoretinal lymphoma
Toni Saba, Channelle Succar, Michele Madigan, Svetlana Cherepanoff, Adrian Fung, Alex Hunyor, William Sewell *(Australia)*

15:30-16:00 | Coffee Break

16:00-17:15 | Auditorium 2

SIS COS-34 - Novel insights into ocular graft versus host disease

Allogenic stem cell transplantation (allo-SCT) is a potentially curative form of treatment for a range of haematological disorders. However, the most prevalent and serious complication after allo-SCT, graft-versus-host disease (GvHD) affects 25–70% of recipients and remains a major cause of morbidity and mortality. Ocular manifestations of chronic GvHD develop in 30–60% of patients after allo-SCT. The pathogenesis of the disease is multifactorial and incompletely understood, but it is thought to be due to a complex immune mediated interaction between the donor T lymphocytes and the host histocompatibility antigens. This leads to a destructive cycle of chronic inflammation and fibrosis on the ocular surface and the surrounding adnexa, leading to dry eye disease which is considered a hallmark of the condition. We have investigated the inflammatory cytokine and microRNA expression on the ocular surface of patients with chronic ocular GvHD, taking an innovative approach to expanding our understanding of the pathobiology of GvHD, as well as identifying potential biomarkers of diagnostic, prognostic and therapeutic value. In addition, we will report on the most sight threatening aspects of ocular GvHD, namely corneal complications and cicatrising conjunctivitis, focusing on alterations in meibomian glands, tear production, tear film metrics, corneal epithelial/sub-basal nerve changes, and conjunctival subepithelial fibrosis.

Organizer: **Conor Murphy** *(Ireland)*
Co-organizer: **Giuseppe Giannaccare** *(Italy)*

16:00 Alterations in clinical parameters in cicatrising conjunctivitis secondary to GvHD
Giulia Coco *(Italy)*

16:18 Corneal complications of GvHD
Giuseppe Giannaccare *(Italy)*

16:36 Ocular surface expression of inflammatory cytokines in GvHD and their association with disease development and clinical manifestations
Conor Murphy *(Ireland)*

16:54 Ocular surface MicroRNA associated with chronic ocular graft versus host disease
Emily Greenan *(Ireland)*

16:00-17:15 | Calatrava 1

JM Young Ophthalmology and Vision Researchers Session

This year for the EVER YOs session we are going to talk about important things to keep in mind when starting a doctoral thesis and the importance of mentoring. We will also propose the creation of a youth multidisciplinary EVER committee to carry out different activities and talk about topics of interest. We invite you to come and actively participate in the YOs session!

Organizer: **Pilar ROJAS LOZANO** *(Spain)*

16:00 How to start a doctoral thesis / what to do after a doctoral thesis
Pedro de la Villa *(Spain)*

16:15 Mentorship and the research training experience
Jose Carlos Pastor Jimeno *(Spain)*

16:30 Panel discussion on our PhD and postdoctoral experience
Elena Salobrar-García *(Spain)*, **Gordon Plant** *(United Kingdom)*

17:00 Young researchers committee proposal. Voting next talks
Pilar ROJAS LOZANO *(Spain)*

16:00-17:15 | Calatrava 2

SIS COS-61 - Artificial intelligence and its potential for the diagnosis of ocular surface/corneal diseases

Artificial intelligence (AI) is emerging as a valuable tool for the diagnosis and treatment of ocular diseases. While most applications are now being developed for retinal disorders, AI role in the diagnosis of anterior segment diseases is emerging. An overview of AI uses in in these setting will be presented. Moreover, the potential of AI in the diagnosis of in vivo confocal images and its applications for the diagnosis of keratoconus will be discussed in this SIS.

Organizer: **Giulio Ferrari** *(Italy)*
Co-organizer: **Zisis Gkatzioufas** *(Switzerland)*

16:00 Deep learning in early keratoconus/corneal ectasia
Benjamin Fassbind *(Switzerland)*

16:25 In vivo confocal microscopy of the cornea: state of the art and the potential of artificial intelligence
Giulio Ferrari *(Italy)*

16:50 The role of deep learning in the diagnosis of ocular diseases
Stefano Ghidoni *(Italy)*

16:00-17:15 | Gaudi 1

RF Rapid Fire 10 - RV

Moderators: **Jost Jonas** *(Germany)*, **Ines Lopez-Cuenca** *(Spain)*

197 T.146 Hyperreflective material boundary remodeling: A new morphological biomarker of good functional outcomes in neovascular age-related macular degeneration
Siqing Yu[1], Isabel Bachmeier[1], Jules Hernandez-Sanchez[2], Beatriz Armendariz[1], Andreas Ebneter[1], Daniel Pauleikhoff[3], Usha Chakravarthy[2], Sascha Fauser[1] *([1]Switzerland, [2]United Kingdom, [3]Germany)*

314 T.147 Swedish version of the Massof Activity Inventory to measure vision-related activity difficulties amongst patients with nAMD
Karthikeyan Baskaran, Ida Nilsson, Klara Ringbäck, Michaela Ternehäll, Cecilia Svanfeldt, Jeanette Melin, Camilla Mohlin, Antonio Filipe Macedo *(Sweden)*

362 T.148 Ruthenium brachytherapie and sandwich therapy for medium sized uveal melanomas
Ha-Vy Do, Celine Czapla, Heike Vogel, Guido Hildebrandt, Rudolf Guthoff, Thomas Fuchsluger, Claudia Brockmann *(Germany)*

373 T.149 Enhanced choroidal thickness, total choroidal area and choroidal vascularity index from deep-learning generated OCT images
Valentina Bellemo, Ankit Kumar, Damon Wong, Jacqueline Chua, Xinyu Liu, Xinxing Xu, Yong Liu,

500 T.151 Targeted fluorescence imaging using bevacizumab-800CW within neovascular Age-related Macular Degeneration (AMD) patients to evaluate the up-regulation of Vascular Endothelial Growth Factor (VEGF-A) (preliminary results)
Pia Volkmer, Iris Schmidt, Kim Westra, Janine Polman, M. Stefan Ouwerkerk, Liberata Uwantege, Renée Bolhuis, Rogier Muskens, E. Angela Huiskamp, Wouter Nagengast *(The Netherlands)*

809 T.152 Choriocapillaris, photoreceptor and inner retinal layers in spatial relationship to parapapillary alpha, beta, gamma, and delta zone
Jost Jonas, Rahul Jonas, Shefali Jonas, Songhomitra Panda-Jonas *(Germany)*

40 T.153 Geographic Atrophy (GA) secondary to AMD: Online medical education can significantly improve ophthalmologists' knowledge and confidence on evidence based guidance for patient management
Siggi Trier[1], Kate Carpenter[1], Karen Reid[1], Paolo Lanzetta[2], Ursula Schmidt-Erfurth[3], Laurent Kodijkian[4]
([1]USA, [2]Italy, [3]Austria, [4]France)

16:00-17:15 | Gaudi 2

RF Rapid Fire 11 - IM / PO

Moderators: **Jan-Willem Beenakker** *(The Netherlands)*, **Ester Carreño Salas** *(Spain)*

IM

155 S.134 Synergistic effect of mesenchymal stem cells and silver nanoparticles in the treatment of retinal degenerative diseases
Kateřina Palacká, Barbora Hermankova, Eliska Javorkova *(Czech Republic)*

269 S.135 Kinetics of infection and local immune response in a model of Chlamydia trachomatis conjunctival infection
Elodie Paulet, Mathilde Galhaut, Vanessa Contreras, Roger Le Grand, Marc Labetoulle, Antoine Rousseau *(France)*

457 S.136 HAP1 cell utilization for accurate interpretation of germline BAP1 variants
Pauliina Repo, Joni Turunen, Tero Kivelä *(Finland)*

656 S.137 Ocular manifestations of juvenile lupus erethymatosus - A 2023 update
Anna Nikolaidou[1], Christos Frantzidis[2] *([1]Greece, [2]United Kingdom)*

707 S.138 Effects of primed adipose mesenchymal stem cell-derived exosomes on immunomodulation in Behcet uveitis
Merve Gözel, Ayse Dilara Aydemir, Humeyra Nur Kaleli, Zehra Canbulat, Ümit Yaşar Güleser, Cem Kesim, Billur Sezgin Kızılok, Afsun Sahin, Didar Uçar, Gülen Hatemi, Murat Hasanreisoğlu *(Turkey)*

PO

787 S.149 Mapping of fundus photography to 3D imaging for ocular radiotherapy
Corne Haasjes, Lennart Pors, Jan-Willem Beenakker *(The Netherlands)*

862 S.150 Intravitreal application of stem cells and their products does not ameliorate experimental autoimmune uveitis
Eva Skrlova, Eva Uherkova, Katerina Palacka, Barbora Hermankova, Vladimir Holan, Jarmila Heissigerová *(Czech Republic)*

17:15-17:45 | Prize Award Ceremony and Closing Remarks

17:45-18:15 | Farewell Reception

Poster Session 1

Moderators: **Marcelino Aviles-Trigueros** *(Spain)*, **Caridad Galindo-Romero** *(Spain)*, **Elena Salobrar Garcia** *(Spain)*

16:00-16:45

POS Poster Session LC

110 T.001 Comparison of short-term clinical outcomes between sutured scleral fixation and modified yamane sutureless scleral fixation
TaeHwan Kim, Seungyoon Noh, Yoon Hyung Kwon *(South Korea)*

124 T.002 The effect of zinc on the stiffness of chicken lenses
Shilpa Gorla, Vivian Choh *(Canada)*

276 T.003 The prevalence and associated risk factors of age-related cataract among people aged 50 years and older in Gegharkunik province of Armenia
Aida Giloyan, Tsovinar Harutyunyan, Varduhi Petrosyan *(Armenia)*

306 T.004 Direct measurement of the ciliary sulcus diameter using optical coherence tomography - inter-rater variability
Timo Eppig[1], Manuel Seer[1], Antonio Martinez Abad[2], Virgilio Galvis[3], Alejandro Tello[3], Saskia Schütz[1], Michiel Rombach[4], Jorge L. Alió[1,2] *([1]Germany, [2]Spain, [3]The Netherlands)*

330 T.005 Investigation of changes in socio-demographic and clinical factors related to quality of life in patients undergoing phacoemulsification
Evgenia Kontou, Georgios Smoustopoulos, George Bontzos, Alexandros Papadopoulos, Panagiotis Sgouros, Tina Xirou *(Greece)*

334 T.006 Clinical aspects and therapeutic features of irvin gass syndrom (about 6 eyes)
Lamiaa Ajdour, Elharrar Assia, Hanane Imad, Chahir Rokaya, Daghouj Ghizlane, Allali Bouchra, Elmaaloum Loubna, Elkettani Asmaa *(Morocco)*

364 T.007 Thickness of the crystalline lens does not depend on cataract formation
Alberto Lopez-de la Rosa, Cecilia Diez-Montero, Elena Martínez-Plaza, Alberto López-Miguel, Miguel J. Maldonado *(Spain)*

466 T.008 The outcome of cataract surgery in pediatric uveitis
Naoual Mtalai, Daghouj Ghizlane, Roukaya Chahir, Elmaaloum Loubna, Allali Bouchra, Elkettani Asmaa *(Morocco)*

533 T.009 Interchangeability of bilateral anterior chamber depth in intraocular lens power calculation and its application in unilateral lens subluxation
Wei Lou, Ziang Chen, Yang Huang, Haiying Jin *(China)*

769 T.010 Analysis of the effects of FineVision Micro F and AcySof IQ PanOptix intraocular lenses on visual quality under different lighting condition.
Inas Baoud Ould Haddi, Dayan Flores Cervantes, Emilio Dorronzoro Ramírez, Vanesa Blázquez Sánchez, Cristina Bonnin Arias *(Spain)*

Thursday
26 October 2023

771	T.011	Comparison of quality of life with two trifocal intraocular lenses under different lighting conditions **Inas Baoud Ould Haddi, Dayan Flores Cervantes, Emilio Dorronzoro Ramírez, Vanesa Blázquez Sánchez, Cristina Bonnin Arias** *(Spain)*
780	T.012	Difficulty of biometric images and calculation of intraocular lens in a patient with Sjogren's syndrome **Sara Mesa Mesa, Juan Cadavid Usuga, Luis Zapata** *(Colombia)*
799	T.013	Femtosecond laser iridorexis during cataract surgery **Dayan Flores Cervantes, Emilio Dorronzoro Ramírez, Inas Baoud Ould Haddi, Cristina Bonnin Arias, Vanesa Blázquez Sánchez** *(Spain)*
956	T.014	Identification of new antioxidant drugs in a human in vitro model of ageing-associated cataract **Estefania Caballano Infantes, Mehdi Moshtaghion, Pablo Peñalver, Juan Carlos Morales, Francisco Diaz-Corrales** *(Spain)*
115 *rf*	T.015	Risk factors associated with visual performance of enhanced monofocal intraocular lens **Da Ran Kim** *(South Korea)*
247 *rf*	T.016	Epidemiological and clinical profile of lens ectopias in children: about 126 eyes **Roukaya Chahir, Daghouj Ghizlane, Loubna Elmaaloum, Bouchra Allali, Asmaa Elkettani** *(Morocco)*
537 *rf*	T.017	Prospective clinical study of a new intraocular lens with extended depth of focus: ISOPURE, 1 year follow up **Dounia Bradly, Salik Dany, Motulsky Elie** *(Belgium)*
664 *rf*	T.018	Changes in visual acuity and quality of life following lens surgery in Alport syndrome **Aida Kafai Golahmadi, Kirsty Clarke, Edward Bloch, Zaid Shalchi, Manoharan Shunmugam, Helen Storey, Frances Flinter, Moin Mohamed, Omar Mahroo** *(United Kingdom)*
774 *rf*	T.019	Extended depth of focus versus trifocal for intraocular lens implantation: an updated systematic review and meta-analysis **Mohammad Karam[1,2], Nahlaa AlKhowaiter[3], Ali Alkhabbaz[1], Ahmad AlDubaikhi[3], Abdulmalik Alsaif[3], Eiman Shareef[1], Rand Alazaz[3], Abdulaziz Alotaibi[1], Mona Koaik[2], Samir Jabbour[2,4]** *([1]Kuwait, [2]Canada, [3]Saudi Arabia, [4]USA)*
807 *rf*	T.020	Unbalanced redox status network as an early pathological even in congenital cataracts **Eloy Bejarano[1], Elizabeth A. Whitcomb[2], Rebecca L. Pfeiffer[2], Kristie L. Rose[2], José Antonio Rodríguez-Navarro[1], Alejandro Ponce-Mora[1], Antolin Cantó[1], Inmaculada Almansa[1], Kevin L. Schey[2], Bryan W. Jones[2], Allen Taylor[2], Sheldon Rowan[2]** *([1]Spain, [2]USA)*
834 *rf*	T.021	Changes in peripheral visual field perception after intraocular lens implantation **Luc Van Vught, Gregorius Luyten, Jan-Willem Beenakker** *(The Netherlands)*
359	T.022	Systemic effects of intracameral epinephrine during cataract surgery **Cecilia Diez-Montero, Javier Montero-Moreno, Raquel Iglesias-Blanco, Maria Eugenia Sanchis, Clara Gonzalez Urueña, Rosario Hernandez-Fernandez, Elisabet Cañibano-Pérez** *(Spain)*
405	T.023	Evaluation of pan-epithelial viability in the whole porcine lens **Sylvain Poinard, Louise Coulomb, Oliver Dorado Cortez, Justin Thomas, Zhiguo He, Chantal Perrache, Alice Ganeau, Fabien Forest, Frederic Mascarelli, Philippe Gain, Gilles Thuret** *(France)*

16:00-16:45

POS Poster Session PBP

212 T.024 Tolerability of silica microparticle gels as drug delivery vehicles
Aleksandra Poluianova, Alexandra Robciuc, Jukka Moilanen, Kai Kaarniranta, Lasse Leino, Ville Pollari, Frederic Dargelas, Marcus Reay *(Finland)*

347 T.025 Preliminary study on developing ocular formulations for natural antioxidants to prevent long- term complications associated with high myopia
Phuong Linh Ta, Lucia Bernat Just, Vicente Rodilla Alarma, Alicia López Castellano, Francisco Bosch Morell *(Spain)*

438 T.026 Extracellular vesicles mirror the beneficial effect of wild olive (acebuche) oil in hypertensive-like retinal pigment epithelial cells
Álvaro Santana-Garrido[1,2], Claudia Reyes Goya[1], Pablo Espinosa-Martín[1], Helder Andre[2], Carmen María Vázquez[1,2], Alfonso Mate[1] *([1]Spain, [2]Sweden)*

450 T.027 Hydroxytyrosol as a potential ocular antioxidant
Lucia Bernat Just , Phuong Linh Ta, Adrián Alambiaga-Caravaca, Vicente Rodilla Alarma, Francisco Bosch Morell, Alicia López Castellano *(Spain)*

767 T.028 Retinal neurotoxicity induced by inhalation of isopropyl nitrite
Víctor David Ayala Rivera *(Spain)*

803 T.029 Characterization of the whole advillin expressing retinal ganglion cell population in the rodent retina
Manuel Salinas-Navarro, José Antonio Gómez Sánchez, Jose M. Bernal-Garro, Manuel Vidal-Sanz, Marcelino Avilés-Trigueros *(Spain)*

813 T.030 Monocytic involvement in the neuroinflammatory response after retinal injury
Marcelino Avilés-Trigueros[1], Irene López-Olivares[1], Elsa Albero-Ros[1], Samuel David[2], Manuel Vidal-Sanz[1] *([1]Spain, [2]Canada)*

861 T.031 Taurine influences the phagocytic function of retinal pigment epithelium cells in healthy and dystrophic animals
Ana Martínez Vacas, Francisco Javier Valiente-Soriano, Manuel Vidal-Sanz, Maria Paz Villegas Perez, Diego García-Ayuso *(Spain)*

872 T.032 High-intensity physical activity seems to be associated to a higher basal parasympathetic activity and to a reduced OSDI score in young adults
María Serramito Blanco, Carlos Carpena Torres, Gonzalo Carracedo, Adolfo Aracil-Marco *(Spain)*

873 T.033 Pre-race tear volume and dry-eye symptomatology in recreational middle-aged male half-marathoners: a pilot study
María Serramito Blanco, Julia Bodas Romero, Assumpta Peral, Gonzalo Carracedo, Adolfo Aracil-Marco *(Spain)*

