

the  
**Ophthalmologist**

O P H T H A L M I C  
F R O N T I E R S :

*T H E A N T E R I O R  
S E G M E N T*



# TIMELINE

based on @OphthoMag on Twitter



Dr Bob Osher has been presenting videos of challenging cases for the last four decades, and 2021 is no exception! What a great session again! #OphthoTwitter #escrs21 #ESCRS2021

**Friday,  
October 8,  
2021**

We are looking forward to the Binkhorst Medal Lecture by Gerd Auffarth! #ESCRS2021

Huge congratulations to Gerd Auffarth, and thank you for the fantastic lecture! We are staying here for the Herpetic #Keratitis symposium with Carina Koppen and @NuijtsRudy - Marc Labetoulle delivering the first presentation #escrs2021 #escrs

#Rayner #Plus1EMV Clinical Symposium is a global discussion on premium #monofocal #IOLs: The new standard of care, featuring: Gerd Auffarth, Allon Barsam, Lucio Buratto, Manuel Domingues, Alastair Stuart, and Karl Stonecipher #ESCRS2021



TAKE PART! ➔



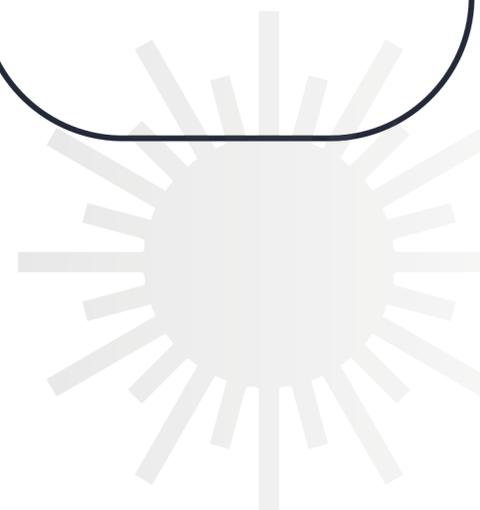
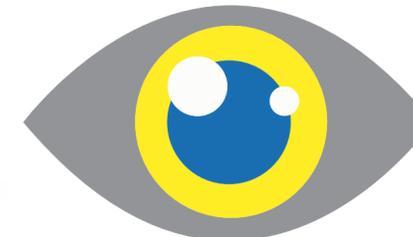
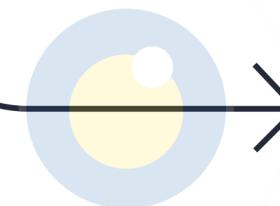
@ric\_vinciguerra talking about therapeutic laser #refractive surgery in treating #corneal optical irregularities in Hall 11 at #ESCRS2021

@ikekahmed on the latest #MIGS technologies and #combined #glaucoma #cataract surgery at #ESCRS2021 #escrs21 Great presentation and great to see you! Hopefully next time in person!

Great talk from @Marie\_Bannier on using lacrimal gland organoids for research! #ESCRS2021 #StemCells #RegenerativeMedicine #TissueEngineering



Dr Renato Ambrosio has welcomed all the visitors to the #ISRS Symposium at #ESCRS21, encouraging them to learn from each other. This is our last session today, catch you again tomorrow for day 2 of #ESCRS2021 #OphthoTwitter



# TIMELINE

## Saturday, October 9, 2021

#OCULUS Satellite Symposium in Hall 9, titled Pentacam® AXL Wave and Corvis® ST: Toolbox for Premium #Cataract, #Presbyopia and #Refractive Surgery, featured Gerd Auffarth, Rohit Shetty, and Renato Ambrósio #ESCRS2021



WATCH THE SYMPOSIUM NOW ON YOUTUBE



The Young Ophthalmologist sessions at #ESCRS2021 have been great so far! Make sure you catch the remaining ones and the on demand versions! #escrs21 Starting Phaco, Including "Learning from the Learners," featuring video cases submitted by young ophthalmologists

Don't miss Tips and Tricks for #Refractive Lens Exchange in Challenging Patients, with huge names such as Julian Stevens, Mayank Nanavaty, Milind Pande, Paul Rosen, Sathish Srinivasan, and Thomas Kohlen #ESCRS2021

Are you watching the Video Award Session of #ESCRS2021? Chaired by Richard Packard #cataract #refractive



An interesting session with Angeli Christy Yu, Cristina Bovone, and Massimo Busin at #ESCRS2021: Deep Anterior Lamellar #Keratoplasty: How to Standardize and Master the Procedure ... Even in difficult eyes!

