ESASO Fellowship Programme

ESASO a vision of collaboration
ESASO
a Vision of
Collaboration

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Dear Applicant

The ESASO Fellowship Programme offers young, talented and ambitious ophthalmologists the opportunity to acquire the expertise and surgical skills necessary to develop an international career.

Since 2008, we at ESASO have been committed to developing a world-class educational programme in ophthalmology.

The fellowship provides an invaluable opportunity to gain hands-on training from globally renowned practitioners of cataract surgery, cornea and refractive surgery, glaucoma, and medical and surgical retina. It is a chance to learn from the best in order to develop the expertise and network of international contacts necessary to become a “complete ophthalmologist”.

ESASO firmly believes that the quality of the learning environment is crucial to the overall value of a fellowship. For this reason, ESASO has partnered with some of the foremost teaching hospitals and university departments throughout the world. We continually monitor the quality of the programme and always strive to develop new connections with leading ophthalmic institutions globally.

We look forward to receiving your application and to working with future leaders in the field of ophthalmology.

Yours sincerely

Stanley Chang
Chairman of Ophthalmology
Columbia University, New York

Giuseppe Guarnaccia
Global Executive
Director ESASO
Fellowships at ESASO
ESASO Fellowships enable young ophthalmologists who have participated in ESASO Modules to acquire expertise and hands-on experience in a particular subspecialty. Generally, ESASO offers four different types of fellowships.

1. The ESASO Visiting Fellowship, a four-week programme, offers participants the opportunity to hone their cataract surgical skills at the LV Prasad Eye Institute (LVPEI) in Hyderabad, India.
2. The four-week ESASO Observership enables participants to explore a particular field of ophthalmology further, perhaps prior to applying for a longer one-year fellowship.
3. The one-year ESASO Fellowships offer the most-talented participants in the ESASO Modules the opportunity to acquire hands-on surgical expertise at a prestigious affiliate institution in order to lay the groundwork for an international career in ophthalmology.
4. The Clinical Product Development Fellowship enables talented and motivated participants to develop a career in research and development in industry.

ESASO Educational Programme
ESASO is working towards academic accreditation for its post-graduate educational programmes

ECTS:
- 1 Module: 15 ECTS credits (450 hrs)
- 2 Modules: 60 ECTS credits (1,800 hrs)

1) ECTS: European Credit Transfer System
2) CAS: Certificate of attendance
3) MAS: Certificate of attendance
ESASO offers ophthalmologists attending the ESASO Modules the chance to hone their skills in a specific field of ophthalmology during a one-year fellowship. The ESASO Fellowship is spent in one of the highly-specialised teaching hospitals or university departments that have developed a specific training programme as part of their partnership agreement with ESASO.

The ESASO Fellowship is an advanced training programme in which highly-motivated and talented ophthalmologists gain a thorough understanding of an ophthalmic subspecialty and acquire practical expertise in the associated clinical and surgical procedures. Fellows are expected to master all the skills required to practise their specialisation autonomously at an ultra-advanced level.

Programmes
Each ESASO Fellowship lasts 12 months and includes a specific programme covering educational and research objectives.
- Cataract Surgery
- Cornea & Refractive Surgery
- Glaucoma
- Medical Retina
- Surgical Retina

### 1-YEAR FELLOWSHIP

<table>
<thead>
<tr>
<th>Key Focus</th>
<th>Institutions 2014</th>
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<tbody>
<tr>
<td>Cataract Surgery</td>
<td>Allgemeines Krankenhaus Universitätskliniken, Vienna, Austria</td>
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<tr>
<td>Cornea &amp; Refractive Surgery</td>
<td>Anglia Ruskin University, Cambridge, UK</td>
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<td>Glaucoma</td>
<td>Columbia University Medical Center, New York, USA</td>
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<tr>
<td>Medical Retina</td>
<td>Instituto de Microcirugía Ocular (IMO), Barcelona, Spain</td>
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<tr>
<td>Surgical Retina</td>
<td>Institute of Ophthalmology &amp; Visual Science, UMDNJ-New Jersey, USA</td>
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<td>Clinical Product Development</td>
<td>Ludwig-Maximilians Universität (LMU), Munich, Germany</td>
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<td>Moorfields Eye Hospital, London, UK</td>
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<td></td>
<td>Tel Aviv Medical Center (TLVMC) &amp; Sackler Faculty of Medicine, Tel Aviv University (TAU), Israel</td>
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<td>Universitat Autònoma de Barcelona, Spain</td>
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<td>University of Amsterdam, Academic Medical Center, Amsterdam, Netherlands</td>
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<td>Università Vita-Salute San Raffaele, Milan, Italy</td>
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### 4-WEEKS FELLOWSHIP AND OBSERVERSHIP