201 T.034 Retinal oxygen extraction and hyperemic response in patients with type II diabetes at different stages of non-proliferative diabetic retinopathy
rf
Theresa Lindner[1], Nikolaus Hommer[1], Doreen Schmidl[1], Martin Kallab[1], Andreas Schlatter[1], Kinga Howorka[1], René M. Werkmeister[1], Leopold Schmetterer[2], Gerhard Garhöfer[1] *([1]Austria, [2]Singapore)*

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277 T.035 A novel approach for measurement of retinal oxygen extraction based on laser speckle flowgraphy and retinal oximetry
rf
Viktoria Pai[1], Theresa Lindner[1], Patrick Janku[1], Liudmyla Pylypenko[1], Anton Hommer[1], Leopold Schmetterer[2], Doreen Schmidl[1], Gerhard Garhöfer[1] *([1]Austria, [2]Singapore)*

439 T.036 Antioxidant insights of wild olive (acebuche) oil ophthalmic nanoemulsions against arterial hypertension
rf
Álvaro Santana-Garrido, Matilde Durán-Lobato, Alfonso Mate, Lucía Martín-Banderas, Carmen María Vázquez *(Spain)*

617 T.037 Intraocular pressure change during and after core strength isometric exercise
rf
Ines Lanzl, Fidan Aghayeva, Abdelrahman Assaf *(Germany)*

674 T.038 Catapol might protect against retinal ischaemia by anti-oxidation, anti-ischaemia, Wnt pathway inhibition and VEGF downregulation
rf
Howard Wen-Haur Chao, Hsiao-Ming Chao *(United Kingdom)*

801 T.039 Study of the single or combined action of three different neuroprotection strategies in an acute hypertension model in mice
rf
Francisco Javier Valiente-Soriano, Alejandro Gallego Ortega, María Norte Muñoz, Cristobal De Los Rios, Marta Agudo-Barriuso, Manuel Vidal-Sanz *(Spain)*

827 T.040 Proteomic changes in age-related cataract and post-vitrectomy cataract
rf
Christina Karakosta, Martina Samiotaki, Anastasios Bisoukis, Dimitrios Papakonstantinou, Marilita Moschos *(Greece)*

676 T.041 The effect of S-allyl L-cysteine on retinal ischaemia: the role of MCP-1 and PKM2
rf
Windsor Wen-Jin Chao[1,2], Hsiao-Ming Chao[1,3] *([1]United Kingdom, [2]Canada, [3]Taiwan)*

542 T.042 Anti-inflammatory and anti-apoptotic activity of a TSPO ligand in slowing retina neurodegeneration in a model of retinitis pigmentosa
Francesca Corsi, Emma Baglini, Elisabetta Barresi, Alessia Galante, Federico Da Settimo Passetti, Sabrina Taliani, Claudia Gargini, Ilaria Piano *(Pisa)*

16:00-16:45

POS **Poster Session RV**

11 T.043 Retinal microcirculation alterations in rheumatoid arthritis patients compared to healty volunteers and their correlation to the disease activity and duration of disease
Abdelrahman Assaf, Roman Günthner, Matthias Braunisch, Quirin Bachmann, Konstantin Kotliar, Christoph Schmaderer, Philipp Moog *(Germany)*

14 T.044 Intravitreal bevacizumab with grid photocoagulation for recurrent macular edema secondary to retinal vein occlusion
Asaad Ghanem *(Egypt)*

26 T.045 Difference in lesion reactivation between pure type 2 and mixed type 1 and 2 macular neovascularization and its influence on long-term treatment outcomes
Chulgu Kim *(South Korea)*

28 T.046 Comparative effect of intravitreal faricimab vs. aflibercept in a patient with diabetic macular edema
Javier Montero-Moreno, Cecilia Diez-Montero, Maria Eugenia Sanchis-Merino, Rosario Hernandez-Fernandez, Elisabeth Cañibano-Perez *(Spain)*

35 T.047 Safety and efficacy of brolucizumab in Indian population
Vivek Velumani, Amjad Salman, Pragya Parmar, Reshika A S *(India)*

48 T.048 SR1375: Phase 1 results of a novel, orally administered lipoprotein-associated phospholipase A2 inhibitor targeting diabetic macular edema
Yanan Hu, Xuechun Gong, Shiping Ma, Ruxing Bai, Pan Wang, Hong Li, Mingyue Wu, Yang Li, Fei Wang, Shuai Li, Kai Wu *(China)*

50 T.049 Ganglion cell loss in central serous chorioretinopathy
Maciej Gawęcki, Andrzej Grzybowski *(Poland)*

51 T.050 Biometric risk factors for central serous chorioretinopathy
Maciej Gawęcki, Andrzej Grzybowski *(Poland)*

53 T.051 Two different visual stimuli that cause axial eye shortening and choroidal thickening have no additive effect
Lea Ingrassia, Barbara Swiatczak, Frank Schaeffel *(Switzerland)*

69 T.052 Choroidal neovascularization as first sign of best's vitelliform dystrophy in a child
Javier Montero-Moreno, Cecilia Diez-Montero, Maria Eugenia Sanchis-Merino, Rosario Hernandez-Fernandez, Elisabeth Cañibano-Perez *(Spain)*

77 T.053 Acute zonal occult outer retinopathy as a luetic ocular manifestation
Manuel Morales Sanchez, Mª Mar Esteban Ortega, Carmen Isabel García Lozano, Eduardo Conesa Hernandez, Ines Artola, Sergio Pernas *(Spain)*

89 T.054 Optimizing criterion to reduce the variability between observers in the delimitation of the foveal avascular zone in diabetic patients
Guisela Fernández-Espinosa, Carlos Ruíz-Tabuenca2, Elvira Orduna-Hospital, María Arcas-Carbonell, Ana Sánchez-Cano, Isabel Pinilla, Francisco J. Salgado-Remacha *(Spain)*

133 T.055 Association between localized retinal nerve fiber layer defects and metabolic syndrome in nonglaucomatous eyes: a propensity score-matched analysis
Youn hea Jung, Kyoung Ohn, Jung Il Moon *(South Korea)*

191 T.056 Retinal vessel analysis in vascular occlusions of the eye
Jana Schätzel, Jakob Eichhorn, Oliver Stachs, Thomas Fuchsluger *(Germany)*

206 T.057 Visual and anatomical outcomes following intravitreal treatment of macular oedema secondary to retinal vein occlusion
Emmanuel Tasos, Pavel Sharma, Janvi Karia, Dheyaedeen Menem, Michail Katzakis, Evangelos Minos *(United Kingdom)*

216 T.058 Association between chromatic sensitivity and peripapillary retinal nerve fiber layer thickness in healthy eyes
Mº Jesús Pérez-Carrasco, Jesús Carballo-Álvarez, María Puell *(Spain)*

218 T.059 Long-term response to idebenone treatment in a patient with advanced leber hereditary optic neuropathy
Stamatina Kabanarou, Chrysoula Sgourou, Nikolaos Bitzanakis, Georgios Bontzos, Ilias Gkizis, Vasiliki Xirou, Tina Xirou *(Greece)*

242 T.060 Secondary full thickness macular holes following vitrectomy for rhegmatogenous retinal detachment: clinical data, surgical outcome and prognosis
Verena Schöneberger, Rahul Jonas, Leonie Menghesha, Claudia Brockmann, Tim Krohne, Claus Cursiefen, Thomas Fuchsluger, Friederike Schaub *(Germany)*

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249 T.061 Incidence of choroidal neovascularisation in the fellow eye in neovascular age related macular degeneration patients and its coreelation with type of drusen
Tina Xirou, Georgios Bontzos, Georgios Smoustopoulos, Efstathios Georgopoulos, Nikiforou Aikaterini, Christina Garnavou Xirou, Stamatina Kabanarou *(Greece)*

271 T.062 Molecular characterization of an iPSC line derived from a patient with Cone-rod dystrophy related to a mutation in the PROM1 gene
Kevin Puertas-Neyra, Ivan Fernandez-Bueno, Leticia Hernández-Rodríguez, Yenisey García-Ferrer, Dino Gobelli, Rosa Coco, Miguel Angel de la Fuente *(Spain)*

275 T.063 Immunohistochemical characterization of pluripotency of an iPSC line derived from a patient with Cone-rod diystrophy related to a mutation in the PROM1 gene
Leticia Hernández-Rodríguez, Kevin Puertas-Neyra, Yenisey García-Ferrer, Miguel De la Fuente, Rosa Coco, Ivan Fernandez-Bueno *(Spain)*

287 T.064 Human iPSC-derived RPE cells implantation into minipig eye - two weeks follow-up study
Taras Ardan[1], Slaven Erceg[2], Ana Artero-Castro[2], Hana Studenovska[1], Brigitte Mueller[3], Knut Stieger[3], Lyubomyr Lytvynchuk[3], Zbyněk Straňák[1], Zdeňka Ellederová[1], Štefan Juhás[1], Jan Motlik[1], Goran Petrovski[4,5] *([1]Czech Republic, [2]Spain, [3]Germany, [4]Norway, [5]Croatia)*

331 T.065 Retinal haemorrhage after cardiopulmonary resuscitation of a patient
Evgenia Kontou, Panagiotis Sgouros, Georgios Smoustopoulos, Alexandros Papadopoulos, George Bontzos, Christina Garnavou-Xirou, Tina Xirou *(Greece)*

361 T.066 Swept source optical coherence tomography and optical coherence tomography angiography in central serous chorioretinopathy
Ben Amor Hager, Walid Namsia, Walha Yasmine, Jouini Arije, Essassi Eya, Khochtali Sana, Khairallah Moncef *(Tunisia)*

382 T.067 Analysis of the photographers' quality control in the diabetic retinopathy screening at the IOBA's Reading Center
Oscar Garcia Espinilla, Pablo Arlanzón Lope, Andrea Novo Díez, Inmaculada Yepes Recio, Purificación de la Iglesia Rodríguez, María Isabel López Gálvez, Jose Carlos Pastor Jimeno *(Spain)*

393 T.068 Certification process in capturing retinographies in Castilla y Leon diabetic retinopathy screening program
Andrea Novo-Diez, Pablo Arlanzón-Lope, Óscar García-Espinilla, Inmaculada Yepes-Recio, Purificación De Iglesia-Rodríguez, María Isabel López-Galvez, José Carlos Pastor *(Spain)*

406 T.069 Porcine ex vivo retina model to study retinal neurodegenerative diseases: potential role of mesenchymal stem cells
Letizia Pelusi[1], Maddalena Ghelardoni[1], Luca Agnifili[1], Ilaria Cappellacci[1], Marcello Allegretti[1], Jose Hurst[2], Sven Schnichels[2], Leonardo Mastropasqua[1], Sveva Bollini[1], Mario Nubile[1], Assunta Pandolfi[1], Domitilla Mandatori[1] *([1]Italy, [2]Germany)*

409 T.070 Retinal microglia and ganglion cells in a cuprizone (CPZ) induced mouse model of multiple sclerosis (MS)
Soyoung Choi[1], Richard Nicholas[1], Dimitri Papadopoulos[2,3], Maria Francesca Cordeiro[1] *([1]United Kingdom, [2]Greece, [3]Cyprus)*

414 T.071 Hyperreflectivity of the outer portion of the outer nuclear layer seen on optical coherence tomography in some cases of NR2E3-associated retinopathy
Sammi Wing Fai Fong, Gavin Arno, Andrew R. Webster, Michel Michaelides, Omar Mahroo *(United Kingdom)*

418 T.072 Vitreous hemorrhage revealing hemophilia C
Aida Jallouli, Rim Maamouri, Mariem Belhedi, Wiem Lazzem, Sonia Chouaieb, Monia Cheour *(Tunisia)*

419 T.073 Macular colobama associated with nephrocalcinosis. A case report
Rocio Falcon Roca, Mercedes Rivera Zori, Isabel Valls Ferrán, Belén Gutiérrez Partida, Katarzyna Kubiak, Celia Martín Villaescusa, Natalia Blanco Calvo, Raquel Borrego Hernández *(Spain)*

436 T.074 Telemedicine-based eye screening program in Castilla and León: a reading center assisted model
Pablo Arlanzón Lope, Óscar García Espinilla, Andrea Novo Díez, Inmaculada Yepes Recio, Purificación de la Iglesia Rodríguez, María Isabel López Gálvez, José Carlos Pastor Jimeno *(Spain)*

441 T.075 Proteome changes in ferroptosis-induced retinal pigment epithelial cell death in age-related macular degeneration
Sichang Qu, Natarajan Perumal, Norbert Pfeiffer, Franz Grus, Caroline Manicam *(Germany)*

455 T.076 Detection of subretinal and intraretinal fluids in Optopol SD-OCT using transfer learning
Abdelrahman Assaf, Mohamad Orabi, Alexander Loktyushin, Sökmen Aydin, Ines Lanzl *(Germany)*

475 T.077 Dopamine and motion perception: unveiling retinal connections in Parkinson's disease
Víctor Paleo, Sofía Bellón, Rosario Moratalla, Pedro De La Villa, Cristina Alcacer *(Spain)*

480 T.078 Retinal thickness as sensitivity as biomarkers of neurodegeneration in moderate diabetic retinopathy
Ana Boned-Murillo, Guisela Fernández-Espinosa, Elvira Orduna Hospital, Maria Dolores Diaz, Ana Sánchez Cano, Maria Sopeña Pinilla, Sofia Bielsa, Isabel Pinilla Lozano *(Spain)*

489 T.079 Discrepancies in central foveal intensity with different autofluorescence modalities in CNGB3-associated achromatopsia and correlation with integrity of ellipsoid zone on optical coherence tomography
Haseeb Akhtar, Jeffrey Lam, Gavin Arno, Andrew R Webster, Michel Michaelides, Omar Mahroo *(United Kingdom)*

490 T.080 Localised loss of sheen in Optos pseudocolour images in Oguchi disease following prior short wavelength autofluorescence imaging
Haseeb Akhtar, Luke Nicholson, Zoe Ockrim, Magella Neveu, Andrew R. Webster, Michel Michaelides, Omar Mahroo *(United Kingdom)*

498 T.081 Changes in macular sensitivity in long-term type 1 diabetic patients without diabetic retinopathy after 5 years of follow up
Guisela Fernández-Espinosa, Elvira Orduna-Hospital, María Sopeña-Pinilla, Sofía Bielsa-Alonso, Marta Arias-Álvarez, Cristina Tomás-Grasa, Ana Boned-Murillo, María Dolores Díaz-Barreda, Javier Acha-Pérez, Isabel Pinilla *(Spain)*

502 T.082 Inflammation status after retinal detachment could be modulate by TP53 gene
Nadia Galindo-Cabello, Paula Pérez-Prieto, Julio Fernández-Fernández, Antonio López-García, Carmen García-Vázquez, José Rodríguez-Cabello, Rebeca Lapresa, Angeles Almeida, Salvador Pastor-Idoate, Ricardo Usategui-Martin *(Spain)*

510 T.083 Choroidal thickness after anti-vascular endothelial growth factor in treatment-naïve typical neovascular age-related macular degeneration patients - a systematic review and meta-analysis
Erlend Hoven[1], John-Thomas Michelet[1], Mario Vettore[1], Neil Lagali[1,2] *([1]Norway, [2]Sweden)*

514 T.084 Analysis of prognostic and predictive factors in Kuopio wet age-related macular degeneration cohort
Hanna Heloterä, Leea Siintamo, Niko Kivinen, Kai Kaarniranta *(Finland)*

523 T.085 Multimodal imaging study and clinical management in Coats' disease
Maria Victoria Navarro Abellán, Elisa Foulquié Moreno, Juan Antonio Sánchez Perea, Manuel Almarcha Menargues, Carmen Miquel López, María De Los Reyes Retamero Sánchez, José Javier García Medina *(Spain)*

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565 T.086 Are there any differences in the retina and optic nerve anatomies in attention deficit hyperactivity disorder?
Carmen Miquel López, Antonio Eusebio López Hernández, Diego García-Ayuso, José Javier García Medina, Monica Del Río Vellosillo, Maria Victoria Navarro Abellán, María De Los Reyes Retamero Sánchez, Maravillas De Paco Matallana *(Spain)*

566 T.087 Vogt-Koyanagi-Harada-Like findings as the first manifestation of neuroleukemia
Laura Fernández García, Paula Boned Fustel, Anselmo Feliciano Sánchez, Romana García Gil *(Spain)*

569 T.088 Be mindful of the blood glucose measurement: the relevance of blood glucose in the eye emergency department
Shanees Nazeer, Amy Stone *(United Kingdom)*

571 T.089 Sarcoidosis-related uveitis: a case series study
Camilia Chafter, Rym Maamouri, Nadia Ben Ammar, Mehdi Somai, Fatma Boussema, Monia Cheour *(Tunisia)*

575 T.090 Characterization of a new fluorescence lifetime imaging ophthalmoscope
Julia Nycz[1], Dietmar Link[1], Matthias Klemm[1], Sascha Klee[1,2], Jens Haueisen[1] *([1]Germany, [2]Austria)*

584 T.091 The role of fluorescein angiography in incontinentia pigmenti: a case report
Catarina Monteiro, Tomás Reis da Costa, Maria Teixeira Dias, Júlio Almeida, Mafalda Mota, Graça Pires, Susana Teixeira, Isabel Prieto *(Portugal)*

625 T.092 Diabetic retinopathy screening using a handheld non-mydriatic camera
Andrei Iudakov, Christoph Kern, Ines Lanzl *(Germany)*

630 T.093 Review of treatments for retinopathy of the premature in Africa
António Queiros, Gisela Hauela, Paulo Fernandes, José Diaz-Rey *(Portugal)*

638 T.094 Color fundus photography versus fundoscopy in diabetic retinopathy patients: a pilot study
Stamatina Kabanarou, Nikolaos Bitzanakis, Georgios Bontzos, Georgios Smoustopoulos, Chrysoula Sgourou, Christina Garnavou-Xirou, Tina Xirou *(Greece)*

643 T.095 Emergency treatment approaches for central retinal artery occlusion
Meryam Smiri1 , Haddoum Karim Nassim, Mansouri Abdeldjalil, El Sanharawi Mohamed *(France)*

