

## Program in English Language

### WS01 Workshop

#### Toxicity of medical devices used in the posterior segment

Room H-1-01, Thursday 27.09.2018, 10:15–11:30

#### Chair:

Kai Januschowski (Tübingen)

Mario Romano (Mailand, I)

Ramin Tadayoni (Paris, F)

Retinal toxicity/biocompatibility of medical devices in direct contact with the retina is an important subject for clinicians and scientists. The past has taught us multiple times that there is a significant lack of safety associated with severe loss of vision in affected patients. In this EURETINA initiative we want to classify medical products that are used in the back of the eye, describe recent examples of toxicity, critically reflect the regulations that exist and suggest improvements that can be done to ensure patient safety without hindering innovation.

Toxicity of vital dyes

Kai Januschowski (Tübingen)

In vitro testing of medical devices

Martin Spitzer (Hamburg)

Silicone oils

Mario Romano (Mailand, I)

Gas tamponades - what do we know?

Radu Ivanescu (Timisoara, RO)

PFCL - where it all started

Karl Boden (Krefeld)

---

### Do19 Symposium

#### Stem cells – how close are we to application in ophthalmology?

Room Addis 3, Thursday 27.09.2018, 15:00–16:15

#### Chair:

Birgit Lorenz (Gießen)

Knut Stieger (Gießen)

The use of stem cells for disease modeling and cell therapeutic applications is currently at the height of debate in Experimental Ophthalmology. In this symposium, the speaker will highlight the current state of the art in generating and maintaining stem cells, in generating 3D organoid culture systems, as well as in developing treatment approaches for inherited retinal dystrophies.

Transplantation of photoreceptors generated from ipSCs - future prospects and limitations

Valeria Canto-Soler (Denver, Colorado, USA)

Stem cell therapy for retinal diseases with a focus on RPE cell transplantation

Tim U. Krohne (Bonn)

The use of murine and human 3D organoids of the retina to describe phenotypic changes

Mike Karl (Dresden)

Stem cell differentiation and 3D organoid generation with regard to potential therapeutic application

Stefan Liebau (Tübingen)

**Do25 Symposium****Eye Health and new technologies in low-income populations****Room Addis 3, Thursday 27.09.2018, 16:45–18:00****Chair:**

Robert Patrick Finger (Bonn)

Volker Klauß (München)

Artificial Intelligence, 3D-Printing and mobile devices among other new technologies are inspiring new ideas for eye care systems, last but not least in low-resource settings. This symposium provides an update on current developments and practical experiences in low-income populations.

Where are we coming from? Eye care systems for low-income populations over the years

Volker Klauß (München)

New technologies in Public Eye Health

Matthew Burton (London, GB)

Apps and mobile devices for eye health workers

Maximilian Wintergerst (Bonn)

Big data and Artificial Intelligence – effective usage of the collected information

Heiko Philippin (Moshi, EAT)

Scaling up mHealth in low-income populations – the development organisation's perspective

Iris Menn (Berlin)

---

**WS04 Workshop****How the immune system influences retinal angiogenesis****Room H-1-01, 82, Friday 28.09.2018, 08:30–09:45****Chair:**

Thomas Langmann (Köln)

Nicole Eter (Münster)

Neovascular processes are main drivers of retinal degenerative and metabolic diseases including age-related macular degeneration, diabetic retinopathy and rare inherited retinal dystrophies. The interference of retinal immune cells and local as well as systemic cytokines with retinal homeostasis is implicated in the initiation of neovascular, proliferative and degenerative processes. The speakers of this workshop will provide their expertise in research related to the intimate role of immune cells in angiogenesis.

Molecular principles of angiogenesis

Holger Gerhardt (Berlin)

Immunology and the neurovascular unit of the retina in a diabetic mouse model

Hans-Peter Hammes (Mannheim)

Vascular and inflammatory processes in the murine Norrin-deficient retina

Mathias Seeliger (Tübingen)

Microglia in choroidal neovascularization

Thomas Langmann (Köln)

Retinal immune cells in AMD-related animal models

Peter Heiduschka (Münster)

**Fr05 Symposium****Keratomycosis – Evidence in diagnosis and treatment****Nairobi 3&4, Friday 28.09.2018, 08:30–09:45****Chair:**

Gerd Geerling (Düsseldorf)

Berthold Seitz (Homburg/Saar)

Fungal keratitis is a serious and increasingly frequent infection, often associated with contact lens wear. This symposium presents new results on molecular biological as well as clinical diagnostic approaches and treatment from the German keratomycosis registry and a number of international studies.