- Visiting Fellowship and Hands-on Training in Cataract Surgery, L V Prasad Eye Institute (LVPEI) Hyderabad, India
- Observership
Cataract Surgery Fellowship

Objectives: To acquire demonstrable and certified expertise in the assessment and the contemporary management of all forms of cataracts

Essential clinical experience
To have actively participated in, or assisted at, a minimum of 200 cataract surgeries

Mandatory competence
In addition to those areas specified in Basic Specialist Training, competence in the following is specifically required:
• Drawing up a management plan leading to a target post-op refraction after discussion with the patient; this should include at least a theoretical knowledge of astigmatic management during cataract surgery.
• Biometry (keratometry & axial length determination) to indicate IOL power leading to target post-op refraction.
• Routine phacoemulsification, to include capsulorhexis and placement of PC IOL (including foldable lenses), using a variety of contemporary forms of anaesthesia.
• Management of difficult cataract cases. This should include cases with hard nuclei (by phacoemulsification and/or ECCE), small pupils, previous vitrectomy and/or trauma, high myopia, pseudoxefoliation, and mature and hypermature lenses.
• Management of intraoperative complications (including vitreous loss by anterior vitrectomy and wound leak by suturing).
• Implantation of other IOL types (e.g. AC in complicated cases, secondary AC and PC IOLs).
• Management of post-op complications, including raised pressure, endophthalmitis, macular edema and posterior capsular opacification (by laser capsulotomy).
• Management of cataract in the presence of glaucoma (e.g. phacotrabeculectomy).
• Management of cataract in the presence of retinal disease (e.g. ARMD; and especially in the presence of diabetic retinopathy).
• Management of adverse refractive outcomes of cataract surgery.

Desirable clinical experience
• Management of the dislocated crystalline lens
• Sclerally sutured IOLs and IOL exchange
• Piggy-back IOLs
• Anterior segment revision (including anterior vitrectomy)
• Multifocal IOLs
• Toric IOLs
• Intracapsular cataract surgery
Cornea and Refractive Surgery Fellowship

Objectives: To acquire demonstrable and certified expertise in the assessment and contemporary management of corneal disorders and to develop an understanding of the principles of refractive surgery

Essential clinical experience
- To have attended a minimum of 200 corneal disease clinics
- To have actively participated in, or assisted at, a minimum of 30 corneal transplant operations
- To have actively participated in the management of the complications of corneal transplantation, including rejection and refractive problems
- To have actively participated in, or assisted at, a minimum of 25 PRK
- To have actively participated in, or assisted at, a minimum of 25 LASIK

Mandatory competence
In addition to those areas specified in Basic Specialist Training, competence in the following is specifically required:
- Clinical evaluation of the patient undergoing corneal transplantation leading to the development of a suitable management plan, after discussion with the patient.
- Management and primary repair of penetrating eye injury, including those affecting the anterior segment
- Management of contact lens related disorders
- Management of infective keratitis, including biopsy/sampling (for cytology, histology, microbiology) and the development of an appropriate antimicrobial strategy, and in particular the management of herpetic keratitis
- Acute management of severe chemical burns involving the anterior segment
- Management of all inflammatory and degenerative diseases of the cornea
- Management of corneal dystrophies and keratoconus
- Surgical management of the refractive disorders
- Management of adverse refractive outcomes of refractive surgery

Desirable clinical experience
- Combined corneal transplantation, cataract extraction and lens implantation
- Management of acute corneal perforation by transplantation or tissue glues
- Fitting of contact lenses
- Endothelial microscopy
- Corneal pachimetry, topography and aberrometry
- Management of the complications of severe chemical injuries to the anterior segment
- Limbal cell transplantation and conjunctival autografting
- Amnion membrane grafting
- Intracorneal rings, toric and phakic IOL
- Techniques and organisation of eye-banking
Glaucoma Fellowship