655 T.096 Popper and maculopathy
Ainhoa Mimendia Sancho, Alicia Traveset Maeso, Felipe Costales-Mier, Pau Cid Bertomeu *(Spain)*

657 T.097 The impact of elevated lipoprotein a levels on retinal vein occlusion in young individual: case report with 7 months follow up
Meryam Smiri, Karim Nassim Haddoum, Abdeldjalil Mansouri, Mohamed El Sanharawi *(France)*

658 T.098 Ridge-shaped peripapila dry, fluid associated, and self-resolved fluid associated presentations
Ainhoa Mimendia Sancho, Alicia Traveset Maeso, Pau Cid Bertomeu, Felipe Costales-Mier *(Spain)*

669 T.099 Associations of neurovascular dysfunction with inner retinal layer thickness in non-proliferative diabetic retinopathy
Berthold Pemp[1], Stefan Palkovits[1], Stefan Sacu[1], Doreen Schmidl[1], Gerhard Garhöfer[1], Leopold Schmetterer[1,2], Ursula Schmidt-Erfurth[1] *([1]Austria, [2]Singapore)*

683 T.100 Preoperative OCT in idiopathic epiretinal membrane surgery: the importance of biomarkers in predicting visual outcomes
Catarina Monteiro, Tomás Reis da Costa, Maria Teixeira Dias, Júlio Almeida, Mário Ramalho, Graça Pires, Susana Teixeira, Isabel Prieto *(Portugal)*

689 T.101 Cultural differences in perceived social support in patients with retinal diseases
Ida Nilsson[1], Laura Hernández Moreno[2], Karthikeyan Baskaran[1], Camilla Mohlin[1], Hugo Senra[2,3], Antonio Filipe Macedo[1] *([1]Sweden, [2]Portugal, [3]United Kingdom)*

692 T.102 Low vision rehabilitation program in patients with myopic macular degeneration: a case series
Nádia Fernandes, Débora Pereira, Tiago Carvalho, Carla Lanca *(Portugal)*

695 T.103 Reserch of Branched retinal vein occlusion with Arteriovenous crossing site
Seung Yoon Noh, Taehwan Kim, Yoonhyung Kwon *(South Korea)*

696 T.104 Comparative analysis of the effects of limbal and adipose-derived mesenchymal stem cell conditioned media on oxidative stress-induced damage in retinal pigment epithelial cells
Ayse Dilara Aydemir, Zehra Canbulat, Murat Hasanreisoğlu *(Turkey)*

701 T.105 Role of heparin-binding mediators in the resistance to anti-VEGF therapies in diabetic retinopathy
Sara Rezzola, Alessandra Loda, Greta Mutti, Vito Romano, Francesco Morescalchi, Giovanna Tabellini, Silvia Parolini, Francesco Semeraro *(Italy)*

702 T.106 Therapeutic potential of photobiomodulation on hydrogen peroxide-induced oxidative damage in retinal pigment epithelial cells
Ayse Dilara Aydemir, Zehra Canbulat, Murat Hasanreisoğlu *(Turkey)*

718 T.107 Digoxin induced retinal toxicity after acute kidney injury in a patient with dilated cardiomyopathy: a case report
Hyeyeon Park, Minhee Kim, Young-Jung Roh *(South Korea)*

741 T.108 Local ischemia morphology in diabetics differs from healthy controls
Simon Hoffmann, Lucy Kessler, Ramin Khoramnia, Werner Nahm *(Germany)*

747 T.109 Nanoparticle-based sustained drug delivery for the treatment of ocular neovascular diseases
Saliha Durak, Ozlem Kutlu, Sibel Cetinel *(Turkey)*

752 T.110 Tomographic findings in the retina of unvaccinated patients with COVID Pneumonia: prospective longitudinal study
Carlos Enrique Monera Lucas, Manuel Vicente Baeza Diaz, Jose Antonio Quesada, Adriana Lopez Pineda, Cristian Fernandez Martinez, Jose Juan Martinez Toldos, Vicente Francisco Gil Guillén *(Spain)*

758 T.111 Targeted retinal spectroscopy: towards a localized assessment of biomarkers in the eye fundus
Cleophace Akitegetse, Nicolas Lapointe, Jasmine Poirier, Maxime Picard, Dominic Sauvageau *(Canada)*

768 T.112 Role of peroxisome proliferator activated receptor alpha (PGC-1alpha) in the expression of genes encoding proteins of antioxidant defense, senescence and autophagy in the aging retina
Janusz Blasiak[1], Iswariyaraja Gurubaran[2], Cezary Watala[1], Joanna Kostanek[1], Kai Kaarniranta[2] *([1]Poland, [2]Finland)*

773 T.113 Four years follow up OCTA changes in long-term type 1 diabetic patients without diabetic retinopathy
Maria Sopeña-Pinilla, Guisela Fernández-Espinosa, Marta Arias Álvarez, Sofia Bielsa Alonso, Elvira Orduna Hospital, Cristina Tomas-Grasa, Ana Boned-Murillo, Mª Dolores Díaz-Barreda, Javier Acha, Isabel Pinilla *(Spain)*

778 T.114 Optical coherence tomography angiography of the foveal avascular zone after successful macula-off rhegmatogenous retinal detachment repair
Anis Mahjoub, Nesrine Abroug, Chaabene Rahma, Jouini Arij, Nabi Wijdene, Moncef Khairallah *(Tunisia)*

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784 T.115 Functional and morphological characterization of ocular phenotype in C3H/HeOuJ (Pde6b-rd1) mice
Leena Tähtivaara[1], Anne Mari Haapaniemi[1], Niina Jääskeläinen[1], Anni Tenhunen[1], Päivi Partanen[1], Anna Mari Koponen[1], Anni Kolehmainen[1], Xavier Ekolle[1], Giedrius Kalesnykas[1,2], Marc Cerrada-Gimenez[1] *([1]Finland, [2]Lithuania)*

814 T.116 Bruch's membrane and Brücke's muscle in the pars plana region
Songhomitra Panda-Jonas, Jost Jonas, Rahul Jonas, Shefali Jonas *(Germany)*

826 T.117 Paracentral acute middle maculopathy as the first sign of internal carotid artery dissection
Marta Comes, Elena Gracia Rovira, Yolanda Cifre Fabra, Álvaro Andrés Ojeda Parot, Héctor Carot Sanmillán, José Miguel Vilaplana Mora, Andrea Díaz Barrón, Antonio M. Duch-Samper *(Spain)*

831 T.118 Effect of systemic sclerosis on macular anatomy
Maravillas De Paco Matallana, Andrea Carolina Garcés Rodriguez, Miguel Martin Cascon, María De Los Reyes Retamero Sánchez, Carmen Miquel López, Monica Del Río Vellosillo, Maria Teresa Herranz Marin, Jose Javier Garcia-Medina *(Spain)*

838 T.119 Clinical-grade hPSC-derived RPE grafts for the treatment of age-related macular degeneration
Alvaro Plaza Reyes[1], Lourdes Valdés Sánchez[1], Rocio Mesa[1], Mehdi Moshtaghion[1], Estefania Caballano Infantes[1], Ana Belen Garcia-Delgado[1], Blanca Arribas[1], Beatriz Fernandez Muñoz[1], Mikhail Tsurkan[2], Rosario Sanchez-Pernaute[1], Berta De La Cerda[1], Francisco Diaz-Corrales[1] *([1]Spain, [2]Germany)*

845 T.120 Retinal neurodegeneration induced by sodium iodate administration and visual cortex activity
Michael Espitia, Santiago Milla Navarro, Pedro de la Villa, Francisco Germain *(Spain)*

849 T.121 Uncommon case of basal linear deposits and its tomographic and indocyanine green angiography findings
Imene Zhioua Braham, Ines Hachicha, Ilhem Mili, Mejdi Boukari, Raja Gmar Zhioua *(Tunisia)*

866 T.122 Lipid-lowering therapy in the treatment of massive hard exudates in type 1 diabetes
Natalia Palarie, Palii Natalia, Olga Tagadiuc *(Moldova)*

874 T.123 EYS mutation causes RPE dysfunction in a patient-derived cellular model
Berta de la Cerda, Alvaro Plaza Reyes, Ana García Delagado, Lourdes Valdés Sánchez, Francisco Diaz-Corrales *(Spain)*

878 T.124 Alterations in glutamate and nitric oxide metabolism in the RdS mice
Inmaculada Almansa, Carla Espuis, Antolin Cantó, Javier Martínez-González, Teresa Olivar, Vicente Hernández-Rabaza, María Miranda Sanz *(Spain)*

883 T.125 Clinical pattern and outcomes of acute retinal necrosis in a referral center in Tunisia, North Africa: a 17-year retrospective study
Anis Mahjoub, Nesrine Abroug, Ben Saidi Oussama, Loukil Hajer, Khochtali Sana, Moncef Khairallah *(Tunisia)*

886 T.126 Dexamethasone intravitreal implant (Ozurdex) in phakic patients with diabetic macular oedema resistant to anti-VEGF therapy: Short term visual and anatomical outcomes in a real world study
Suresh Thulasidharan , Lawrence Walker, Christina Rennie, Radhika Krishnan *(United Kingdom)*

890 T.127 OCT angiography findings in posterior persistent fetal vasculature
Ines Hachicha, Imene Zhioua Braham, Haddar Slim, Mokrani Manel, Mili Ilhem, Gmar Zhioua Raja *(Tunisia)*

893 T.128 Evaluating the macular vascular complexes' density by OCTA for dyslexia
María de los Reyes Retamero Sánchez, Celia Gómez-Molina, Carmen Miquel-López, Maria Victoria Navarro-Abellán, Maravillas De-Paco-Matallana, Laura Espín-López, María del Pino Sánchez, Mónica del-Río-Vellosillo, Jose Javier García-Medina *(Spain)*

915 T.130 Correlations between optic nerve OCT and macular functional alterations in patients who undergone successful RRD surgery
Mª Dolores Díaz-Barreda, Ana Boned-Murillo, Elvira Orduna Hospital, Guisela Fernández-Espinosa, Marta Arias Álvarez, Maria Sopña-Pinilla, Isabel Pinilla *(Spain)*

920 T.131 Changes in vascular density of optic nerve head in diabetic 1 patients with no retinopathy using optical coherence tomography angiography
Ana Boned-Murillo, Guisela Fernández-Espinosa, Elvira Orduna Hospital, Maria Dolores Diaz, Maria Sopeña Pinilla, Marta Aria Alvarez, Cristina Tomas Grasa, Isabel Pinilla Lozano *(Spain)*

923 T.132 Remodeling of the lamina cribrosa thickness in proliferative diabetic retinopathy as a pathogenetic factor of retrolaminar migration of silicone oil after vitrectomy
Maryna Karliychuk, Serhii Pinchuk, Artem Urazov *(Ukraine)*

924 T.133 An unusual case of bilateral type 1 idiopathic macular telangiectasia
Haddar Selim, Imene Zhioua Braham, Ben Mrad Syrine, Ines Hachicha, Erraies Khalil, Mili Ilhem, Gmar Zhioua Raja *(Tunisia)*

927 T.134 Lamotrigine associated macular phototoxicity in Asperger syndrome
Haddar Selim, Imene Zhioua Braham, Ben Mrad Syrine, Ines Hachicha, Erraies Khalil, Boukari Mejdi, Gmar Zhioua Raja *(Tunisia)*

929 T.135 Optical coherence tomography angiography findings after silicone oil tamponade for rhegmatogenous retinal detachement
Imene Zhioua Braham, Boubaker Cyrine, Mokrani Manel, Ines Hachicha, Mili Ilhem, Boukari Mejdi, Gmar Zhioua Raja *(Tunisia)*

942 T.136 Sunrays epiretinal membrane
Ines Hachicha, Khaled El Matri, Bouraoui Rim, Mghaieth Fatma, Rim Limaiem, Leila El Matri *(Tunisia)*

943 T.137 Ozurdex insert dislocated to the anterior chamber after postration in a patient who underwent secondary implant surgery with Canabrava thechnique: A case report.
Carla Sánchez Remacha, Cristina Calvo Simón, Luca Bueno Borghi, Miguel Castillo Fernández, Julia Aramburu Clavería, Marta Suñer Martínez, Pablo Cisneros Arias, Marta Orejudo De Rivas, Eva Josefina Nuñez Moscarda, Adrián Moñux Sánchez, Paula Casas Pascual, Francisco Javier Ascaso Puyuelo *(Spain)*

954 T.138 Ocular involvement in a patient with POEMS syndrome, 2-years follow-up with OCTA
Sara Crespo Millas, Salvatore Di Lauro, David Galarreta-Mira *(Spain)*

955 T.139 Real world experience with brolucizumab in pro re nata regimen in patients with neovascular age-related macular degeneration previously treated with ranibizumab and aflibercept and without control of subretinal fluid
Salvatore Di Lauro, Sara Crespo Millas, Lucia Manzanas Leal, Maria Isabel Lopez Galvez, David Galarreta-Mira *(Spain)*

959 T.140 Metabolic effect of the retina in a murine model of AD
Mariana Yolotzin Garcia Bermudez, Rupali Vohra, Kristine Karla Freude, Maj Schneider Thomsen, Blanca Irene Aldana, Miriam Kolko *(Denmark)*

95 T.141 Safety, biocompatibility, and potential functionality of a new accommodative intraocular lens:an experimental study in rabitts
Luis Ignacio Olcina, Ivan Fernandez Bueno, Cristina Andres Iglesias, Kevin Puertas Iglesias, Itziar Fernandez Martinez, Ricardo Usategui Martin, Miguel Jose Maldonado Lopez *(Spain)*

846 T.142 Exposure to subthreshold dose of UVR-B does not induce increase in caspase 3 mRNA expression in the rat lens in vivo within first 24 hours
Zhaohua Yu, Konstantin Galichanin *(Sweden)*

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58 T.143 Endophthalmitis after cataract surgery
Moon Jeong Choi *(South Korea)*

709 T.144 Synchrotron-based Fourier transform infrared microspectroscopy examined differences between the cultured and postoperative humane lens epithelial cells important for understanding posterior capsular opacification and lens regeneration
Sofija Andjelic[1], Martin Kreuzer[2], Marko Hawlina[1] *([1]Slovenia, [2]Spain)*

598 T.145 Study of the metallome and transcriptome of a degenerating cellular model of the retinal pigment epithelium
Lydia Álvarez, Ana Alvarez-Barrios, Montserrat García, Rosario Pereiro, Hector Gonzalez-Iglesias *(Spain)*

197 T.146 *rf* Hyperreflective material boundary remodeling: A new morphological biomarker of good functional outcomes in neovascular age-related macular degeneration
Siqing Yu[1], Isabel Bachmeier[1], Jules Hernandez-Sanchez[2], Beatriz Armendariz[1], Andreas Ebneter[1], Daniel Pauleikhoff[3], Usha Chakravarthy[2], Sascha Fauser[1] *([1]Switzerland, [2]United Kingdom, [3]Germany)*

314 T.147 *rf* Swedish version of the Massof Activity Inventory to measure vision-related activity difficulties amongst patients with nAMD
Karthikeyan Baskaran, Ida Nilsson, Klara Ringbäck, Michaela Ternehäll, Cecilia Svanfeldt, Jeanette Melin, Camilla Mohlin, Antonio Filipe Macedo *(Sweden)*

362 T.148 *rf* Ruthenium brachytherapie and sandwich therapy for medium sized uveal melanomas
Ha-Vy Do, Celine Czapla, Heike Vogel, Guido Hildebrandt, Rudolf Guthoff, Thomas Fuchsluger, Claudia Brockmann *(Germany)*

373 T.149 *rf* Enhanced choroidal thickness, total choroidal area and choroidal vascularity index from deep-learning generated OCT images
Valentina Bellemo, Ankit Kumar, Damon Wong, Jacqueline Chua, Xinyu Liu, Xinxing Xu, Yong Liu, Leopold Schmetterer *(Singapore)*

444 T.150 Comparative analysis of the quality of life among different retinal diseases
David Blanco Darriba, Jose Ignacio Fernandez-Vigo, Barbara Burgos-Blasco, Patricia Robles Amor, Elena Montolío Marzo, Haizea Haizea Etxabe Ávila *(Spain)*

500 T.151 *rf* Targeted fluorescence imaging using bevacizumab-800CW within neovascular Age-related Macular Degeneration (AMD) patients to evaluate the up-regulation of Vascular Endothelial Growth Factor (VEGF-A) (preliminary results)
Pia Volkmer, Iris Schmidt, Kim Westra, Janine Polman, M. Stefan Ouwerkerk, Liberata Uwantege, Renée Bolhuis, Rogier Muskens, E. Angela Huiskamp, Wouter Nagengast *(The Netherlands)*

809 T.152 *rf* Choriocapillaris, photoreceptor and inner retinal layers in spatial relationship to parapapillary alpha, beta, gamma, and delta zone
Jost Jonas, Rahul Jonas, Shefali Jonas, Songhomitra Panda-Jonas *(Germany)*

40 T.153 *rf* Geographic Atrophy (GA) secondary to AMD: Online medical education can significantly improve ophthalmologists' knowledge and confidence on evidence based guidance for patient management
Siggi Trier[1], Kate Carpenter[1], Karen Reid[1], Paolo Lanzetta[2], Ursula Schmidt-Erfurth[3], Laurent Kodijkian[4] *([1]USA, [2]Italy, [3]Austria, [4]France)*

495 T.154 The inflammatory potential of diet is associated with the risk of age-related eye diseases
Joëlle Vergroesen[1], Eric Thee[1], Tosca de Crom[1], Jessica Kiefte-de Jong[1], Trudy Voortman[1], Caroline Klaver[1,2], Wishal Ramdas[1] *([1]The Netherlands, [2]Switzerland)*

Poster Session 2

Moderators: **Piero Barboni** *(Italy)*, **Loïc Hamon** *(Germany)*, **Elias Flockerzi** *(Germany)*, **Fabian Fries** *(Germany)*, **Baptiste Wilmet** *(France)*

10:45-11:30

POS **Poster Session COS**

17 F.001 The biomechanical e-staging - *In vivo* assessment of corneal biomechanics in keratoconus
Elias Flockerzi[1], Riccardo Vinciguerra[2,3], Michael W. Belin[4], Paolo Vinciguerra[2], Renato Ambrósio[5], Berthold Seitz[1] *([1]Germany, [2]Italy, [3]United Kingdom [4]USA, [5]Brazil)*