## Sunday, October 10, 2021

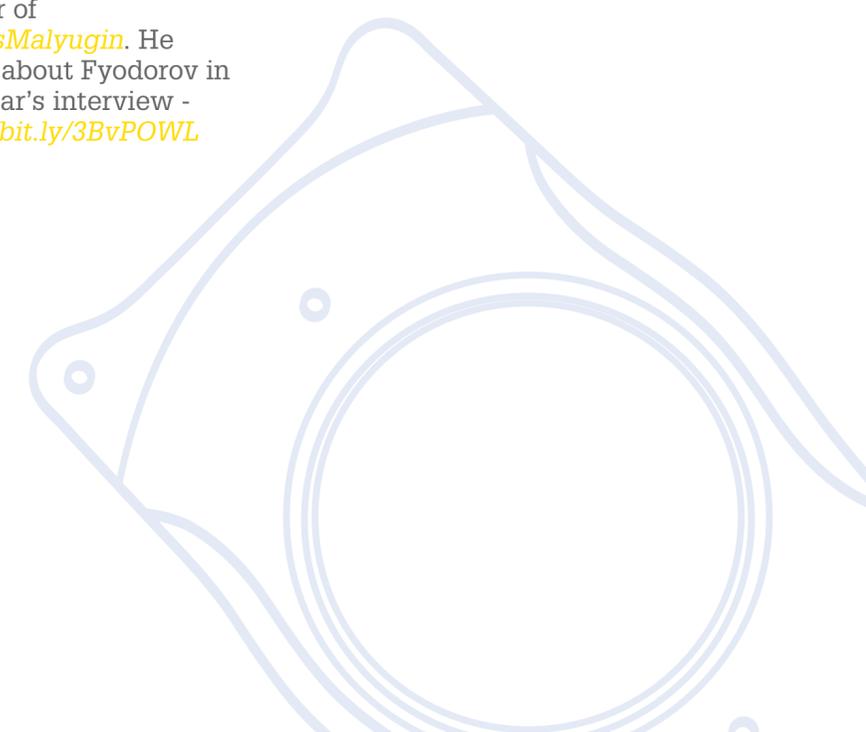
"Getting into trouble" on day 3 of #escrs2021 with surgical video session With Richard Packard and Burkhard Dick moderating.

Nic Reus at the main refractive surgery symposium #ESCRS2021

The main #ESCRS2021 symposium: Enhancements After #Refractive Surgery is chaired by Guy Sallet and Jose Guell. Don't miss it! Highlights include enhancements incidence, post-SMILE refinements, and reducing #ametropia after RLE

Ribeiro, Carones, Auffarth, Findl, Nuijts, Kohnen... need we say more? #ESCRS #Refractive #IOL Symposium - Optimizing #Presbyopia Correction & #Astigmatism Management with Modern Lens Technologies happening now at #ESCRS2021

In the #ESCRS2021 Heritage Lecture, Patrick Condon talks about the great Fyodorov, the mentor of @BorisMalyugin. He talked about Fyodorov in this year's interview - <http://bit.ly/3BvPOWL>



## FEATURE

## The Meeting of Minds

Some of the most accomplished experts in anterior segment surgery share their memories from ESCRS Congresses past, and discuss this year's very special meeting – the first one held in person since the pandemic began – that took place in October in Amsterdam, The Netherlands

### How did your relationship with the ESCRS Congress begin?

*Robert H. Osher:* If my memory is correct, I have attended every annual meeting since the second gathering of the EIIC, the precursor of ESCRS. Emanuel Rosen and Paddy Conden initially invited me to present the Video Symposium, a new concept which I had introduced in the US. Every year thereafter, I enjoyed showing challenging cases and management of complications to enthusiastic audiences. Eventually, I teamed up with Graham Barrett from Australia to teach a popular recurring course, and I would always have an entry into the Video Competition. I am pretty sure that I have won two Grand Prizes at this fabulous event introduced by Michael Blumenthal, and subsequently championed by English surgeon Richard Packard.