Epidemiology of fungal keratitis in Germany - Results of the German Keratomycosis Registry

Gerd Geerling (Düsseldorf)

Molecular biological diagnostic at the National Reference Center for mycosis

Oliver Kurzai (Würzburg)

Clinical diagnosis of keratomycosis - Evidence and current developments

Matthew Burton (London, GB)

Medical therapy of fungal keratitis

Wolfgang Behrens-Baumann (Göttingen/Magdeburg)

Surgical treatment of keratomycosis

Berthold Seitz (Homburg/Saar)

---

**Fr13 Keynote Lecture****Clinical Applications of the IRIS Registry****von Graefe, Friday 28.09.2018, 11:45–12:15****Keynote Speaker:**

George Williams (Livonia, Michigan, USA)

---

**WS06 Workshop****International Ophthalmology – Wanted: The next generation****Workshop der Sektion DOG-Internationale Ophthalmologie****Room H-1-01, Friday 28.09.2018, 15:00–16:15****Chair:**

Rudolf Guthoff (Rostock-Warnemünde)

Babar Qureshi (London, GB)

Volker Klauß (München)

"Links with third world partners in ophthalmology are not are like dating - it's like marriage", said Alan Foster, one of our pioneers in that field. Considerable progress has been achieved since thirty years ago the first stable partnership Munich - Nairobi started. Other relationships came into action. To maintain the momentum permanent flow of information on what can be achieved for both partners it is necessary to continue and to improve international relationships. Stakeholders will report and stimulate.

Munich - Nairobi. The pioneer project. How to maintain the spirit?

Volker Klauß (München)

The next generation on its way - The British LINKS/twinning concept for International Ophthalmology

Marcia Zondervan (London, GB)

Australia - Germany - Can we learn from each other

Robert Patrick Finger (Bonn)

The ideal German ophthalmologist to be sent abroad - the CBM perspectives  
CBM (Bensheim)

Is work in Africa a career-killer?  
Martin Spitzer (Hamburg)

---

### **Fr18 Symposium**

#### **New aspects in vitreoretinal surgery**

**Bangkok 3, Friday 28.09.2018, 15:00–16:15**

#### **Chair:**

Nicole Eter (Münster)

Pieter Nelis (Münster)

Peter Stalmans (Leuven, B)

Jan C. Van Meurs (Rotterdam, NL)

Discussion on hot topics in vitreoretinal surgery with fresh opinions of experts from the Netherlands, Belgium and Germany.

-Is the future hydrophilic or hydrophobic? On vitreous body replacement

-Case closed: on macular holes

-Stay and play vs. scoop and run: on macular bleeding

Foldable capsular vitreous body implantation

Peter Stalmans (Leuven, B)

Crosslinked hyaluronate formulations as vitreous replacement

Martin Spitzer (Hamburg)

The (ap)peal of a flap

Leigh Spielberg (Gent, B)

Trooping the colours: the best dye

Christos Haritoglou (München)

Macular relocation and RPE grafting after macular bleeding

Jan C. Van Meurs (Rotterdam, NL)

---

**Fr25 Symposium****Health Systems in developing countries – Who will carry the burden?****Symposium of the Section DOG-International Ophthalmology****Room Addis 3, Friday 28.09.2018, 16:45–18:00****Chair:**

Rudolf Guthoff (Rostock-Warnemünde)

Adrian D. Hopkins (London, GB)

Peter Wiedemann (Leipzig)

Many resource-poor countries have produced national plans for the prevention and treatment of blindness but often this has not created effective plans of action. Structures to allow these ideas to become reality are lacking in many areas. The symposium will give insight in strategies of local, national and international organizations to improve this situation.

How to strengthen the health systems to make sure 'no one is left behind'?

Babar Qureshi (London, GB)

River blindness elimination - strengthening the health system 'top and bottom' - Lessons for other eye care programs

Adrian D. Hopkins (London, GB)

Pakistan on the way to bridge social differences in eye care

Sanaullah Jan (Peshawar, PK)

Networking for eye care in diabetic patients

Janvier Kilangalanga (Kinshasa, CGO)

Western medicine and traditional healers - how do they interact?