32 F.002 The association between dry eye with ocular aberrations and contrast sensitivity in 60 years old people and over
AbbasAli Yekta, Mehdi Khabazkhoob, Hassan Hashemi, Mohammad Azami, Hadi Ostadimoghaddam, Javad Heravian Shandiz, Asieh Ehsaei, Abbas Azimi, Yeganeh Yekta *(Iran)*

66 F.003 Keratoconus: ocular surface considerations, from bench to bedside
Farideh Doroodgar, Sana Niazi *(Iran)*

78 F.004 Analysis of corneal scrape outcomes in NHS Ayrshire and Arran
Anna Blake, Jonathan Nairn, Zachariah Koshy *(United Kingdom)*

93 F.005 Effect of phospholipid-eluting contact lens on dry eye in rabbit
Sehie Park, Jin Sun Hwang, Sun Hee Oh, Young Joo Shin *(South Korea)*

97 F.006 Comparison in treatment effect according to the IPL treatment area in meibomian gland dysfunction patients
Ji Sang Min, Ikhyun Jun, Tae-im Kim, Kyoung Yul Seo *(South Korea)*

108 F.007 Long-term clinical course of amniotic membrane after permanent amniotic membrane transplantation
TaeHwan Kim, Seungyoon Noh, Yoon Hyung Kwon *(South Korea)*

139 F.008 Changes of the bulbar conjunctiva as the result of glaucoma medication treatment
Vladyslav Tetarchuk, Tetiana Zhmud *(Ukraine)*

142 F.009 The effect of long-term use of gadgets on the condition of the bulbar conjunctiva in young people
Olexandra Hryzhymalska, Olha Melnyk , Tetiana Zhmud, Olga Andrushkova *(Ukraine)*

213 F.010 Sequels of severe vernal keratoconjunctivitis (KCV): about a case
Sara Ennaki[1], Ghizlane Daghouj[1], Zineb Hammoumi[1], Hind Hamdani[1], Yasmina Chaa[2], Loubna El Maaloum[1], Bouchra Allali[1], Asmaa El Kettani[1] *([1]Morocco, [2]Belgium)*

250 F.011 Para-phenylenediamine hair dye and dry eye symptoms: a cross-sectional study
Davina Jugnarain[1,2], Matthew Birss[2], Raawiyah Mohamudally[1], Nedjema Chaabane-Rajah[1], Zia Carrim[1] *([1]Mauritius, [2]United Kingdom)*

258 F.012 Quantitative comparison of *in vivo* and *ex vivo* meibography in BALB/c mice
Youngchae Yoon, Ho Sik Hwang *(South Korea)*

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262 F.013 Investigation of pathogenesis of the pterygium by transcriptomic and proteomic analysis
Chang Hwan Kim, Yong Woo Ji *(South Korea)*

280 F.014 Cold plasma treatment for fungal keratitis
Peter Trosan, Anselm Reif-Eberhard, Freya Nadermann, Susanne Staehlke, Philipp Warnke, Thomas Fuchsluger *(Germany)*

285 F.015 Eye-bank precut versus surgeon-cut tissue graft for descement stripping automated endothelial keratoplast (dsaek): a systematic review and meta-analysis
Khaled Alkandari, Alotaibi Abdulrahman *(Kuwait)*

305 F.016 The use of artificial tears among the Danish population: epidemiological observations
Simone Ahrensberg, Jens Rovelt Andreasen, Miriam Kolko *(Denmark)*

325 F.017 Decellularized human corneal lenticule as a delivery system of recombinant human nerve growth factor and human amniotic fluid stem cells factors for posterior ocular disease treatment
Domitilla Mandatori[1], Letizia Pelusi[1], Maddalena Ghelardoni[1], Luca Agnifili[1], Nadia Di Pietrantonio[1], Jose Hurst[2], Marcello Allegretti[1], Sven Schnichels[2], Leonardo Mastropasqua[1], Sveva Bollini[1], Mario Nubile[1], Assunta Pandolfi[1] *([1]Italy, [2]Germany)*

327 F.018 A biosynthetic alternative to human amniotic membrane for cornea repair- A comparative in-vitro study
Prity Sahay, Mehri Behbehani, Perla Filippini, Gianpaolo Bruti, Melissa Townsend, Harminder Dua *(United Kingdom)*

349 F.019 Comparing and combining bovine cornea decellularization methods for ocular surface biomaterials and tissue engineering applications
Mert Egemen Caliskan, Ilayda Arslan, Musacan Yalcin, Taylan Can Ozer, Merve Nur Soykan, Burcugül Altuğ Tasa, Eray Atalay *(Turkey)*

366 F.020 Far-red, high-resolution, reflection-free images of the anterior segment in retroillumination
Oliver Dorado Cortez, Anthony Ain, Sylvain Poinard, Marie Caroline Trone, Zhiguo He, Justin Thomas, Frederic Mascarelli, Philippe Gain, Gilles Thuret *(France)*

370 F.021 Comparison of waveform-derived ORA parameters in clinical keratoconus, subclinical keratoconus and healthy subjects
Kubra Atay, Onur Özalp, Eray Atalay *(Turkey)*

371 F.022 Epidemiological profil of post contusive hyphaema experience of the pediatric ophtalmology department of Casablanca
Rima Ayad, Daghouj Ghizlane, Zineb Hammoumi, Assia El Harrar, Lamiaa Ajdour *(Morocco)*

376 F.023 Novel anti-evaporative lipid-based formulation for dry eye disease treatment
Janika Jäntti, Tuomo Viitaja, Julia Sevón, Tatu Lajunen, Jooseppi Puranen, Jan-Erik Raitanen, Mira Viljanen, Riku Paananen, Jukka Moilanen, Filip Ekholm, Marika Ruponen *(Finland)*

378 F.024 Automatic characterization of Meibomian gland morphology
Andrea Novo-Diez, Marta Blanco-Vázquez, Pablo Arlanzón-Lope, Cristina Valencia-Sandonís, María J. González-García, Itziar Fernández *(Spain)*

385 F.025 Diagnostic errors and delay of keratitis fugax hereditaria
Annamari Immonen, Sabita Kawan, Michael Backlund, Heikki Saaren-Seppälä, Tero Kivelä, Joni Turunen *(Finland)*

396 F.026 Analysis of epithelial corneal layer after phacoemulsification
Marta Cerdà - Ibáñez, Cristina Peris-Martínez *(Spain)*

398 F.027 Pre- and intraoperative risk factors for ocular surface pain after cataract surgery
Sun-Kyoung Park *(South Korea)*

423 F.028 Mechanotransduction and corneal endothelium homeostasis: application in tissue engineering
Noor Ahmed Hussain[1,2], Francisco Figueiredo[2], Che Connon[2] *([1]Saudi Arabia, [2]United Kingdom)*

447 F.029 Feasibility of 3D bioprinting of a corneal stroma tissue equivalent using a desktop 3D printer
Aspasia Diafa, Alexandros Tsouknidas *(Greece)*

467 F.030 Ocular pathogens and antibiotic susceptibility patterns in bacterial keratitis during 2010-2019 in the county of Östergötland, Sweden, a retrospective study
Jenny Roth, Baris Toprak, Sofia Somajo, Antonio Filipe Macedo, Neil Lagali *(Sweden)*

472 F.031 Artificial tears, preservatives, so what?
Umalbaninn Alnoor, Simone Ahrensberg, Josefine Freiberg, Miriam Kolko, Anne Nagstrup, Steffen Heegaard *(Denmark)*

484 F.032 Preparation and outcome of swollen versus dextran deswollen grafts in descemet membrane endothelial keratoplasty (DMEK)
Sarah Zwingelberg *(Germany)*

485 F.033 Smoking, diabetes mellitus and obesity as risk factors for the degree of fuchs endothelial corneal dystrophy (FECD)
Sarah Zwingelberg *(Germany)*

488 F.034 Morphogeometric characterization in keratoconus according to the RETICS grading system
Claudia Patricia Tarazona Jaimes, Elinor Megiddo, Carmelo Gomez, Alejandro Moya, Francisco Cavas Martinez, Jorge Alio *(Spain)*

491 F.035 Long-term results and persistence of topical cyclosporine A 0.1% treatment in patients with dry eye disease in a tertiary eye center
Fidan Aghayeva, Abdelrahman Assaf, Ines Lanzl *(Germany)*

529 F.036 A novel AI-powered IR-Visible dual camera system for measuring and tracking ocular surface temperature
Ehsan Zare Bidaki, Alexander Wong, Navid Shahsavari, Paul Murphy *(Canada)*

544 F.037 Higher occurrence of ocular surface disease symptoms in patients with atopic dermatitis - data in the FOREVER study
Pernille May Hansen, Jens Rovelt, Jette Tolstrup, Jacob P. Thyssen, Steffen Heegaard, Miriam Kolko *(Denmark)*

552 F.038 Peripheral sterile corneal infiltrate after cross linking in keratoconus: a case report
Rima Ayad, Daghouj Ghizlane, Roukaya Chahir, Lamiaa Ajdour *(Morocco)*

559 F.039 Artificial intelligence, anterior segment and refractive surgery : which relationship and association?
Sara Ettouri, Daghouj Ghizlane, Naoual Mtalai, Samia Zamzami, Ali Rami, Loubna El Maaloum, Bouchra Allali, Asmaa El Kettani *(Morocco)*

567 F.040 Novel pathomechanisms of impairment of native tear protein complexes in aqueous deficient dry eye syndrome
Natarajan Perumal, Janine Hering, Norbert Pfeiffer, Franz Grus, Caroline Manicam *(Germany)*

585 F.041 Superficial corneal foreign bodies: a series of 90 cases
Sarah Lyz Bel'hantier, Chaimae Baqadir, Daghouj Ghizlane, Loubna El Maaloum, Bouchra Allali, Asmaa El Kettani *(Morocco)*

604 F.042 Investigation of apoptotic and inflammatory markers in hypoxia induced human cornea epithelial cells co-cultured with limbal mesenchymal stem cells
Zehra Canbulat, Ayse Dilara Aydemir, Murat Hasanreisoğlu *(Turkey)*

611 F.043 In-vivo corneal collagen crosslinking using ruthenium and visible light
Ayesha Gulzar, Humeyra Nur Kaleli, Murat Hasanreisoğlu, Ayse Yildiz Tas, Afsun Sahin, Seda Kizilel *(Turkey)*

620 F.044 The role of exocytotic proteins in the (dys)regulation of human reflex tearing and aqueous-deficient dry eye syndrome
Alfred Francis Pakkam John Francis, Caroline Manicam, Fabian Neumann, Norbert Pfeiffer, Franz Grus, Natarajan Perumal *(Germany)*

642 F.045 Corneal laceration with expulsive iridodialysis and vitreous prolapse following blunt trauma
Kirupakaran Arun, Bitrus Danboyi *(United Kingdom)*

644 F.046 In vitro compatibility study of a new preservative-free multidose 0.6% bilastine eye drop formulation containing sodium hyaluronate with soft and gas rigid permeable contact lenses
Eider Arana Rey, Tatiana Suarez Cortes, Ana Gonzalo, Noelia Andollo Victoriano, Inés Torrens Prat, Arturo Zazpe, Gonzalo Hernández *(Spain)*

648 F.047 Herpetic keratouveitis: a three year follow-up case
Kirupakaran Arun, Panagiotis Georgoudis *(United Kingdom)*

649 F.048 The impact of antiglaucoma agents on the ocular surface of 180 patients
Sarah Houti, Daghouj Ghizlane, Zineb Hammoumi, Delphes Mathilde Otsasso Okomiko, Loubna El Maaloum, Bouchra Allali, Asmaa El Kettani *(Morocco)*

660 F.049 An attempt to evaluate the anterior surface homeostasis in patients with diabetic retinopathy
Agnieszka Kuligowska, Ewa Pius-Sadowska, Bogusław Machaliński, Anna Machalińska *(Poland)*

661 F.050 Comparative analysis of corneal parameters between DMEK and UT-DSAEK eyes in 3-year follow-up
Anna Machalińska, Agnieszka Kuligowska, Monika Kuśmierz-Wojtasik *(Poland)*

713 F.051 Change in posterior astigmatism with degree of decentering graft in patients with descemet stripping automated endothelial keratoplasty
Jae Hyun Park, Hyun-Seung Kim *(South Korea)*

716 F.052 Anti-inflammatory effect of mulberry anthocyanins on experimental dry eye
Ji Young Lee, Jin Woo Kwon *(South Korea)*

731 F.053 Use of anterior segment optical coherence tomography for evaluation of topical ciclosporine effectiveness in severe dry eye disease
Ines Fendouli, Asma Hassairi, Fahd Jendoubi, Tesnim Mhamdi, Rim Limaiem, Leila El Matri *(Tunisia)*

733 F.054 Characterization of the proteome changes in an in vitro hyperosmotic dry eye model employing human corneal epithelial cells
Hao Lin, Caroline Manicam, Norbert Pfeiffer, Franz Grus, Natarajan Perumal *(Germany)*

738 F.055 Prevalence of tomographic features associated with subclinical edema in Fuchs dystrophy across three commercially available corneal tomographers
Maria Laura Passaro, Chiara Ancona, Matteo Airaldi, Rosangela Cucco, Francesco Semeraro, Ciro Costagliola, Vito Romano *(Italy)*

743 F.056 In-vivo evaluation of corneal collagen fibrils pattern to detect keratoconus
Chiara Ancona[1], Maria Laura Passaro[1], Matteo Airaldi[1], Eugenio Lipari[1], Francesco Semeraro[1], Stephen B. Kaye[2], Vito Romano[1,2] *([1]Italy, [2]United Kingdom)*

746 F.057 A corneal manifestation of cystinosis a case report
Mariam Issa Mahamat, Chaimae Baqadir, Meriem El Alami, Daghouj Ghizlane, Loubna El Maaloum,

Bouchra Allali, Asmaa El Kettani *(Morocco)*

748 F.058 Allogeneic serum eye drops Sjogren syndrome-related dry eye disease: clinical evaluation of the ocular surface and in vivo confocal microscopy of the cornea
Eliana Forbice, Vito Romano, Francesco Semeraro, Teodoro Pizzolante, Maria Laura Passaro, Matteo Airaldi, Chiara Ancona, Andrea Bianchetti *(Italy)*

776 F.059 Flap amputation for the diagnosis and treatment of acanthamoeba keratitis: a case report
Juan Cadavid Usuga[1], Mauricio Velez[1], Maria Ortiz Usuga[1], Camilo Restrepo Perdomo[1], Luis Izquierdo Jr[2] *([1]Colombia, [2]Peru)*

779 F.060 Anterior chamber phakic lens implantation after deep anterior lamellar keratoplasty. Retrospective cohort with 24-month follow-up
Juan Cadavid Usuga[1], Mauricio Velez[1], Jorge Donado Gomez[1], Camilo Gomez[1], Luis Izquierdo Jr[2] *([1]Colombia, [2]Peru)*

788 F.061 In-depth study of the mucoadhesive and lubricating properties of Hyalistil SYNFO and other sodium hyaluronate-based eye drops
Ilenia Abbate, Angelo Pricoco, Donato Spina, Giuseppe De Pasquale, Cristina Zappulla, Maria Cristina Curatolo, Santa Viola *(Italy)*

790 F.062 Evaluation of drug release, mucoadhesive and viscoelastic performances of Netildex gel versus an antibiotic-steroid combination system
Veronica Pepe, Francesco Cuffari, Maria Cristina Curatolo, Ilenia Abbate *(Italy)*

795 F.063 Bowman's layer transplantation - a new hope for regaining of correct ocular surface
Diana Wyroslak-Bednarek, Piotr Jurowski *(Poland)*

816 F.064 Prevalence and associations of keratokonus among children, adults and elderly in the population-based ural eye studies
Songhomitra Panda-Jonas[1], Bikbov Mukharram[2], Gyulli M[2], Timur Gilmanshin[2], Jost Jonas[1], Ellina Iakupova[2], Albina Fakhretdinova[2], Azaliia Tuliakova[2], Iulia A[1], Gilemzyanova Leisan[2], Dinar A. Khakimov Dinar[2], Liana Miniazeva[2] *([1]Germany, [2]Russia)*

819 F.065 Comparison between 100%autologous serum and 100%platelet-rich plasma eye drops and their impact on the treatment efficacy of dry eye in primary Sjogren syndrome
Dominika Wróbel-Dudzińska, Agata Przekora-Kuśmierz, Paulina Kazimierczak, Ewa Kosior-Jarecka, Agnieszka Ćwikińska-Haszcz, Tomasz Żarnowski *(Poland)*

832 F.066 Contribution of TRPM8-mediated activity to thermally-evoked reflex blink
Ariadna Diaz-Tahoces, Fernando Aleixandre-Carrera, Enrique Velasco, Maria del Carmen Acosta, Juana Gallar *(Spain)*

835 F.067 Short term effect of rose bengal photodynamic therapy on collagen I, collagen V, nuclear factor kappa B, lysyl oxydase, transforming growth factor beta and interleukin 6 expression of human corneal fibroblasts, in vitro
Ning Chai1, Tanja Stachon[1], Tim Berger[1], Zhen Li[1], Berthold Seitz[1], Achim Langenbucher[1] Nora Szentmary[1,2] *([1]Germany, [2]Hungary)*

839 F.068 Gene expression in calcium triggered healthy primary limabal epithelial cells, in vitro
Shweta Suiwal, Tanja Stachon, Fabian Norbert Fries, Zhen Li, Ning Chai, Berthold Seitz, Maryam Amini, Nóra Szentmáry *(Germany)*

853 F.069 Repeatability of ANTERION in subjects with keratoconus
Marta Sancho Larraz, Alejandro Blasco-Martinez *(Spain)*

854 F.070 Conjunctival vessel density as inflammatory ocular surface marker in systemic autoimmune disease
Emanuela Aragona, Alessandro Arrigo, Cristian Perra, E. Miserocchi, Giulio Modorati, Francesco

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Bandello *(Cagliari)*

855 F.071 Mask-associated dry eye syndrome according to sex
Marta Sancho Larraz, Alejandro Blasco-Martinez *(Spain)*

869 F.072 PAX6, FABP5 and Keratocytes-characteristic marker expression in human limbal fibroblasts and Keratocytes of congenital aniridia and healthy subjects, in vitro
Zhen Li[1], Tanja Stachon[1], Ning Chai[1], Shweta Suiwal[1], Fabian Fries[1], Berthold Seitz[1], Maryam Amini[1], Lei Shi[2], Nora Szentmary[1] *([1]Germany, [2]China)*