Thirty-eight years ago, I started the Audiovisual Journal of Cataract and Implant Surgery, which eventually became the Video Journal of Cataract, Refractive, and Glaucoma Surgery. I would watch every single video in the perennial Video Competition and then select the best videos to show in the Video Journal, which became a free member benefit of the ESCRS. As a result, the spectacular work of many leading European surgeons has been featured and shared with thousands of surgeons worldwide. →



*“This year’s ESCRS was excellent. It was well organized by the new management team, with an excellent exhibition and an enthusiastic face-to-face audience.”*

**What are your impressions of this year’s event?**

*Cummings:* I attended this year’s ESCRS Congress virtually. I thought that it was very well organized. Attendance was lower than usual, but compared to other meetings, such as ASCRS, it was very well attended.

*Spalton:* This year’s ESCRS was excellent. It was well organized by the new management team, with an excellent exhibition and an enthusiastic face-to-face audience.

*Hafezi:* I attended the meeting in person. Due to the continuing COVID-19 situation, it was clearly a smaller physical meeting than in previous years, but the speakers were given information about the number of virtual attendees for each session, and these numbers were impressive. The quality of presentations remained high throughout – nobody “rested on their laurels” in 2021, and I was impressed with the standard of work being presented.

*Malyugin:* I was glad to attend this 2021 meeting in person. I think the quality was very good, in spite of the fact that the number of attendees was about half of the usual size. Surprisingly, the exhibit hall was also full. People were happy to meet each other after a long break.

*Torres-Netto:* I attended the congress in person this year. It was a resumption of activities, more introspective, with some occasionally

full rooms. Although much smaller than before, I thought it was an excellent event: I was able to talk with colleagues who I had not talked to for a long time. Since the size and distance between rooms was smaller, it was easier to meet colleagues and discuss cases and ideas. It was an excellent meeting, very well organized, and it provided a new and more intense interaction between colleagues. I’m looking forward to ESCRS 2022.

**Which presentations caught your attention the most at the 2021 ESCRS Congress?**

*Spalton:* The one that stood out for me Osama Ibrahim on hyperopic SMILE an operation of the future.

*Torres-Netto:* Elastography to evaluate corneal biomechanics met with great interest from colleagues.

*Hafezi:* Literally every single one. Everyone was so happy to see each other. And of course, all of those productive conversations that happen at the end of a session or symposia with fellow speakers and delegates got to happen again – that’s something that is far harder to have when a meeting is online.

*Malyugin:* I liked the main symposia and clinical research symposia. The content was up to date and interesting. ➔

## Meet the specialists



Arthur B. Cummings,  
Medical Director, Wellington  
Eye Clinic, and Consultant  
Ophthalmologist, Beacon  
Hospital, Dublin, Ireland



Farhad Hafezi, Professor of  
Ophthalmology at the University  
of Geneva, Switzerland



Boris Malyugin, Professor of  
Ophthalmology, S. Fyodorov  
Eye Microsurgery Complex,  
Moscow, Russia



Robert H. Osher, Professor of  
Ophthalmology, University of  
Cincinnati College



David Spalton, Former  
Professor of Ophthalmology  
at St Thomas’ Hospital,  
London, UK



Emilio A. Torres-Netto, Cornea,  
Cataract and Refractive  
Surgeon at CABMM, University  
of Zurich, Switzerland

*“The quality of presentations remained high throughout – nobody “rested on their laurels” in 2021.”*

#### What did you present on?

*Malyugin:* I was co-chairing “You make the call” and the “Best of the best” sessions as well as the main symposium on MIGS. I was presenting a talk in the Glaucoma Workshop on Cataract surgery in PEX.

*Spalton:* I chaired an excellent free paper session on EDoF IOLs and the Hyperopia Workshop.