Walter K. Bruchhausen (Aachen)

---

**Sa05 Symposium****Impact of modern uveitis diagnostic for therapy****Nairobi 3&4, Saturday 29.09.2018, 08:30–09:45****Chair:**

Carsten Heinz (Münster)

Christoph Deuter (Tübingen)

Uveitis is a mixture of different diseases with potentially severe impact on visual function. Multimodal diagnostic offers new insights in pathogenesis and is very helpful to monitor disease activity besides grading activity by clinical examination. Main talk of the symposium will address this topic during the Aurel von Szily Lecture and show the influence on treatment decisions. Additional talks will focus on the OCT- and widefield angiography and on diagnostic tools for the clinical management in masquerade syndromes.

von Szily Lecture: How far have we come in managing non-infectious posterior uveitis?

Carlos Pavesio (London, GB)

OCT- Angiography in posterior uveitis

Carsten Heinz (Münster)

Impact of widefield angiography in posterior uveitis

Christoph Deuter (Tübingen)

Diagnostic tools for management in masquerade syndromes

Uwe Pleyer (Berlin)

**Working Session****Section DOG-International Ophthalmology****Room tbd, Saturday 29.09.2018, 08:30–09:45****Chair:**

Rudolf Guthoff (Rostock-Warnemünde)

Volker Klauß (München)

**Sa13 Keynote Lecture****Artificial Intelligence and Optical Coherence Tomography – Reinventing the Eye Exam?****von Graefe Hall, Saturday 29.09.2018, 11:45–12:15****Chair:**

Pearse Keane (Moorfield, GB)

Ophthalmology is among the most technology-driven of all the medical specialties, with treatments utilizing high-spec medical lasers and advanced microsurgical techniques, and diagnostics involving ultra-high resolution imaging. Ophthalmology is also at the forefront of many trailblazing research areas in healthcare, such as artificial intelligence. In my presentation, I will describe the motivation - and urgent need - to apply artificial intelligence to ophthalmology, in particular to retinal imaging with optical coherence tomography (OCT).

**Sa16 Symposium****Medical Cornea****Room Nairobi 2, Saturday 29.09.2018, 15:00–16:15****Chair:**

Thomas Fuchsluger (Erlangen)

Claus Cursiefen (Köln)

This symposium focusses on non-surgical treatment options for a broad range of corneal and ocular surface pathologies. Hence, pathophysiology and state-of-the-art therapeutic concepts will be presented. These will cover ocular surface dryness, GvHD, reports from the first application of NGF in humans. Furthermore, latest therapeutic strategies relating to (lymph-)angiogenesis and to enhancement/protection of corneal endothelial cells will be discussed.

Dry eye disease: Is there a way to stop it?

David Sullivan (Boston, USA)

Interdisciplinary drug therapy in chronic ocular GvHD

Henrike Westekemper (Essen)

NGF: First application in humans

Stefano Bonini (Rom, I)

New options for antiangiogenesis at cornea and ocular surface

Claus Cursiefen (Köln)

New concepts for the treatment of diseased corneal endothelium

Thomas Fuchsluger (Erlangen)

**Sa18 Symposium****Pros and cons of femtoassisted cataract surgery****Feoph Symposium and Roundtable Discussion****Room Addis 3, Saturday 29.09.2018, 15:00–16:15****Chair:**

Thomas Reinhard (Freiburg)

Wagih Aclimandos (London, GB)

Pier-Enrico Gallenga (Chieti, I)

Salvador García-Delpech (Valencia, E)

Philip Gass (München)

Laurent Kodjikian (Lyon, F)

During the FEOPh Symposium, junior speakers from France, Great Britain, Germany, Italy and Spain are holding lectures with focus on the „Pros and cons of femtoassisted cataract surgery “. The presentations are followed by a roundtable discussion with five experts from these countries who will discuss the different national approaches and strategies.

---

**Sa23 Symposium****Retina Hot Topics****Room Nairobi 3&4, Saturday 29.09.2018, 16:45–18:00****Chair:**

Nicole Eter (Münster)

Horst Helbig (Regensburg)

The symposium presents latest developments and novel concepts in medical retina and vitreoretinal surgery. International speakers will give an insight into new diagnostic and therapeutic achievements and elucidate new classifications.