879 F.073 Correlative microscopy (CLEM) of tarsal conjunctival scraping: a new opportunity in the diagnosis of microbial keratitis
Mario Troisi, Salvatore Del Prete, Salvatore Troisi, Daniela Marasco, Ciro Costagliola *(Italy)*

880 F.074 Segmentation of the fibrillar layer in advanced fuchs endothelial corneal dystrophy: inter-oberserver-reliability and intra-observer-repeatability analysis of corneal densitometry images
Antonia Howaldt, Mert Mestanoglu, Gwen Musial, Rahul Jonas, Claus Cursiefen, Björn Bachmann, Mario Matthaei *(Germany)*

898 F.075 Neuroinflammatory findings with corneal confocal microscopy in long COVID-19 patients, 2 years after acute SARS-CoV-2 infection
Pilar Canadas Suarez, Leonela Gonzalez-Vides, Marta Alberquilla García-Velasco, José Luis Hernández Verdejo *(Spain)*

909 F.076 "Mucus fishing syndrome": presentation of this rare clinical entity along with its therapeutic options
Alessandra Mancini, Vincenzo Scorcia, Giuseppe Giannaccare *(Catanzaro)*

926 F.077 Our experience in managing patients with dry eye syndrome
Yuliia Boieva, Pavel Bezditko, Liudmyla Ivzhenko, Anastasiia Shelenkova *(Ukraine)*

933 F.078 Regenerative medicine in pterygium surgery
Natalia Palarie, Palii Natalia *(Moldova)*

938 F.079 Plasmacytoid dendritic cell-derived secretome ameliorates neuropathic corneal pain
Pedram Hamrah, Brendan Kenyon, Fangfang Qiu, Deshea Harris *(USA)*

957 F.080 May a post-radiation ocular surface disorder compromise penetrating keratoplasty surgery? A case report
Driton Gjukaj, Margarita Todorova *(Switzerland)*

176 *rf* F.081 Polihexanide 0.8 mg/ml eyedrops as new treatment for severe *Acanthamoeba keratitis*
Chiara De Gregorio, Mariateresa Laborante, Andrea De Luca, Antonio Di Zazzo, Marco Coassin *(Italy)*

198 *rf* F.082 Is it really Keratoconus - Topographic mimicry
Agata Wykrota, Berthold Seitz, Elias Flockerzi *(Germany)*

387 *rf* F.083 Clinical phase 1 safety and tolerability evaluation of sustained release silica composite eye drops in human subjects
Kai Kaarniranta, Marcus Reay, Lasse Leino, Sari Kievari, Arto Hartikainen, Oona Martikainen, Benjam Kemiläinen *(Finland)*

462 *rf* F.084 New non-toxic fluorescent marker for quantifying the viability of corneal endothelial cells
Corantin Maurin, Marielle Mentek, Hanielle Vaitinadapoule, Gilles Ulrich, Antoinette De Nicola, Corentin Maret, He Zhiguo, Gilles Thuret, Philippe Gain *(France)*

527 *rf* F.085 Development of a novel multi-stimulus ocular surface aesthesiometer system
Paul Murphy, Melanie Mungalsingh, Sean Peterson, Ben Thompson *(Canada)*

723 F.086 *rf* Advancing In vivo modeling and delivery systems for triplet repeat expansion-mediated corneal endothelial dystrophy: Implications in AntimiR therapy
Diego Piqueras-Losilla, Isabel Campillo, Laura Perea-Galera, Sandra López-Domènech, Milagros Rocha-Barajas, Maria Jose Roig-Revert, Cristina Peris-Martinez, Clara Barbera-Fuset, Aline Huguet, Genevieve Gourdon, Beatriz Llamusí, Estefanía Cerro-Herros *(Spain)*

889 F.087 Vitamin D supplementation reduces systemic modulation of oxidative stress and collagen degradation in keratoconus patients
Giuseppe Suanno, Romina Mayra Lasagni Vitar, Philippe Fonteyne, Karl Anders Knutsson, Federico Bertuzzi, Laura Galli, Paolo Rama, Giulio Ferrari *(Italy)*

7 F.088 Meibomian gland dysfunction in people who have been in the refuge for a long time during the hostilities in Ukraine
Liudmyla Ivzhenko, Pavel Bezditko, Yuliia Boieva *(Ukraine)*

10:45-11:30

POS **Poster Session MBGE**

33 F.089 Corneal topographic indices of Scheimpflug camera in type 2 diabetic and non-diabetic elderly population
AbbasAli Yekta, Mehdi Khabazkhoob, Hassan Hashemi, Hadi Ostadimoghaddam, Reihaneh Yekta, Asieh Ehsaei, Yeganeh Yekta, Foroozan Narooie, Masoud Siyahkamari *(Iran)*

188 F.090 Investigation of genes and miRNAs associated with scarless healing in orbital adipose-derived and limbal-derived mesenchymal stem cells treated with Vitamin C
Eray Atalay, Sevinj Eyubova, Merve Nur Soykan, Burcugül Altuğ Tasa, Onur Ozalp, Ayla Eker Sarıboyacı *(Turkey)*

243 F.091 Association between self-reported eye health and self-reported general health. Results from the FOREVER questionnaire
Jens Rovelt Andreasen, Josefine Freiberg, Miriam Kolko *(Denmark)*

420 F.092 Molecular characterization of metastatic progression in patient derived xenograft models of malignant uveal melanoma
Lucia Demková, Alena Furdova, Viera Horváthová Kajabová, Pavel Babál, Bozena Smolkova, Andrea Šoltýsová *(Slovakia)*

494 F.093 A higher abundance of butyrate-producing taxa in the gut is associated with lower glaucoma prevalence
Joëlle Vergroesen[1], Zakariya Jarrar[2], Stefan Weiss[3], Fabian Frost[3], Robert Kraaij[1], Carolina Medina-Gomez[1], Najaf Amin[2], Cornelia van Duijn[2], Caroline Klaver[1,2,4], Clemens Jürgens[3], Chris Hammond[2], Wishal Ramdas[1] *([1]The Netherlands, [2]United Kingdom, [3]Germany, [4]Switzerland)*

507 F.094 Significative effect of COVID19 confinement on the evolution of myopia in children and young people in Spain
Sergio Recalde, Cristina Irigoyen, Miriam De La Puente, María Fraga De La Viesca, Jorge Gonzalez-Zamora, Valentina Bilbao-Malavé, Jaione Bezunartea, Maria Hernandez, Manuel Saenz De Viteri, Jesús Barrio, Patricia Fernandez-Robredo, Alfredo García Layana *(Spain)*

Friday
27 October 2023

530	F.095	Clinical, phenotypic and genetic characteristics of macula-sparing stargardt disease **Rozaliya Hristova, Lilit Shahinyan, Yoanna Kuneva, Iva Petkova, Nevyana Veleva** *(Bulgaria)*
597	F.096	Neurodegeneration in diabetic retinopathy: an insight on its main signalling pathways **Alex Gallego-Martínez, Irene Andrés-Blasco, Ricardo Casaroli, Salvatore Di Lauro, Maria Dolores Pinazo-Duran** *(Spain)*
793	F.097	Effect of obesity, dietary habits and physical exercise on visual acuity in healthy young subjects **Carolina Moreira-Estebaranz, Melisa Remis-Gonzalez, Beatriz Sánchez Gavilán, Beatriz Hidalgo-Saiz, Luana Giudice, Juan Cedrun-Sanchez, María Puell** *(Spain)*
805	F.098	Crosstalk between oxidative stress, inflammation, angiogenesis and apoptosis in diabetic macular edema **Irene Andrés-Blasco, Alex Gallego-Martínez, Sarah Karam Palos, Antonio Lleó, Ricardo Casaroli, Salvatore Di Lauro, Sara Crespo Millas, Maria Dolores Pinazo-Duran** *(Spain)*
842	F.099	Mir-205-5p As a regulator agent in cell migration processes **Maria Ybarra Sanchez, Miriam Martinez Santos, Maria Oltra, Javier Sancho Pelluz, Jorge Barcia** *(Spain)*
914	F.100	The global incidence and prevalence of *Acanthamoeba keratitis* **Francesca Ceccarelli[1], Gabriele Gallo Afflitto[1], Yuyi Han[2], Maria Vittoria Turco[1], Francesco Aiello[1], Carlo Nucci[1]** *([1]Italy, [2]China)*
934	F.101	miRNA profiling in the aqueous humor in patients with Fuch's endothelial corneal dystrophy **Dominika Wróbel-Dudzińska, Ewa Kosior-Jarecka, Agnieszka Ćwikińska-Haszcz, Marcin Czop, Janusz Kocki, Tomasz Żarnowski** *(Poland)*
238 *rf*	F.102	Transcriptional profilling to identify the inhibitor effect of trehalose as an alternative natural therapeutic agent on pterygium cells **Uğur Yılmaz, Yasin Durkal, Onur Tokgün, Kubilay İnci** *(Turkey)*
351 *rf*	F.104	Effect of melatonin-induced exosomes on proregenerative and antifibrotic pathways involved in corneal scarring **Burcugül Altuğ Tasa, Merve Nur Soykan, Ayla Eker Sarıboyacı, Onur Ozalp, Eray Atalay** *(Turkey)*
607 *rf*	F.105	The miRNA-mRNA interactome of human trabecular meshwork cells treated with TGF- beta1 **Anton Roodnat, Breedge Callaghan, Chelsey Doyle, Sarah Atkinson, Colin Willoughby** *(United Kingdom)*
666 *rf*	F.106	Kruppel-like factor 5 (KLF5) as a genetic factor associated with the etiopathogenesis of keratoconus **Uxía Regueiro, Yaiza Pastoriza, Maite López-López, Wouter Venema, Isabel Lema, Jonas Kuiper, Robert Wisse** *(Spain)*
802 *rf*	F.107	Towards the preclinical diagnosis of diabetic retinopathy and diabetic macular oedema using tear samples **Víctor Alegre Ituarte, Irene Andrés-Blasco, Alex Gallego-Martínez, Ricardo Casaroli, Salvatore Di Lauro, David Galarreta-Mira, Vicente Zanón-Moreno, Maria Dolores Pinazo-Duran** *(Spain)*
841 *rf*	F.108	Serum microRNAs as biomarkers associated with the course of diabetic macular edema **Emanuela Aragona, Alessandro Arrigo, M'Hammed Aguennouz, Pasquale Aragona, Francesco Bandello** *(Italy)*
471	F.109	Genetic landscape of inherited retinal dystrophies in a welsh tertiary referral centre **Francis Sanders, Marcela Votruba** *(United Kingdom)*

10:45-11:30

POS Poster Session NSPH

45 F.110 Leber hereditary optic neuropathy. The Dutch approach
Tanya Lushchyk, Judith van Everdingen *(The Netherlands)*

217 F.111 Needle track technique in strabismus surgery
Seema Bandhu, Yashi Bansal, Barinder Bains, Tania Moudgil *(India)*

256 F.112 Biofeedback fixation training as an important tool to supplement strabismic amblyopia treatment in aduls - preliminary results
Otto Alexander Maneschg, Mirella Barboni, Petra Killik, Éva Maria Bankó, János Németh, Zoltán Zsolt Nagy *(Hungary)*

289 F.113 Epidemiological and clinical aspects of pediatric blunt ocular trauma: retrospective study
Chaimae Baqadir, Daghouj Ghizlane, Meriem El Alami, Sarah Lyz Bel'hantier, Mariam Issa Mahamat, Loubna El Maaloum, Bouchra Allali, Asmaa El Kettani *(Morocco)*

290 F.114 Intravitreal bevacizumab in choroidal neovascularisation in Vogt-Koyanagi-Harada disease in a child: a review of litterarure
Roukaya Chahir, Daghouj Ghizlane, Naoual Mtalai, Loubna Elmaaloum, Bouchra Allali, Asmaa El Kettani *(Morocco)*

292 F.115 Ptosis revealing breast carcinoma about a case
Delphes Mathilde Otsasso Okomiko, Zineb Hammoumi2, Sarah Houti, Daghouj Ghizlane, Loubna El Maaloum, Bouchra Allali, Asmaa El Kettani *(Morocco)*

293 F.116 Unilateral optic neuropathy and mycosis fungoide
Sara Ennaki[1], Daghouj Ghizlane[1], Hamdani Hind[1], Arab Lamiaa[1], Chaa Yasmina[2], El Maaloum Loubna[1], Allali Bouchra[1], El Kettani Asmaa[1] *([1]Morocco, [2]Belgium)*

298 F.117 Orbital cellulitis in children:epidemiological, clinical, paraclinical,therapeutic and evolutionary aspects: Report of 116 cases
Ali Rami, Daghouj Ghizlane, Sara Talha, Samia Zamzami, Sara Ettouri, Loubna el Maaloum, Bouchra Allali, Asmaa el Kettani *(Morocco)*

311 F.118 Retina hypoperfusion in multiple sclerosis: is it only a consequence of atrophy?
Marta Cerdà - Ibáñez, Laura Manfreda-Domínguez, Antonio Duch-Samper *(Spain)*

333 F.119 Primary palpebral tuberculosis: a case report
Ali Rami, Daghouj Ghizlane, Reda Benchekroun, Samia Zamzami, Kawtar El Hadi, Sara Ettouri, Loubna el Maaloum, Bouchra Allali, Asmaa el Kettani *(Morocco)*

356 F.120 Anterior optic neuritis associated with clamydia trachomatis prostatitis
Javier Garulo Nicolas, Laura Manfreda Domínguez, Sergio Alfredo Maugard Tepper, Gemma Ortega Prades, Julia Pérez Martínez, Antonio Duch-Samper *(Spain)*

363 F.121 Diagnosis of non-strabismic binocular vision anomalies - why are there so many different approaches?
Bruce Evans *(United Kingdom)*

392 F.122 Evaluation of machine learning algorithms using OCT and OCT angiography for the diagnosis of multiple sclerosis
María Pilar Rojas Lozano, Pablo García Mesa, Nuria Díaz Gutiérrez, Juan José Gómez Valverde *(Spain)*

408 F.123 Partial transposition of Hummelshein type associated with botulinum toxin in a case of residual paretic endotropia
Marta Suñer Martínez, Víctor Aguado, Diana Pérez, Patricia Ramiro, León Remón, Julia Aramburu Claverías, Miguel Castillo Fernández *(Spain)*

411 F.124 Vestibular ocular reflex in different types of amblyopia: a monocular and binocular evaluation
Samira Hassanzadeh, Mahdi Sharifi, Sadegh Jafarzadeh Bajestani, Mohammad Yaser Kiaroodi, Masoud Rostami *(Iran)*

417 F.125 Transient eye closure and ocular dominancy in patients with intermittent exotropia
Samira Hassanzadeh, Masoud Rostami, Mohammad Yaser Kiaroodi, Mohammad Etezad Razavi, Mahdi Sharifi *(Iran)*

473 F.127 Risk of malignant brain tumors in the patients with ocular motor cranial nerve palsies
In Jeong Lyu *(South Korea)*

487 F.128 The challenge of monitoring papilledema in a child with idiopathic intracraneal hypertension and achromatopsia
Rocio Falcon Roca, Katarzyna Kubiak, Mercedes Rivera Zori, Isabel Valls Ferrán, Belén Gutiérrez Partida, Celia Martín Villaescusa, Natalia Blanco Calvo, Raquel Borrego Hernández *(Spain)*

535 F.129 Ocular tics in pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections (PANDAS)
Stefano Dore, Angelo Zinellu, Daniele Satta, Giacomo Boscia, Carlo Murgia, Antonio Pinna *(Italy)*

546 F.130 Papillophlebitis: a case series of a controversial diagnosis
Ehtesham Shamsher, Aki Kawasaki *(Switzerland)*

577 F.131 Visual function changes along the continuum of Alzheimer´s disease
Lorena Elvira-Hurtado, Inés López-Cuenca, Rosa de Hoz, Mario Salas, Lidia Sánchez-Puebla, José A. Matamoros, José A. Fernández-Albarral, Juan Jose Salazar, Pedro Gil, Fernando Mestú, Jose Manuel Ramirez, Elena Salobrar-Garcia *(Spain)*

622 F.132 The predictive value of parameters of optic disk in evaluating the progression of myopia
Yuliya Huseva, Olga Zharikova *(Belarus)*

629 F.133 Changes in the structure and function of the visual pathway in subjects at high risk for the development of Alzheimer's disease: 27 months of follow-up
Inés López-Cuenca, Lidia Sanchez-Puebla, María Álvarez Gutierrez, Elena Salobrar-Garcia, Lorena Elvira-Hurtado, Ana Barabash, Federico Ramirez-Toraño, José A. Fernández-Albarral, José A. Matamoros, Juan Jose Salazar, Jose Manuel Ramirez, Rosa De Hoz *(Spain)*

650 F.134 Rapidly progressive neuromyelitis optica, report of a case
Ainhoa Mimendia Sancho, Ramon Espinet, Felipe Costales-Mier, Pau Cid Bertomeu, Alicia Traveset Maeso *(Spain)*

651 F.135 Optic nerve glioma: about a case
Imane Laabi, Chaimae Baqadir, Meriem El Alami, Daghouj Ghizlane, Loubna Elmaaloum, Bouchra Allali, Asmaa El Kettani *(Morocco)*

665 F.136 Retrobulbar haemorrhage and globe perforation after botulinum toxin injection into the medial rectus
Ines Artola, Maria Teresa Cedazo Antón, Manuel Morales Sanchez, Sergio Pernas, Eduardo Conesa Hernandez, Manuel Moriche Carretero *(Spain)*

705 F.137 Diplopia as the presenting symptom of a post-transplant lymphoproliferative disorder in a bilateral inferior lim transplanted young adult
Paula Boned Fustel, Laura Fernández García, M Ángeles Ruth Bort Martí, Enrique España Gregori *(Spain)*

719 F.138 Breaking the mold: an essential need in optic neuritis management
M Ángeles Ruth Bort Martí, Paula Boned Fustel, Laura Fernández García, Bonaventurs Casanova Estruch *(Spain)*