*Torres-Netto:* Elastography to evaluate corneal biomechanics including the role of Bowman’s layer, PACK-CXL for the treatment of infectious keratitis.

*Osher:* This year my opening Video Symposium was pre-recorded. The 90-minute session was divided into Preoperative Challenges, Intraoperative Complications, and Postoperative Problems. Two years ago, I was surprised when at the end of the Video Symposium, President Beatrice Cochener, presented me with the inaugural Teaching Award. I certainly did not expect this wonderful honor. I was also surprised this year when I received an email announcing that my video entitled The Capsular Bag: A New Site for Sustained Drug Delivery received the First Prize in the category of Innovation.

*Hafezi:* I presented the latest on the sub400 protocol, which enables surgeons to safely cross-link ultra-thin corneas, as low as approximately 200 µm, by modifying the amount of UV irradiation based on the patient’s thinnest corneal pachymetry readings, and our work on making simple, effective epi-on corneal cross-linking a reality, without having to

use supplemental oxygen or iontophoresis as adjuncts.

I also presented the work performed in collaboration with Sabine Kling of the ETH Zurich on OCT elastography, which enables in vivo measurements of corneal biomechanical strength, using a technology we all have in our clinics: OCT.

Finally, one of our research team, Reyhaneh Abrishamchi, gave a presentation about our laboratory work on high-fluence accelerated cross-linking. Accelerating cross-linking protocols (by delivering the same total amount of UV energy over a shorter period by using a higher intensity) is attractive because it reduces the procedure time for the patient. However, acceleration reduces the strengthening effect, with the greater the acceleration, the lower the effect on corneal biomechanics. This is thanks to the fact that oxygen is an essential component of the UV-riboflavin reaction, and it diffused from the air at a constant rate, and this limits the speed of the reaction.

However, we now know that you can deliver higher total UV doses – fluences – than was thought possible before and not compromise the corneal endothelium.

Through a series of experiments, we determined an accelerated, high-fluence cross-linking protocol that delivered Dresden protocol-like levels of biomechanical stiffening, in a considerably shorter period.

[READ THE FULL FEATURE ONLINE](#)

## ESCRS Quick fire round

#### Your first ESCRS meeting?

*Robert H. Osher:* EIIC, the precursor of ESCRS, in 1983 (in Giessen, Germany), and every ESCRS Meeting since the first one in 1993 in Innsbruck, Austria.

*David Spalton:* 1993, Innsbruck, Austria – the first one.

*Arthur B. Cummings:* 1998, in Munich, Germany.

*Boris Malyugin:* 2002, in Nice, France.

*Farhad Hafezi:* 2003, in Munich, Germany. Between 1993 and 2003, I was performing retinal research, and ARVO was my go-to meeting.

#### Have you missed any meetings over the years?

*Cummings:* I missed the 2020 and 2021 events in person, but attended both virtually.

*Osher:* I missed going to the meeting for the first time in nearly four decades. My reasoning was simple: I have 11 unvaccinated grandchildren so I could not risk putting their health in jeopardy.

*Hafezi:* I’ve never missed a meeting since 2003.

SPONSORED FEATURE

# SPOTLIGHT ON . . .

Technology

## RayOne EMV enhanced monofocal IOL

RayOne EMV uniquely extends a patient's range of vision with a non-diffractive optic profile, enabling the depth of field of many presbyopia-correcting IOLs but with no dysphotopsia, short neuroadaptation, reliable outcomes, high patient satisfaction, and improved affordability. RayOne EMV was developed in collaboration with world renowned surgeon, Professor Graham Barrett.