Objectives: To acquire demonstrable and certified expertise in the assessment and contemporary management of ocular hypertension, and primary and secondary glaucoma

Essential clinical experience
- To have attended a minimum of 200 glaucoma clinics
- To have actively participated in, or assisted at a minimum of 100 procedures (surgical or laser) for glaucoma

Desirable clinical experience
- Management of malignant glaucoma
- Use of antimetabolites in trabeculectomy
- Use of drainage tubes/stents in complex glaucoma surgery
- Non-penetrating glaucoma surgeries

Mandatory competence
In addition to those areas specified in Basic Specialist Training, competence in the following is specifically required:
- The clinical evaluation of the retinal nerve fibre layer by slit lamp biomicroscopy
- The appropriate selection and interpretation of visual fields
- The drawing up of an individual management plan leading to a target IOP
- Pharmacological lowering of IOP
- Trabeculectomy, bleb management and laser suture lysis
- Management of the complications of trabeculectomy, including flat anterior chamber
- Management of glaucoma in the presence of cataract
- Cycloablation (including cyclodiode laser) for refractory glaucoma
- Laser trabeculoplasty and selective laser trabeculoplasty
- Management of acute angle closure glaucoma, including medical and laser treatment
Medical Retina Fellowship

Objectives: To acquire demonstrable and certified expertise in the diagnosis and management of medical disorders of the retina

Essential clinical experience
- To have undertaken under supervision a minimum of 50 laser treatments for retinal diseases
- To have performed under supervision a minimum of 150 OCT examinations
- To have performed, under supervision a minimum of 50 fluorescein/indocyanine green angiography examinations
- To have undertaken under supervision a minimum of 20 microperimetry examinations
- To have undertaken under supervision a minimum of 20 ultrasound examinations

Mandatory competence
In addition to those areas specified in Basic Specialist Training, competence in the following is specifically required:
- Clinical diagnosis:
  - Age-related macular degeneration
  - Diabetic retinopathy
  - Retinal vein occlusions
  - Degenerative myopia
  - Chorioretinal dystrophies
  - Chorioretinal inflammatory disorders
  - Other retinal vascular disorders
  - Other retinal degenerative disorders
  - Instrumental diagnosis of chorioretinal disorders
  - Treatment of chorioretinal disorders

Desirable clinical experience
To have a sound working knowledge by exposure to:
- Management of all age-related macular degeneration forms
- Management of diabetic retinopathy forms
- Management of degenerative, inflammatory, and hereditary chorioretinal disorders

Each ESASO Fellowship includes a specific Programme covering educational and research objectives
Objectives: To acquire demonstrable and certified expertise in the assessment and contemporary management of surgical disorders of the retina

**Essential clinical experience**
- To have undertaken a minimum of 50 posterior segment laser treatments
- To have actively participated in, or assisted at a minimum of 150 retinal operations in which the fellow is the primary, or the assistant surgeon. These procedures should include scleral buckling, and vitrectomy.
- To have performed, under supervision, a minimum of 50 B scan ultrasound and OCT

**Desirable clinical experience**
- To have a sound working knowledge, by exposure to:
  - Management of IOFB and dropped nucleus
  - Management of PVR
  - Management of traumatic retinal detachment

**Mandatory competence**
In addition to those areas specified in Basic Specialist Training, competence in the following is specifically required:
- Clinical evaluation of rhegmatogenous retinal detachment leading to the development, after discussion with the patient, of a suitable management plan
- Clinical evaluation of macular pucker leading to the development, after discussion with the patient, of a suitable management plan
- Clinical evaluation of macular oedema leading to the development, after discussion with the patient, of a suitable management plan
- Management of endophthalmitis by intraocular fluid biopsy, planning an appropriate pharmacological therapeutic strategy, and the administration of intraocular drug therapy
- Management of retinal breaks by laser photocoagulation and cryotherapy
Observership and Short Visiting Fellowship

ESASO Observership

Objectives
To acquire a demonstrable and certified understanding of clinical and surgical practice in an ophthalmic subspecialty through observation with leading specialists in the field.