720 F.139 When atypical becomes urgent: unleashing the ophthalmologist's role in managing unconventional macroadenomas
M Ángeles Ruth Bort Martí, Paula Boned Fustel, Blanca Casado pelaez, Laura Fernández García, Enrique España Gregori *(Spain)*

755 F.140 *Bartonella neuroretinitis*: case report and literature review
Ghizlane Daghouj, Sara Ettouri, Loubna Elmaaloum, Bouchra Allali, Asmaa El Kettani *(Morocco)*

772 F.141 Optic nerve disorders and reduced visual acuity in children. Differential diagnosis
Mª Dolores Díaz-Barreda, Ana Boned-Murillo, Guisela Fernández-Espinosa, María Sopeña, Marta Arias Álvarez, Isabel Pinilla *(Spain)*

791 F.142 A review of retinal analysis by OCT in murine models Alzheimer's disease
Lidia Sanchez-Puebla, Inés López-Cuenca, Rosa De Hoz, Ana Isabel Ramirez, José A. Matamoros, María Pilar Rojas Lozano, Elena Salobrar-Garcia, José A. Fernández-Albarral, Alberto Arias Vázquez, Juan Jose Salazar, Jose Manuel Ramirez *(Spain)*

797 F.143 Visual fields loss patterns in dominant and recessive optic atrophy based on OPA 1 archetypes
Maria Lucia Cascavilla, Catarina Coutinho, Marco Battista, Ferdinando Zanchetta, Alice Galzignato, Giorgio Lari, Stefano Albertini, Luigi Brotto, Paolo Nucci, Rita Fioresi, Francesco Bandello, Piero Barboni *(Italy)*

808 F.144 Uncorrected refractive errors in Senegalese School-Aged children
Caridad Galindo-Romero, Luis Ordoñez-Angamarca, Esther Berrio, Eloy A. Villegas *(Spain)*

868 F.145 Peripapillary retinal layer thickness is associated with retinal oxygen saturation in newly diagnosed patients with multiple sclerosis
Dragana Nes, Pål Berg-Hansen, Sigrid A. De Rodez Benavent, Einar A. Høgestøl, Mona K. Beyer, Daniel A. Rinker, Nina Veiby, Mia Karabeg, Beáta Éva Petrovski, Elisabeth G. Celius, Hanne F. Harbo, Goran Petrovski *(Norway)*

895 F.146 Cortical visual impairment in a child: a case report
Hind Hamdani, Naoual Mtalai, Sara Ennaki, Ghizlane Daghouj, Loubna El Maaloum, Bouchra Allali, Asmaa El Kettani *(Morocco)*

900 F.147 Changes in colour perception in Alzheimer´s disease continuum
Lorena Elvira-Hurtado, Inés López-Cuenca, Rosa De Hoz, Mario Salas, Lidia Sanchez-Puebla, José A. Matamoros, José A. Fernández-Albarral, Juan Jose Salazar, Fernando Mestú, Pedro Gil, Jose Manuel Ramirez, Elena Salobrar-Garcia *(Spain)*

335 F.149 Optic neuritis post SARS-CoV-2 infection and vaccination; a systematic review exploring the clinical features of optic neuritis after SARS-CoV-2 infection and vaccination
rf
Iliana Georganta, Despoina Chasapi, Charlotte Smith, Konstantinos Kopsidas, Andrew Tatham *(United Kingdom)*

477 F.150 rf
The ganglion cell complex thickness and visual function in leber hereditary optic neuropathy
Johan Hedström, Maria Nilsson, Martin Engvall, Abinaya Venkataraman *(Sweden)*

496 F.151 rf
Archetypal analysis for dominant optic atrophy visual field loss
Catarina Coutinho, Ferdinando Zanchetta, Alice Galzignato, Marco Battista, Giorgio Lari, Stefano Albertini, Enrico Borrelli, Giacomo Savini, Maria Lucia Cascavilla, Francesco Bandello, Rita Fioresi, Piero Barboni *(Italy)*

511 F.152 rf
Long-term efficacy of idebenone in patients with Leber hereditary optic neuropathy in the LEROS study: analyzing change in visual acuity according to causative mutation and disease phase
Patrick Yu-Wai-Man[1], Valerio Carelli[2], Xavier Llòria[2], Livia Tomasso[2], Thomas Klopstock[3] *([1]United Kingdom, [2]Italy, [3]Germany)*

515 F.153 rf
Long-term efficacy of idebenone in patients with Leber hereditary optic neuropathy in the LEROS study: analyzing change in visual acuity over time according to age at symptom onset
Xavier Llòria[1], Patrick Yu-Wai-Man[2], Valerio Carelli[1], Livia Tomasso[1], Thomas Klopstock[3] *([1]Italy, [2]United Kingdom, [3]Germany)*

586 F.154 rf
Optic nerve head dimension as biomarker in leber hereditary optic neuropathy
Marco Battista[1], Michele Carbonelli[1], Catarina P. Coutinho[1], Jonathan Oakley[2], Maria Lucia Cascavilla[1], Alice Galzignato[1], Giorgio Lari[1], Giulia Amore[1], Chiara La Morgia[1], Francesco Bandello[1], Valerio Carelli[1], Piero Barboni[1] *([1]Italy, [2]USA)*

706 F.155 rf
Choroidal thickness as a biomarker for axial length change
Matilda Biba, Gareth Lingham, Emmanuel Kobia Acquah, James Loughman, Daniel Flitcroft *(Ireland)*

792 F.156 rf
Retinal ganglion cells in a mouse model of Alzheimer´s disease: a temporal study
Lidia Sanchez-Puebla, Mar Gómez-Moreno, José A. Matamoros, José A. Fernández-Albarral, Rosa De Hoz, Juan Jose Salazar, Elena Salobrar-Garcia, Inés López-Cuenca, Carmen Nieto-Vaquero, María Isabel Cuartero, Ana I. Ramírez, Jose Manuel Ramirez *(Spain)*

209 F.157
Current status & outcomes of the Welsh national cohort of patients with leber's hereditary optic neuropathy treated with idebenone
Francis W.B. Sanders, Marcela Votruba *(United kingdom)*

703 F.158
Presentations patterns of acute onset binocular diplopia among pediatric population in the emergency department: retrospective analysis and systematic review of the literature
Paula Boned Fustel, Laura Fernández García, M Ángeles Ruth Bort Martí, Honorio Barranco González *(Spain)*

Poster Session 3

Moderators: **Josè Fernandez Albarral** *(Spain)*, **Rosa De Hoz** *(Spain)*, **Ana Isabel Ramirez** *(Spain)*, **Ana Raquel Santiago** *(Spain)*, **Heli Skottman** *(Finland)*

10:15-11:00

POS **Poster Session ACB**

190 S.001 Intravitreal injection of Noggin ameliorates retinal degeneration in a mouse model of retinitis pigmentosa
Ivan Fernandez-Bueno[1], Carlos Font[2], Abey Martin[2], Mark Martin[2] Courtney Helm[2], E-Jine Tsai[2], Mei Xu[2], Mindy George-Weinstein[2], Arturo Bravo-Nuevo[2] *([1]Spain, [2]USA)*

254 S.002 Gradient myopic defocus causes scleral tissue reinforcement and structural scleral remodeling
Denise Hileeto, Thomas Gillis, Elizabeth Irving *(Canada)*

486 S.003 Simvastatin and amfenac act as immunomodulators during induced epithelial-mesenchymal transition in ARPE-19 cells
Niina Harju (ex-Bhattarai), Sirpa Loukovaara, Anu Kauppinen *(Finland)*

506 S.004 A systems biology approach to understand retinal ciliopathies
Xiaonan Liu[1,2], Anna Pacwa[1], Klaudia Bugara[1], Bartosz Machna[1], Piotr Rodak[1], Joanna Machowicz[1], Joanna Lewin-Kowalik[1], Adrian Smedowski[1] *([1]Poland, [2]Finland)*

534 S.005 Mitophagy as a potential mediator for the anti-inflammatory effects of metformin in human retinal pigment epithelium cells
Maija Toppila, Maria Hytti, Sofia Ranta-aho, Kai Kaarniranta, Anu Kauppinen *(Finland)*

540 S.006 A 15 month follow-up study characterizing the progression of retinal pathology and visual loss in CLN3 ex7/8 mice
Tommi Torsti, Elisa Toropainen, Toni Tamminen, Anu Kauppinen, Kai Kaarniranta, Markus M. Forsberg *(Finland)*

541 S.007 A pilot study for decellularizing human and porcine cornea for future use in corneal regeneration
Natasha Josifovska[1], Essi M. Niemi[1], Hanne Scholz[1], Goran Petrovski[1,2] *([1]Norway, [2]Croatia)*

551 S.008 Monomeric C-reactive protein exacerbates choroidal neovascularization in vivo: implications for age-related macular degeneration
Patricia Fernandez-Robredo, Maria Hernandez, Sara Romero-Vázquez, Sergio Recalde, Jaione Bezunartea, Maite Moreno Orduña, Alfredo García Layana, Alfredo Adàn, Blanca Molins *(Spain)*

640 S.009 A simple method for preservation of embryonic rat brain tissue for primary neuron culture
Çiğdem Pehlivan, Humeyra Nur Kaleli, Afsun Sahin, Murat Hasanreisoğlu *(Turkey)*

681 S.010 Increased secretory autophagy in retinal pigment epithelial cells of the 5xFAD mice
Johanna Ruuth, Toni Tamminen, Elisa Toropainen, Ali Koskela, Heikki Tanila, Kai Kaarniranta *(Finland)*

732 S.011 Menopause-induced neurodegeneration of retinal ganglion cells in a model of an acute retinal ischemia in rats
Piotr Rodak, Edyta Olakowska, Anna Pacwa, Joanna Machowicz, Adrian Smedowski *(Poland)*

736 S.012 The characterization of a new murine model of central areolar choroidal dystrophy showed that both cones and rods were affected by R195L mutation in peripherin-2
María José Ruiz Pastor, Xavier Sanchez Saez, Oksana Kutsyr, Henar Albertos-Arranz, Carla Sánchez Castillo, Isabel Ortuno-Lizaran, Lorena Vidal, Natalia Martínez-Gil, Victoria Maneu, Pedro Lax, Nicolas Cuenca *(Spain)*

137 S.013 Altered corneal structures in form-deprived highly myopic chicks
rf
Byung Soo Kang[1], Tsz-wing Leung[1], Sonal Vyas[2], Patience Ayerakwah[1], Jia Chun Lin[1], Yuanyuan Liang[1], William Stell[3], Chea-su Kee[1] *([1]Hong Kong, [2]USA, [3]Canada)*

554 S.014 P3HT:ITIC polymer based photovoltaic biointerfaces for neural photostimulation
rf
Humeyra Nur Kaleli[1], Onuralp Karatum[1], Çiğdem Pehlivan[1], Cem Kesim[1], Erdost Yıldız[1,2], Afsun Sahin[1], Sedat Nizamoğlu[1], Murat Hasanreisoğlu[1] *([1]Turkey, [2]Germany)*

561 S.015 Insights into human choroid melanocyte and stromal cells
rf
Michele Madigan, Chieh-Lin (Stanley) Wu, V. Cioanca, Robert Conway *(Australia)*

668 S.016 Mitophagy-reporter Muller cell line (MQ-MG2) as a novel platform for ocular drug discovery
rf
Aidan Anderson, Kaouthar Bouzinab, Paula Rudzinska, Ian Ganley, Graham Wallace, Jose M. Romero *(United Kingdom)*

844 S.017 Nrf2 and HuR/ELAV1 as determinant factors for VEGF expression and secretion in ARPE-19 cells under stress stimuli
rf
Giorgia Bresciani, Federico Manai, Stefano Govoni, Marialaura Amadio *(Italy)*

860 S.018 The size of the ciliary body in human enucleated chronic angle-closure glaucoma
rf
Rahul Jonas, Jost Jonas, Songhomitra Panda-Jonas, Shefali Jonas *(Germany)*

903 S.019 PGC-1a inhibition promotes autophagy in induced pluripotent stem cell-derived retinal pigment epithelial cells generated from age-related macular degeneration patients
rf
Maria Hytti[1], Anu Kauppinen[1], Heli Skottman[1], Janusz Blasiak[2], Kai Kaarniranta[1] *([1]Finland, [2]Poland)*

919 S.020 De novo pigmentation of amelanotic retinal pigment epithelium - An *Ex Vivo* model
rf
Santosh Gupta[1], Lyubomyr Lytvynchuk[2,3], Taras Ardan[4], Hana Studenovska[4], Ljubo Znaor[5], Slaven Erceg[4,6], Knut Stieger[2], Jan Motlik[4], Goran Petrovski[1,5] *([1]Norway, [2]Germany, [3]Austria, [4]Czech Republic, [5]Croatia, [6]Spain)*

949 S.021 In situ distribution of markers for stemness, quiescence, proliferation and differentiation in the human cornea and limbus
rf
Jovana Bisevac, Morten Carstens Moe, Goran Petrovski, Agate Noer *(Norway)*

851 S.022 Drusen of the retinal pigment epithelium of the parapapillary region
Rahul Jonas, Jost Jonas, Songhomitra Panda-Jonas, Shefali Jonas *(Germany)*

857 S.023 A microbial infection-resistant 3D bioprinted material for corneal stroma regeneration
Gerard Boix Lemonche[1], Essi M. Niemi[1], Georgina Faura Muñoz[1], Hanne Scholz[1], Barbara Skerlavaj[1], Goran Petrovski[1,2] *([1]Norway, [2]Croatia)*

10:15-11:00

POS Poster Session EOVS

54 S.024 ON-OFF electroretinogram analysis in patients with negative electroretinograms
Dorota Pojda-Wilczek *(Poland)*

300 S.025 Investigating focal macular electroretinogram function for fundus-related perimetry application
Naoto Suzuki *(Japan)*

516 S.026 A color vision test assisted by neural networks
José Monteiro, Paulo Alves, Andreia Gomes, Sérgio Nascimento, João Linhares *(Portugal)*

517 S.027 A color vision test - Comparing results between computer screens
Andreia Gomes, Joao Linhares, Paulo Jorge Alves, José Monteiro, Sérgio Nascimento *(Portugal)*

543 S.028 Influence of dark adaptation on the perceptional thershold of electrically evoked phosphenes
Dietmar Link[1], Eva Noether[1], Stefanie Freitag[1], Uwe Graichen[2], Sascha Klee[1,2] *([1]Germany, [2]Austria)*

595 S.029 Texture analysis shows interocular retina asymmetries in women not existing in men
Rui Bernardes, Ana Nunes, João Ferreira, Pedro Guimarães, Pedro Serranho, Miguel Castelo-Branco *(Portugal)*

619 S.030 Structurally enhanced perimetric examination
Josephine Evans, David Crabb, Giovanni Ometto, Giovanni Montesano *(United Kingdom)*

634 S.031 Peripheral refraction and retinal activity with Dual Focus contact lenses for myopia control
Paulo Fernandes, Ana Amorim-de-Sousa, António Queirós, José Manuel González-Meijome *(Portugal)*

636 S.032 Study of peripheral blur in retinal electrical activity
António Queiros, Ana Nevado, Ana Filipa Pereira-da-Mota, Ana Amorim-de-Sousa, Paulo Fernandes *(Portugal)*

711 S.033 Healthy aging does not alter centre surround orientation effects in foveal intraocular and interocular contrast suppression
Kabilan Pitchaimuthu[1,2], Bao Nguyen[1], Allison McKendrick[1] *([1]Australia, [2]Sweden)*

729 S.034 Assessment of functional changes in long-standing type 1 diabetic patients without diabetic retinopathy with multifocal electroretinogram
Marta Arias Álvarez, Sofia Bielsa Alonso, Elvira Orduna Hospital, Cristina Tomas-Grasa, Maria Sopeña-Pinilla, Guisela Fernández-Espinosa, Mª Dolores Díaz-Barreda, Diego Rodríguez Mena, Javier Acha, Isabel Pinilla *(Spain)*

740 S.035 Multifocal electroretinogram in the diagnosis of Stargardt disease
Maria Sopeña-Pinilla, Marta Arias Álvarez, Guisela Fernández-Espinosa, Sofia Bielsa Alonso, Cristina Tomas-Grasa, Ana Boned-Murillo, Mª Dolores Díaz-Barreda, Elvira Orduna Hospital, Isabel Pinilla *(Spain)*

782 S.036 Retinal response to two commercially available contact lenses for myopia control
Ana Amorim-de-Sousa, Paulo Fernandes, António Queirós, José Manuel González Meijome *(Portugal)*

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84 S.037 Contrast threshold recovery after bleaching during cone-mediated mesopic adaptation: the effect of test conditions
Melisa Remis-Gonzalez, Carolina Moreira-Estebaranz, Beatriz Sánchez Gavilán, Javier Álvarez Liébana, Juan Cedrun-Sanchez, María Puell *(Spain)*

852 S.038 The aged mouse retina: anatomical and functional study of retinal ganglion cells
Kristy Tatiana Rodríguez Ramírez, María Norte Muñoz, Alejandro Gallego Ortega, Manuel Vidal-Sanz, Marta Agudo-Barriuso *(Spain)*

875 S.039 Influence of visual acuity on monocular face perception and exploration: evidence from gaze-contingency
Nathan Hupin, Coralie Hemptinne, Demet Yuksel *(Belgium)*

902 S.040 Electrophysiological response of myopic young adults with a novel ophtalmic lens for the control of myopia progression
Sara Silva-Leite, Sílvia Alves-Touças, Ana Amorim-de-Sousa, Paulo Fernandes, José Manuel González Méijome *(Portugal)*

907 S.041 Development of a cone-mediated dark adaptation test on a smartphone
Beatriz Sánchez Gavilán[1], Melisa Remis-Gonzalez[1], Carolina Moreira-Estebaranz[1], Shrinivas Pundlik[2], María Puell[1] *([1]Spain, [2]USA)*

913 S.042 Comparison of changes in ocular aberrations with accommoation and accommodative facility
Maria Mechó García[1], María Arcas Carbonell[2], Elvira Orduna Hospital[2], Ana Sánchez Cano[2] *([1]Portugal, [2]Spain)*

932 S.043 Eyecare staff knowledge in three Belgium nursing homes
Zahra Javdani Sanatgar Moghaddam, Frank Goes *(Belgium)*