LEARN MORE: [WWW.RAYNER.COM/PLUS1EMV](http://WWW.RAYNER.COM/PLUS1EMV)



SITTING DOWN WITH

## No Such Thing as a Free Lunch

Sitting Down With... Gerd U. Auffarth, Professor and Chairman of the Department of Ophthalmology, University of Heidelberg; and Director of the International Vision Correction Research Centre, David J Apple International Laboratory for Ocular Pathology, Germany

**Congratulations on receiving the Binkhorst Medal at the 2021 ESCRS! Your lecture, titled “There is no free lunch in optics,” was one of the highlights of this year’s event. Was this also a highlight of your career?**

Being able to deliver this lecture was certainly one of my biggest achievements. Within it, I tried to include much of the knowledge I have accumulated, in a way that non-specialists would understand, and I think that a good number of patients could make use of it. In general, I think I’m quite good at making complicated subjects easier to understand! It seems like the title – an idiom – was the least comprehensible element of the presentation for many people! →



Over the years, there have been many events that I could call my highlights, from qualifying for medical school, to my travels to Africa. I also don't exclusively consider my professional career to be the source of these highlights – I hugely value the achievements in my personal life. Being able to spend time with my grandchildren is a great highlight. Of course, without the support of my family, my professional career would not be what it is now. My wife has supported me through all my pursuits, and has been there to celebrate my successes, but also helped me get through tougher times.

#### How did you find this year's ESCRS Congress?

I was very impressed that the committee managed to organize the meeting in such difficult times, and get so many people together in what resembled normality. These days, I usually come to events in search of new ideas, often from start-up companies, and I was able to organize some of those key meetings in Amsterdam. There are certainly really interesting new products and technologies – such as the artificial cornea – in the pipeline, and I'm looking forward to seeing them fully developed.

The main ESCRS auditorium attracted a very decent crowd, and I was very happy with attendance of my Binkhorst lecture. The audiences did not seem any smaller than usual!

#### Do you think people will still travel to events in the future or will they choose to attend conferences virtually?

Well-organized virtual meetings, like the latest ESCRS, are great for those who don't have the option of attending events in person. Travel is often prohibitively expensive and it has been severely restricted

in the last couple of years, so virtual options are welcome by many people for whom this is a chance to join more ophthalmic gatherings. Nevertheless, there are many people who still prefer to attend conferences in person. Humans learn best by interacting directly with others, and long may it continue!

#### How has ESCRS Congress changed over the years you have attended?

It has been growing bigger and bigger, becoming more important year on year. The organizers' confidence has been growing, and with the increase in size of the conference and exhibition, attendee numbers have also grown, and so has the number of Society members. ESCRS itself is now a huge enterprise, with big annual turnovers. It has lost its purely scientific character and naivety of the early days, and it is now a huge professional body, with great impact and influence. When I first came to the ESCRS Congress, I was still a student, and I don't think I have missed any meetings since then!

#### How has your field changed in the course of your career?

This question makes me acutely aware of my age because the change has been so dramatic! The first time I watched cataract surgery being performed, the surgeon did not wear gloves, and they used regular magnifying glasses, and then gave the patient a pair of aphakic spectacles. In Germany, phaco became the main way of performing cataract surgery at the end of the 1990s, and before that, extracapsular or intracapsular extractions were the norm. What modern surgeons often take for granted, was really out of the ordinary 30 years ago. Then, nobody would believe in cataract surgery under topical anesthesia, using foldable lenses. Excimer lasers were not commonly used in

ophthalmology then, either. I have witnessed all these developments myself, over the years!

Nowadays, in the cataract and refractive field, improvements come in smaller steps; it's more a question of fine-tuning existing technologies. There are some technologies that have the capability of changing the way ophthalmologists work more drastically, such as artificial intelligence or gene and genetic therapies. New diagnostic solutions, such as OCT, have made a lot of things possible that we couldn't even imagine before. Nevertheless, I can't see anyone coming up with a new piece of equipment that will drastically change my work in the next two or three years... But in 10 years' time? Everything is possible.

IOL materials are getting better and better all the time, with new materials entering the market. Developing a new material is not the biggest issue – the main problem are regulatory hurdles that it takes many years and huge amounts of money to get through before a new material is approved. If an IOL manufacturer wants to make changes to their material, they need approval for each individual lens they offer in each country or territory with a regulatory process. With a completely new material, the process has to be started from scratch, with new clinical trials, checking biocompatibility and other features. New regulatory guidelines and recommendations are being added all the time, so it's a never-ending story of obtaining approvals. Of course, I completely understand the need for standardization and transparency, especially in the face of many scandals that happened in the medical field in the last several decades.