Subspeciality
- Cataract – IOL implantation
- Glaucoma
- Medical Retina – New anti-VEGF and steroids
- Surgical Retina – Mini-invasive vitrectomy

Advantages for participants
- Explore an ophthalmic subspecialty intensively
- Each fellow is assigned to a tutor surgeon to provide expert guidance and supervision
- Improve theoretical understanding and acquire practical experience
- The ESASO Observership can form the basis of a future application for a one-year fellowship

Programme Structure
- Full-time, intensive one-month observership
- Takes place at ESASO-affiliated institutions internationally

ESASO Visiting Fellowship

Objectives
To acquire demonstrable and certified hands-on, cataract surgical skills.

Subspeciality
- Cataract surgery

Advantages for participants
- Opportunity for young ophthalmologists to gain hands-on training
- Each fellow is assigned to a tutor surgeon to provide expert guidance and supervision
- Perform a minimum of 24 cataract surgeries with IOL implantation
- Video recording and analysis of all surgeries
- Books, journals, video material and interactive sessions available

Programme Structure
- Four-week programme held at the LV Prasad Eye Institute (LVPEI) in Hyderabad, India
- Week 1 – the fellow assists surgeons in the operating room and performs practice surgery on animal eyes in the wetlabs
- Week 2 & 3 – the fellow assists with pre-operative and post-operative care and begins to perform live surgery under expert supervision.
- Week 4 – the fellow performs surgery independently and handles outpatient care
Leadership Training Programme for Clinical Product Development Fellowship

Objectives
- Identify & train the next generation of outstanding leaders in the ophthalmic device/pharmaceutical industry
- Cultivate a leadership team with global representation through special emphasis on emerging markets
- Enhance partnerships with academic institutions from which such leaders may be recruited

Curriculum: Product Development from Inception to Completion Selection of Target Diseases
- Identification of unmet needs
- Identification of unpenetrated markets

Preclinical Models
- Development
- Data assessment

Product Design/Manufacture
- Devices
- Drugs
- Biologicals/cells/genes

Clinical Trials
- Project team assembly
- Trial design: phase I vs. II vs. III
- Site recruitment & management
- Clinical regulatory interactions
- Data analysis, review, reporting
- Post-market clinical trials/surveillance
- Data publication
- External consultant interactions (including DSMC, Trial PI, etc.)

Regulatory Issues
- General: devices, drugs, biologicals, cells, genes
- Regional

Commercial Issues
- Medical affairs, key opinion leader engagement
- Pricing
- Delivery/packaging
- Product differentiation

Market Surveillance
- Identification & evaluation of external preclinical & clinical stage programmes for partnering

Programme Structure
- Two-year Fellowship:
  - Year 1: curriculum training
  - Year 2: initiate & complete clinical research project
- Partner with degree-awarding academic institution
  - One of the candidate’s mentors is based at this institution
- One fellow is accepted per year
ESASO One-Year Fellowship
ESASO awards fellowships on a competitive basis. Each June, the Fellowship Committee holds interviews with candidates in Lugano. Applicants should have completed an ophthalmology residency and attended two modules at ESASO, preferably in the subspecialty in which they wish to study further. The following requirements apply:

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<tr>
<th>Fellowship</th>
<th>Modules required</th>
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* The Glaucoma Fellowship only requires one module. **In the event of mixed module (Medical & Surgical Retina) another retina module is required.

ESASO Observership
In each module the participant with the best grades is offered the opportunity to pursue an observership in the same subspecialty. If this participant declines the observership the participant with the second-highest grades will be eligible, and so on.

ESASO Visiting Fellowship
Applicants must have completed one ESASO module, here preferably in cataract surgery, to be eligible to attend this programme.

Clinical Product Development Fellowship
Applicants must have completed two ESASO Modules, preferably in the subspecialty in which they wish to study further, and must demonstrate an interest in translational research/clinical product development. In addition, they should have the ability to work internationally. This fellowship lasts 12 – 24 months.

Economic Support
ESASO will provide successful applicants with an annual stipend or a grant. The sum depends on the commitments related to the specific fellowship programme.

ESASO One-Year Fellowship
ESASO provides grants of up to € 40,000 for the ESASO Fellowships, depending on the local funding of the international centre.

ESASO Observership
ESASO provides a grant of up to € 1,000 for each ESASO Observership. The grant is paid as a lump sum at the end of the programme.

ESASO Visiting Fellowship
ESASO will support successful applicants with a grant. The budget is set yearly in advance.

Clinical Product Development Fellowship
ESASO grants an annual stipend, supported by industry, which will depend on the commitments related to the specific fellowship.