936 S.044 Tryptamine psychedelics shape population receptive fields in early visual cortex in the presence of perceptual distortions
Marta Pais, Carla Soares, Marta Teixeira, Gisela Lima, Patrícia Rijo, Célia Cabral, Miguel Castelo-Branco *(Portugal)*

383 *rf* S.045 Analysis of the relation between facial asymmetry and users' preference between standard versus customized inset progressive addition lenses
Oscar Garcia Espinilla, Irene Sánchez Pavón, Raúl Martín Herranz *(Spain)*

395 *rf* S.046 The use of colour and rapid flicker sensitivity tests for early detection and monitoring of vision changes in diabetes
Megan Vaughan, Sajni Bohra, Emily Patterson, Marisa Rodriguez-Carmona, John Barbur *(United Kingdom)*

445 *rf* S.047 Are there any indicative signs in Colour Doppler Imaging of de novo development thyroid orbitopathy after radioiodine treatment
Dorota Walasik-Szemplińska, Grzegorz Kamiński, Iwona Sudoł-Szopińska *(Poland)*

497 *rf* S.048 Neurovascular coupling reflex from contralateral stimulation: system setup
João Jordão[1], Hugo Quental[1], Miguel Morgado[1], João Figueira[1], Daniela Castro-Farías[2], Delia Cabrera DeBuc[3], Miguel Castelo-Branco[1], Michel Paques[2], Rui Bernardes[1] *([1]Portugal, [2]France, [3]USA)*

525 *rf* S.049 The effects of post-saccadic oscillations on visual processing time
Emsal Llapashtica, John Barbur *(United Kingdom)*

532 S.050 Changes in visual function in long-term type 1 diabetic patients without diabetic retinopathy using full-field electroretinogram
rf
Marta Arias Álvarez, Guisela Fernández-Espinosa, Maria Sopeña-Pinilla, Cristina Tomas-Grasa, Sofia Bielsa Alonso, Ana Boned-Murillo, Inés Vicente Garza, Diego Rodríguez Mena, Elvira Orduna Hospital, Isabel Pinilla *(Spain)*

602 S.051 Relationships between regional retinal sensitivities assesed by microperimetry and their corresponding retinal layer thicknesses in healthy middle-aged subjects
rf
María Puell, Melisa Remis-Gonzalez, Carolina Moreira-Estebaranz, Juan Cedrun-Sanchez *(Spain)*

659 S.052 A comparison of visual electrophysiology measures in optic neuropathy.
rf
Dorothy Thompson, Katrina Prise, Lisa Tucker, Dermot Roche, Sian Handley, Oliver Marmoy *(United Kingdom)*

781 S.053 Sex-related differences in the visual function of an animal model of type 1 diabetes
rf
Sara Oliveira, Elisa Julião Campos, Rosa Fernandes, Rui Bernardes, Paulo Matafome, António Francisco Ambrósio *(Portugal)*

856 S.054 ZOSPy, a python package for ray tracing simulations
rf
Luc Van Vught, Corné Haasjes, Jan-Willem Beenakker *(The Netherlands)*

413 S.055 Visual acuity testing in preschool children: Freiburg Acuity Test (FrACT) vs LEA Symbols Test
Navid Farassat, Vanessa Jehle, Sven Heinrich, Wolf Lagrèze, Michael Bach *(Germany)*

10:15-11:00

POS Poster Session G

12 S.056 A meta-analysis of surgical treatments for childhood glaucoma
Yun Jeong Lee, Young Kook Kim *(South Korea)*

18 S.057 Comparative study of the efficacy of lens extraction and laser peripheral iridotomy in primary angle closure
Nataliya Kurisheva, Alexey Pomerantsev, Oxana Rodionova, Galina Sharova *(Russia)*

80 S.058 Clinical profile of glaucoma patients in rural tertiary care hospital of Western Maharshtra state of India
Viraj Padwal, Pradnya Bhalerao, Smita Pawar *(India)*

118 S.059 Comparison of a preservative-free bimatoprost 0.01% ophthalmic gel with a preserved bimatoprost 0.01% ophthalmic solution: A phase III, randomised, multicentre, 3-month study
Francisco José Muñoz Negrete[1], Fotis Topouzis[2], Francesco Oddone[3], Sylvie Nisslé[4], Dariusz Rokicki[4], Ingrida Januleviciene[4], Paul Harasymowycz[6], Ingeborg Stalmans[7] *([1]Spain, [2]Greece, [3]Italy, [4]France, [5]Lithuania, [6]Canada, [7]Belgium)*

127 S.060 Factors contributing to the development of choroidal microvasculature dropout in glaucoma suspects and patients with glaucoma
Hee Jong Shin, Chan Kee Park, Hae-Young Park *(South Korea)*

162 S.061 Long term intraocular pressure fluctuation and epiretinal membrane in patients with glaucoma or glaucoma suspect
Kyoung In Jung, HeeKyung Ryu, Chan Kee Park *(South Korea)*

165 S.062 Comparing the effect of benzalkonium chloride-preserved, polyquad-preserved, and preservative-free prostaglandin analogue eye drops on cultured human conjunctival goblet cells
Anne Nagstrup[1], Josefine Freiberg[1], Pernille May Hansen[1], Gerard Boix-Lemonche[2], Tor Paaske Utheim[2], Darlene Dartt[3], Goran Petrovski[2,4], Steffen Heegaard[1], Miriam Kolko[1] *([1]Denmark, [2]Norway, [3]USA, [4]Croatia)*

177 S.063 Retinal neurodegeneration in intraocular pressure fluctuation rat model
Chan Kee Park, Kyoung In Jung, Jeong-Sun Han *(South Korea)*

184 S.064 Evaluating the diagnostic performance with neurovascular segregation of the retinal nerve fibre layer in glaucoma
Damon Wong, Ai Ping Yow, Jacqueline Chua, Leopold Schmetterer *(Singapore)*

210 S.065 Relationship between central corneal thickness and inter-eye disease severity in primary angle closure glaucoma
Monisha Nongpiur, Ruthra Umapathi, Tin Hliang, Tin Aung *(Singapore)*

236 S.066 Automated analysis of vessel morphometry in retinal images from a Danish high street optician setting
Josefine Freiberg[1], Roshan Welikala[2], Jens Rovelt[1], Christopher Owen[2], Alicja Rudnicka[2], Miriam Kolko[1], Sarah Barman[2] *([1]Denmark, [2]United Kingdom)*

251 S.067 Soluble epoxide hydrolase gene deletion ameliorates retinal and ophthalmic arterial senescesome
Caroline Manicam, Elahe Zare, Mario Dejung, Falk Butter, Franz Grus, Norbert Pfeiffer, Natarajan Perumal *(Germany)*

304 S.068 Central contrast sensitivity as an outcome measure in randomized controlled trials in glaucoma - a systematic review
Jens Riis Møller[1], Alexander Sverstad[2], Gianni Virgili[3,4], Augusto Azuara-Blanco[3], Josefine Clement Freiberg[1], Simone Ahrensberg[1], Olav Kristianslund[2], Goran Petrovski[2], Miriam Kolko[1] *([1]Denmark, [2]Norway, [3]United Kingdom, [4]Italy)*

321 S.069 Risk factors and macular microvascular changes in open angle glaucoma progression: a longitudinal study using OCT-A
Maria del Mar Schilt-Catafal, Vicente T. Pérez-Torregrosa, Antonio M. Duch-Samper *(Spain)*

328 S.070 Ocular pharmacokinetics of a new preservative-free bimatoprost 0.01% ophthalmic gel
Dariusz Rokicki, Silvia Ghione, Richard Allan, Karen Viaud, Fanny Allan *(France)*

345 S.071 Fluvoxamine supresses transforming growth factor beta-2-induced fibrotic changes in trabecular meshwork cells
Timea Medveczki[1], Minh N. Tran[1], Balazs Besztercei[1], Gyorgy Torok[1], Illes Kovacs[1,2], Attila J. Szabo[1], Andrea Fekete[1], Judit Hodrea[1] *([1]Hungary, [2]USA)*

375 S.072 Factors associated with retinal nerve fiber layer stability after glaucoma surgery
Sung Eun Park *(South Korea)*

377 S.073 2 Year results of combined phacoemulsification- iStent inject W, from a single centre
Kleonikos Tsakiris[1], Themistoklis Gialelis[2], Athanasios Vergados[1] *([1]United Kingdom, [2]Greece)*

399 S.074 Influence of the postoperative restrictive methodologies and efficacy of the Baerveldt 350 implant after 12 months follow-up
Maria Del Mar Schilt-Catafal, Carlos Arciniegas, Nathalie Gutierrez-Lemus, Elena Ávila Marrón, Osvaldo Guevara-Chavarría, Shirin Djavanmardi, Susana Duch *(Spain)*

404 S.075 The role of trabeculoplasty in challenging glaucoma
Gemma Caterina Maria Rossi, Lorenzo Savini, Paolo Rama, Giovanni Milano *(Italy)*

416 S.076 Distinct metabolic profiles in ocular hypertensive individuals responding
Mia Langbøl[1], Jens Rovelt Andreasen[1], Cinzia Bocca[2], Sarkis Saruhanian[1], Daniel Tiedemann[1], Rupali Vohra[1], Guy Lenaers[2], Miriam Kolko[1] *([1]Denmark, [2]France)*

421 S.077 The socioeconomic impact among Tunisian glaucoma patients
Aida Jallouli, Rim Maamouri, Meryem Doukh, Hichem Aoun, Meriem Ouederni, Monia Cheour *(Tunisia)*

433 S.078 Weill Marchesiani syndrome, about a case
Ghizlane Daghouj, Hind Hamdani, Naoual Mtalai, Loubna El Maaloum, Bouchra Allali, Asmaa El Kettani *(Morocco)*

465 S.079 Steroid induced glaucoma in the pediatric population
Naoual Mtalai, Daghouj Ghizlane, Hind Hamdani, Elmaaloum Loubna, Allali Bouchra, Elkettani Asmaa *(Morocco)*

503 S.080 Effects of cataract on peripapillary retinal nerve fiber layer and ganglion cell-inner plexiform layer thickness measurement by cirrus optical coherence tomography
Chanjoon Park *(South Korea)*

509 S.081 Clinical effectiveness of combined cataract surgery with iStent inject implantation in the surgical treatment of open-angle glaucoma
Shakhriiar Gurbanzade, Fidan Aghayeva, Abdelrahman Assaf, Ines Lanzl *(Germany)*

522 S.082 Anti-cytokine antibodies attenuated neuroglial degeneration under hypoxic stress
Chaoqiang Guan, Linglin Zhang, Natarajan Perumal, Hao Lin, Alfred Francis Pakkam John Francis, Norbert Pfeiffer, Franz Grus, Caroline Manicam *(Germany)*

536 S.083 Evolution of the morphology of filtering blebs through anterior segment OCT, one, three and six months after Preserflo Microshunt implant and its correlation with intraocular pressure
Gemma Ortega Prades, Vicente-Tomás Pérez-Torregrosa, Leyre Sanz Gallén, Álvaro-Andrés Ojeda Parot, Prudencia Rochina Pérez, Antonio Miguel Duch Samper *(Spain)*

538 S.084 Potential neuroprotective effects of anti-cytokine antibodies against lipopolysaccharide-induced microglial inflammation
Linglin Zhang, Natarajan Perumal, Chaoqiang Guan, Alfred Francis Pakkam John Francis, Norbert Pfeiffer, Franz H. Grus, Caroline Manicam *(Germany)*

557 S.085 Zeiss Visulas green SLT in primary open-angle glaucoma and ocular hypertension: 6 month follow up in a real-world setting
Matteo Sacchi, Davide Tomaselli, Gaia Li Calzi, Gianluca Monsellato, Cinzia Brancato, Paolo Nucci *(Italy)*

568 S.086 Combined non-penetrating deep sclerectomy with phacoemulsification versus non-penetrating deep sclerectomy alone
Carmen Miquel López, Maria Victoria Navarro Abellán, María de los Reyes Retamero Sánchez, Luis Eloy Pérez González, Javier Hernández Olivares *(Spain)*

572 S.087 RNA-binding protein ELAVL1-mediated neuroprotection of retinal ganglion cells
Anna Pacwa[1], Joanna Machowicz[1], Piotr Rodak[1], Xiaonan Liu[1,2], Marialaura Amadio[3], Joanna Lewin-Kowalik[1], Adrian Smedowski[1] *([1]Poland, [2]Finland, [3]Italy)*

574 S.088 Third surgery of Ahmed valve tube exposure: a case report
Yolanda Cifre Fabra, Gemma Ortega Prades, Álvaro Andrés Ojeda Parot, Vicente T. Pérez-Torregrosa, Antonio M. Duch-Samper *(Spain)*

663 S.089 Postoperative glaucome following cataract surgery in children
Zineb Hammoumi, Daghouj Ghizlane, Houti Sarah, Otsasso Mathilde, El Maaloum Loubna, Allali Bouchra, El Kettani Asmaa *(Morocco)*

678 S.090 Comparing first and second generation iStent for the treatment of glaucoma: a systematic review
Diego Abelleyra Lastoria *(United Kingdom)*

680 S.091 A novel effect of plasma rich in growth factors in the small leucine-rich proteoglycans regulation in trabecular meshwork
Susana del Olmo Aguado, Carla Martin Cueto, Andrés Fernández-Vega Cueto, Ignacio Rodriguez Uña, Nagore de Pablo Herranz, Pedro Pablo Rodriguez Calvo, Luis Quirós Fernández, Jesús Merayo-Lloves *(Spain)*

721 S.092 Progression risk factors in glaucoma patients with disc hemorrhage
Ji Young Lee, Jin A Choi *(South Korea)*

726 S.093 Glaucoma in Sturge-Weber-Krabbe syndrome about 10 cases
Reda Benchekroun, Daghouj Ghizlane, Naoual Mtalai, Ali Rami, Loubna El Maaloum, Bouchra Allali, Asmaa El Kettani *(Morocco)*

734 S.094 The interest of ultrasound biomicroscopy in congenital glaucoma : observation and review of the literature
Chaimae Baqadir, Loubna El Maaloum, Daghouj Ghizlane, Imane Laabi, Mariam Issa Mahamat, Meriem El Alami, Sarah Lyz Bel'hantier, Bouchra Allali, Asmaa El Kettani *(Morocco)*

744 S.095 Brachial artery FMD and carotid artery IMT in glaucoma
Veljko Rogosic, Lucija Vanjaka Rogosic, Andro Frankovic, Sime Kabic *(Croatia)*

756 S.096 Combined surgery and Preserflo coating with conjunctival graft autologous in acute pseudo-exfoliative glaucoma
Aranzazu Caro Ortega, Gemma Ortega Prades, Vicente T. Pérez-Torregrosa, Francisco Calleja Casado, Elena Gracia Rovira, Prudencia Rochina Pérez, Antonio M. Duch-Samper *(Spain)*

762 S.097 Evaluation of macular vessel density changes in patients with POAG by Swept-source OCTA
Asaad Ghanem *(Egypt)*

804 S.098 Idebenone addition in protein-loaded PLGA/VitE microspheres as neuroprotective IODDS
Cristina Morilla-Lomeña, Blanca Reguera-Insausti, Vanessa Andrés-Guerrero, Marta Vicario de la Torre, Marco Brugnera, Beatriz de las Heras, Rocio Herrero-Vanrell, Irene Cuadrado-Berrocal, Irene Bravo-Osuna *(Spain)*

810 S.099 Intraouclar pressure and its determinants in a very old population. The Ural very old study
Jost Jonas[1], Bikbov Mukharram[2], Gyulli M[2], Ellina Iakupova[2], Songhomitra Panda-Jonas[1], Azaliia Tuliakova[2], Albina Fakhretdinova[2], Iulia A[2] *([1]Germany, [2]Russia)*

821 S.100 Detection of visual field defects in early glaucomatous eyes: comparison of Humphrey 24-2c and Octopus perimetry G1 program with G-peripheral mode
Seung Joo Ha, Yerim Choi, Kyeong Joo Lee *(South Korea)*

825 S.101 Differential response of macular and disc capillaries in response to the orthostatic hypotension test
Konstantinos Pappelis[1], Nomdo Jansonius[2] *([1]Greece, [2]The Netherlands)*

864 S.102 Late T-Flux extrusion: a series of 5 cases
Álvaro Andrés Ojeda Parot, Yolanda Cifre Fabra, Gemma Ortega Prades, Vicente Tomás Pérez Torregrosa, Prudencia Rochina Pérez, Antonio Miguel Duch Samper *(Spain)*

865 S.103 Patterns of ganglion cell complex defects and association with functional status in glaucoma patients and suspects
Camila Amorim-Cabral, Vinicius Zangarini, Mayara Pacovska, Ana Aurea Hilariao, Niro Kasahara *(Brazil)*

870 S.104 Outstanding partnership in neuroinflammation. highlighting open-angle glaucoma diagnosis and therapy
Carolina Garcia Villanueva, Irene Andrés-Blasco, Alex Gallego-Martínez, Vicente Zanón-Moreno, Jorge Vila-Arteaga, Julian Garcia Feijoo, Maria Dolores Pinazo-Duran *(Spain)*

882 S.105 Paul device implantation in pediatric glaucoma patients with LTBP2 mutation: case reports
Aspasia Diafa, Anna Mourgela, Margarita Papadopoulou, Spyros Atzamoglou, Aspasia Adamopoulou, Rafaela Smarlamaki, Christina Kappou, Nefeli Ioanna Paizi, Athanasios Zisimopoulos, Chrysa Terzidou, Agathi Kouri *(Greece)*

885 S.106 Peripapillary and macular vessel density changes after trabeculectomy
Ernesta Jašinskienė[1], Aiste Kadziauskiene[1], Rimvydas Asoklis[1], Leopold Schmetterer[2] *([1]Lithuania, [2]Singapore)*

897 S.107 Glaucoma screening: how and why?
Camilia Chafter, Rym Maamouri, Hichem Aoun, Hela Nouri, Ouederni Meriem, Monia Cheour *(Tunisia)*

904 S.108 Liposomes versus microemulsions: two novel nanosystems achieved an increased latanoprost hypotensive effect compared to traded medication
Marco Brugnera, Miriam González-Cela Casamayor, José López Cano, Marta Vicario de la Torre, Vanessa Andrés Guerrero, Irene Bravo Osuna, Fernando Huete Toral, María González Rubio, Gonzalo Carracedo, Irene Molina Martínez, Rocío Herrero Vanrell *(Spain)*