Gene therapy with voretigene neparvovec

Albert M. Maguire (Philadelphia, USA)

New classification in AMD

Rick Spaide (New York, USA)

OCT Angiography in the management of macular diseases

Jean-Francois Korobelnik (Bordeaux, F)

Tops and flops in AMD research

Carel Hoyng (Nijmegen, NL)

Performance analysis of a new hypersonic vitrector system

Michael Amon (Wien, A)



## **WS11 Workshop**

### **The future of retinal imaging – a peek behind the curtains**

**Room H-1-01, Saturday 29.09.2018, 16:45–18:00**

#### **Chair:**

Andreas Stahl (Freiburg)

Sandra Liakopoulos (Köln)

This workshop will provide an insight into current developments in retinal imaging analysis. The range of presented topics covers handheld, patient-operated OCT, predictive OCT algorithms for anti-VEGF treatment planning and automated fundus image analysis for objective grading of retinal disease. All presentations will be viewed in light of what is currently possible and what is waiting around the corner. A reading center perspective will add a special focus on how these new methods will influence the way we analyse our routine clinical data and conduct clinical trials.

Binocular OCT: engaging the patient

Pearse Keane (Moorfield, GB)

Using OCT to predict anti-VEGF treatment response and outcome

Andreas Stahl (Freiburg)

Diving deep into fundus photography

Philipp Berens (Tübingen)

Objective grading in ROP: utopia or reality?

Ann Hellström (Gothenburg, S)

New image analysis tools from a Reading Center perspective

Sandra Liakopoulos (Köln)

---

## **DS08 Workshop**

### **European Reference Network ERN-EYE: transnational European medical care and data base development**

**Room H-1-01, Sunday 30.09.2018, 08:30–09:45**

#### **Chair:**

Hélène Dollfuss (Strasbourg, F)

Ursula Schlötzer-Schrehardt (Erlangen)

Eberhart Zrenner (Tübingen)

In 2017, the European Union established European Reference Networks (ERN) for rare diseases in 24 medical specialties, including ERN-EYE for Ophthalmology (<https://www.ern-eye.eu>). ERN-EYE aims at achieving improved transnational diagnosis and treatment of patients with rare eye diseases, as well as better molecular-genetic diagnosis and inclusion in a European database in connection with accompanying research projects. The workshop will present and discuss the new chances of implementing faster and more precise diagnoses, of disease-specific optimal patient care and of better access to new therapy developments.

**DS07 Workshop****Smartphones in Ophthalmology****Room Addis 3, Sunday 30.09.2018, 08:30–09:45****Chair:**

Robert Patrick Finger (Bonn)

Maximilian Wintergerst (Bonn)

Heiko Philippin (Moshi, EAT)

Smartphones gain increasing popularity, and due to their ubiquity and multifunctionality might pave the way for the next revolution in medicine. This is especially the case in Ophthalmology, where they allow for smartphone-based funduscopy, an easy and extremely mobile eye examination. This workshop will highlight current promising applications of smartphones in Ophthalmology.

Smartphones for school eye health programs

Priya Morjaria (London, GB)

Smartphone-tools for retinopathy of prematurity screening

Tim U. Krohne (Bonn)

Evidence-based glaucoma screening with app and smartphone? An overview

Heiko Philippin (Moshi, EAT)

Smartphone-funduscopy in diabetic retinopathy screening: Comparison of four different devices

Maximilian Wintergerst (Bonn)

Smartphone-funduscopy in the ophthalmologic animal experiment

Nil Celik (Heidelberg)

---

**DS05 Symposium****Deep learning in Ophthalmology – Technical approaches****Room Nairobi 3&4, Sunday 30.09.2018, 12:00–13:15****Chair:**

Karsten Kortüm (München)

Pearse Keane (Moorfield, GB)

Deep learning represents a new technology, which will make decision support systems and automatic imaging analysis possible. Currently, the focus is on OCT imaging modalities. In this symposium, computer scientists will present their current projects in the field of Ophthalmology in a clinical context. The symposium shall provide a forum for exchange between different working groups.

Enhancing visual acuity prediction for AMD patients

Markus Rohm (München)

Personalized prognosis of AMD based on deep learning of OCT biomarkers

Hrvoje Bogunovic (Wien, A)

A deep learning approach to automatic identification of biomarkers in OCT images

Raphael Sznitman (Bern, CH)

Applying machine learning methods to temporal sequences of OCT images

Holger Langner (Mittweida)

CNN-based accurate and fast drusen segmentation in OCT

Thomas Schultz (Bonn)