908 S.109 Study of the inluence of care overburden on the indication for glaucoma surgery
Cristina García-Velarde Angulo, Clara Lara Aroco, Javier Guzmán Blazquez, Teresa Pérez Martínez *(Spain)*

916 S.110 A series of acute corneal edema and residual subepithelial haze after bilateral selective laser trabeculoplasty
Evelien Vandewalle, Walgrave Vincent, Nijs Jeffrey, Somers Alix, Lemmens Sophie *(Belgium)*

917 S.111 Neuroprotective effects of GLP-1 receptor agonists and their potential in retinal diseases
Zaynab Ahmad Mouhammad, Alexander Von Spreckelsen, Mariana Yolotzin Garcia Bermudez, Rupali Vohra, Pete Williams, Miriam Kolko *(Denmark)*

921 S.112 The impact of COVID-19 on the wait times and severity of surgical glaucoma cases evaluated at a tertiary eye center
Huixin Zhang, Sarah McIntyre, Anas Abu-Dieh, Andrew Toren *(Canada)*

925 S.113 Comparison between optic nerve head minimal waist of the nerve fiber layer and retinal nerve fiber layer thickness with regard to angular distribution
Per Soderberg, Jonatan Holm3, Konstancija Kisonaite, Zhaohua Yu *(Sweden)*

15 *rf* S.114 Clinical and optical coherence tomography evidence of aqueous humor outflow from supraciliochoroidal space to subconjunctival lymphatics
Vinod Kumar, Zarina Rustamova, Andrej Bezzabotnov, Kamal Abdulmuhsen Abu Zaalan, Galina Dushina, Ahmad Shradqa, Mikhail Frolov *(Russia)*

16 *rf* S.115 Long term results of valve cyclodialysis with implantation of a non-absorbable collagen implant in the supraciliary space with one end in the anterior chamber angle in surgical management of open angle glaucoma
Vinod Kumar, Ahmad Shradqa, Andrej Bezzabotnov, Galina Dushina, Zarina Rustamova, Mikhail Frolov *(Russia)*

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336 S.116 Protective effects of neuropeptide Y treatment on retina in a mouse model of experimental glaucoma
rf
Viswanthram Palanivel, Devaraj Basavarajappa, Vivek Gupta, Stuart Graham *(Australia)*

368 S.117 Primary open-angle glaucoma and its relationship with smoking: a systematic review and meta-analysis
rf
Saajan Ramji, Sohail Daniel, Obeda Kailani *(United Kingdom)*

372 S.118 Morphology-function correlation using available clinical parameters describing retinal ganglion cells in glaucoma suspects
rf
Bartłomiej Kocurek, Katarzyna Kociołek, Anna Pacwa, Adrian Smedowski *(Poland)*

562 S.119 What artificial intelligence can bring us in the diagnosis and progression of glaucoma
rf
Sara Ettouri, Daghouj Ghizlane, Reda Benchekroun, Kawtar El Hadi, Arab Lamiaa, Loubna El Maaloum, Bouchra Allali, Asmaa El Kettani *(Morocco)*

580 S.120 Biomechanical analysis of Corvis tonometry parameters in patients with hypotony after glaucoma filtering surgery
rf
Rachid Bouchikh El Jarroudi, Jordi Loscos Arenas, Pau Romera Romero, Jessica Botella García *(Spain)*

606 S.121 Artificial Intelligence in glaucoma progression: a systematic review
rf
Maria Concepcion Guirao-Navarro, Hong Kai Lim, Diandra Antunes, Rhea Suribhatla, Gurjeet Jutley *(United Kingdom)*

632 S.122 Association between functional parameter and structural, and vascular parameters in advanced glaucoma
rf
Onur Özalp, Kubra Atay, Taylan Can Ozer, Mustafa Deger Bilgec, Eray Atalay *(Turkey)*

667 S.123 Sigma-1 receptor agonist ameliorates trabecular meshwork fibrosis by modulating extracellular matrix emodeling and increasing nitric oxide production
rf r
Judit Hodrea[1], Minh Tran[1], Balazs Besztercei[1], Timea Medveczki[1], Illes Kovacs[1,2], Xavier Gasull[3], Attila Szabo[1], Andrea Fekete[1] *([1]Hungary, [2]USA, [3]Spain)*

639 S.124 Isolated versus combined XEN-implant surgery
rf
Maria Victoria Navarro Abellán, Luis Eloy Pérez González, Juan Antonio Sánchez Perea, Manuel Almarcha Menargues, Carmen Miquel López, María De Los Reyes Retamero Sánchez, José Javier García Medina *(Spain)*

673 S.125 Syndromic congenital glaucoma clinical features and thrapeutic results
rf
Hanane Imad, El Harrar Assia, Hamza Alaoui, Ghizlane Daghouj, El Maaloum Loubna, Allali Bouchra, El Kettani Asmaa *(Morocco)*

763 S.126 Analysis of the impact of different schemes of preparation to trabeculectomy on the healing markers using in vitro model of the Tenon fibroblast cultures isolated directly from the patient
rf
Ewa Kosior-Jarecka, Joanna Piłat, Agata Przekora, Dominika Wróbel-Dudzińska, Tomasz Żarnowski *(Poland)*

785 S.127 EyeLife: a prospective glaucoma screening study with double-blind genetic pre-screening conducted within the population-based Lifelines cohort
rf
Nomdo Jansonius, Anna Neustaeter, Ilja Nolte, Harold Snieder *(The Netherlands)*

901 S.128 Deep learning model detects the retinal pigmental epithelium central limit in eyes with peripapillary atrophy
rf
Konstancija Kisonaite, Zhaohua Yu, Per Soderberg *(Sweden)*

43 S.129 Transcriptomic analyses reveal the molecular mechanisms underlying the ocular surface damage in treated glaucoma patients
Cristina Irigoyen, Javier Moreno Montañes, Elena Carnero, Miguel Naveiras, Miriam de la Puente, Maria Fraga de la Viesca, Jorge Gonzalez Zamora *(Spain)*

545 S.130 External testing of an established glaucoma screening AI on a glaucoma clinic population from Finland
Ruben Hemelings[1,2], Leopold Schmetterer[1], Ingeborg Stalmans[2], Anja Tuulonen[3] *([1]Singapore, [2]Belgium, [3]Finland)*

10:15-11:00

POS Poster Session IM

402 S.131 Tear-borne interleukin 1-beta and transforming growth factor-beta and its relationship with clinical parameters in neophytes contact lens wearers
Eduardo Insua Pereira, Madalena Lira, Ana Paula Sampaio *(Portugal)*

468 S.132 Exogenous endophtalmitis caused by *Citrobacter koseri*
Gemma Ortega Prades, Héctor Carot Sanmillán, Vicente-Tomás Pérez-Torregrosa, Yolanda Cifre Fabra, Noemí Ruiz Del Río, Antonio-Miguel Duch Samper *(Spain)*

765 S.133 Panuveitis and palpable purpura in a patient with interstitial *Pasteurella multocida pneumonia*
Carlo Murgia, Andrea Carbini, Aurora Satta, Stefano Dore, Antonio Pinna *(Italy)*

155 S.134 Synergistic effect of mesenchymal stem cells and silver nanoparticles in the treatment of retinal degenerative diseases
rf
Kateřina Palacká, Barbora Hermankova, Eliska Javorkova *(Czech Republic)*

269 S.135 Kinetics of infection and local immune response in a model of Chlamydia trachomatis conjunctival infection
rf
Elodie Paulet, Mathilde Galhaut, Vanessa Contreras, Roger Le Grand, Marc Labetoulle, Antoine Rousseau *(France)*

457 S.136 HAP1 cell utilization for accurate interpretation of germline BAP1 variants
rf
Pauliina Repo, Joni Turunen, Tero Kivelä *(Finland)*

656 S.137 Ocular manifestations of juvenile lupus erethymatosus: an 2023 update
rf
Anna Nikolaidou[1], Christos Frantzidis[2] *([1]Greece, [2]United Kingdom)*

707 S.138 Effects of primed adipose mesenchymal stem cell-derived exosomes on immunomodulation in Behcet uveitis
rf
Merve Gözel, Ayse Dilara Aydemir, Humeyra Nur Kaleli, Zehra Canbulat, Ümit Yaşar Güleser, Cem Kesim, Billur Sezgin Kızılok, Afsun Sahin, Didar Uçar, Gülen Hatemi, Murat Hasanreisoğlu *(Turkey)*

428 S.139 Brain-derived neurotrophic factor alleviates clinical symptoms of experimental autoimmune uveoretinitis and supports retinal regeneration
Miloslav Zloh, Andrea Štofková *(Czech Republic)*

10:15-11:00

POS Poster Session PO

68 S.140 Combined treatment of a giant palpebral keratoacanthoma
Manuel Morales Sanchez, Alvaro Diaz-Rato Revuelta, Eduardo Conesa Hernandez, Ines Artola, Sergio Pernas *(Spain)*

202 S.141 Operator stress in ophthalmology: impact on the result and management
Zineb Hammoumi, Ghizlane Daghouj, Rima Ayad, Mathilde Otsasso, Loubna Elmaaloum, Bouchra Allali, Asmaa El Kettani *(Morocco)*

432 S.142 Ruthenium- 106 Brachytherapy in the treatment of central choroidal melanoma
Luise Grajewski, Krause Lothar *(Germany)*

645 S.143 Orbitary invasion secundary to sarcoma of soft parts: a case report
Julia Aramburu Clavería, Diana Pérez García, Marta Súñer García, Miguel Castillo Fernández *(Spain)*

653 S.144 Frontal mucocele revealed by diplopia
Sarah Houti, Daghouj Ghizlane, Mochid Zineb, Delphes Mathilde Otsasso Okomiko, Loubna El Maaloum, Bouchra Allali, Asmaa El Kettani *(Morocco)*

670 S.145 Iris melanoma: a case report
Ines Fendouli, Mohamed Ben Hadj Khelifa, Hajer Zouara, Rahma Saidane, Amel Chebbi, Hedi Bouguila *(Tunisia)*

750 S.146 Bloody tears: a new option for early diagnosis of endometriosis
Yuliya Huseva *(Belarus)*

817 S.147 Orbital pleomorphic sarcoma: a case report
Sara Mesa Mesa, Cristina Gonzalez Borrero, Carolina Ceballos Hoyos, Juan Cadavid Usuga *(Colombia)*

446 S.148 Assessment of tear derived extracellular vesicles as a minimally source of novel biomarkers for subconjunctival glaucoma surgery
Clara Viñas-Palau, Marta Sanroque-Muñoz, Jéssica Botella García2, Rachid Bouchikh El Jarroudi, Jordi Loscos-Arenas, Francesc Enric Borras-Serres *(Spain)*

787 S.149 Mapping of fundus photography to 3D imaging for ocular radiotherapy
rf
Corne Haasjes, Lennart Pors, Jan-Willem Beenakker *(The Netherlands)*

862 S.150 Intravitreal application of stem cells and their products does not ameliorate experimental autoimmune uveitis
rf
Eva Skrlova, Eva Uherkova, Katerina Palacka, Barbora Hermankova, Vladimir Holan, Jarmila Heissigerová *(Czech Republic)*

859 S.151 Promising preclinical efficacy of intravitreally administered tafasitamab and anti-Hu CD199 on immunocompetent murine model of primary intraocular lymphoma
Eva Skrlova, Eva Uherkova, Aneta Klimova, Diana Malarikova, Petra Svozilkova, Petr Matous, Vit Herynek, Tomas Kucera, Pavel Klener, Jarmila Heissigerova *(Czech Republic)*

13:20 - 14:20 | Auditorium 2

CIS **Industry Sponsored Symposium**

Chiesi
global rare diseases

New perspectives in LHON management

Chairs: **Bernardo Sanchez Dalmau** *(Spain)*, **Valerio Carelli** *(Italy)*

Chairs' introduction
Bernardo Sanchez Dalmau *(Spain)*, **Valerio Carelli** *(Italy)*

What is new in the knowledge of LHON?
Francisco Muñoz-Negrete *(Spain)*

Further characterizing the role of idebenone in LHON: Learnings from LEROS sub-analysis
Thomas Klopstock *(Germany)*

Extending the therapeutic window in chronic LHON treatment
Berthold Pemp *(Austria)*

The road ahead in the management of LHON
Nancy Newman *(USA)*

Discussion
Co-Chairs and Speakers

13:20 - 14:20 | Calatrava 1

CIS Industry Sponsored Symposium

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The vision to change the world

Efficacy and safety of repeated low-level red-light therapy for myopia control

Junwen Zeng *(China)*

13:10 - 14:10 | Auditorium 2

CIS **Industry Sponsored Symposium**

SIFI

Treating *Acanthamoeba keratitis*, in the past, the present, and future

Chairs: **Benitez Castillo** *(Spain)*, **Nora Szentmary** *(Germany)*

Diagnostic issues in the management AK: how to achieve a fast and reliable confirmation of AK
Francisco Arnalich *(Spain)*

Current treatments and outcomes in AK
Jose Manuel Benitez Castillo *(Spain)*

Shaping the future of AK management

- Key outcomes of the phase 3 ODAK trial
Anders Knutsson *(Italy)*

- Real-world experience with polihexanide (PHMB) 0,08%
Antonio Di Zazzo *(Italy)*

Discussion and closure

13:10 - 14:10 | Calatrava 1

CIS **Industry Sponsored Symposium**

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Ocular Surface in all its forms

Chair: **Christina Grupcheva** *(Bulgaria)*

The Effect of Aging on Ocular Surface
Antonio Di Zazzo *(Italy)*

Parainflammation and Dry Eye Flare
Christina Grupcheva *(Bulgaria)*

When skin disease collides with ocular surface
Pedro Rodríguez Jimenez *(Spain)*

Impact of lifestyle habits in dry eye disease
Benitez-Del-Castillo *(Spain)*

THE EYE OF THE WHALE, An exhibition of scientific microphotography.
Through optical and electron microscopy photographs of different parts of a whale's eye, we show how whales see. The artistic quality of some of the photographs have made them win international awards: NeuroArte of Scientific American, Spanish Society of Neuroscience (SENC), Ophthalmology (SEO) and FECYT, FotCiencia 2023.
Elena Vecino y Luis López (Spain)

Acknowledgements

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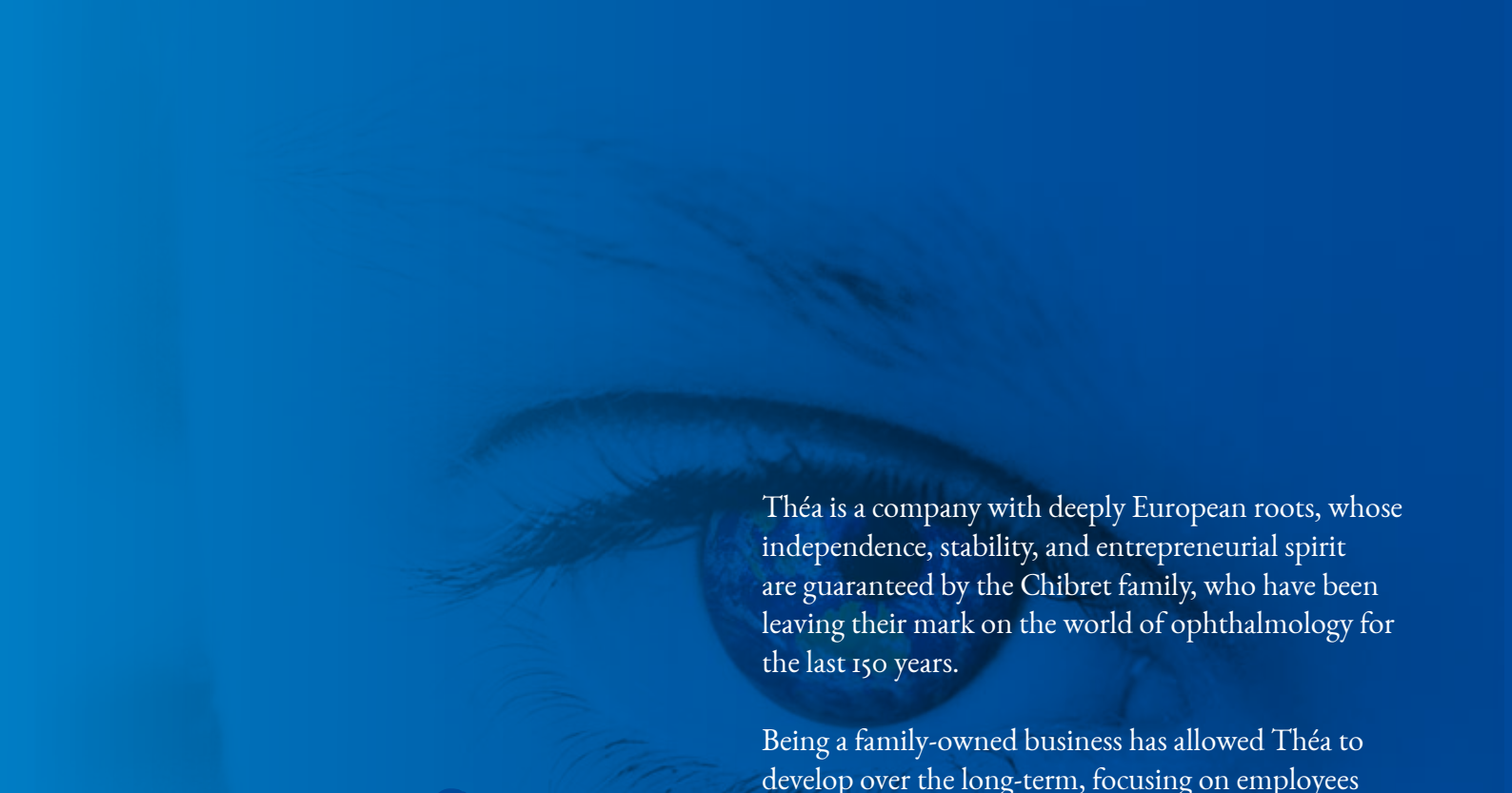
Efficacy and Safety of Repeated Low-Level Red-Light Therapy in myopia control

Professor Junwen Zeng

Thursday 26 October 13:20 – 14:20, Room Calatrava 1.

Hi My name is Willow
I am a Wombat
I will be at the Eyerising booth #2
Hope to see you there!!



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