



# Newsletter

of the *European Society for Artificial Organs*

## Letter from the president

ESAO Newsletter  
February 2018

### Inside this issue:

- p1 Letter from the president
- p2 Update on ESAO BoG
- P3 ESAO 2017 - Vienna
- P4 yESAO 2017 - Vienna
- P5 yESAO news
- p6 ESAO Winter School
- P7 Announcements

### Contact

#### ESAO office:

anita.aichinger@  
donau-uni.ac.at  
sunny.eloot@ugent.be

### More information:

[www.esao.org](http://www.esao.org)

### Edited by:

Sunny Eloot

Dear Members of European Society for Artificial Organs,

We reach now at the fifth edition of the Newsletter edited by our Secretary General Sunny Eloot. It is time to have a look back to 2017, which was a very active and successful year for ESAO and a look forward in 2018, which will be also very busy.

First, let me outline the enormous success of our annual congress that was organised by our colleague Prof Heinrich Schima and his team in **Vienna** last September. Congratulations! As you know, the joint **ESAO-IFAO congress** comes to Europe every three years. We could thus meet and interact with colleagues from all over the world, from Japan, China, Australia to North and South America. More than 500 persons attended the congress, which was probably the largest audience in the past ten years. We could enjoy both a high-level scientific meeting as well as typical and friendly social events. Once again, we could notice the high number of young researchers during the **yESAO** events before and during the congress. You can read more about ESAO-IFAO 2017 on page 3-4 and have a look at the photo gallery as available on the website [www.esao2017.org](http://www.esao2017.org).

Following the elections, we are glad to welcome **two new governors**: Nuno Neves from Portugal and Simon Sonntag from Germany. You will find more details about them on page 2.

Year 2018 started with the **ESAO Winter School** on Therapeutic Apheresis, Biomaterials & Cellular Therapies organised by our Austrian colleagues at a very nice mountain resort, Semmering. Snow was there, as well as an active audience providing many interactions with speakers (see page 6 for more details). If you have a good idea or wish to organise the next ESAO Winter School, please get in touch with Viktoria Weber ([viktoria.weber@donau-uni.ac.at](mailto:viktoria.weber@donau-uni.ac.at)) who is in charge of the ESAO Education Working Group.

In 2018, we have also the opportunity to work with a **new publisher for the blue journal**: indeed, *Wichtig* was sold at the end of 2017 to SAGE Publishing. I take the opportunity here to **warmly thank Ms. Michela Zucchetti**, who acted as IJAO Managing Editor for the past 18 years, and with who we had the pleasure to meet at all congresses and during ESAO boards. Michela, we will miss you! Nevertheless, we have the insurance that IJAO will go on with SAGE and that the publication policy will not be altered. Prof Andrea Remuzzi remains Editor in Chief and Prof Thomas Groth, as past president, is the ESAO editor. Therefore, I strongly encourage you to submit new manuscripts and reviews to the journal.

Finally, I would like to focus on our next major event: the **45th ESAO Annual Congress will be organised in Madrid (Sept 12-15, 2018)** by Prof Juan F. del Cañizo and our Spanish colleagues. It is now time to submit abstracts ([www.esao2018.org](http://www.esao2018.org)). We expect to meet most of you there to make this new edition a real success!

With my best personal regards,  
*Cécile Legallais, ESAO President*



## Update on the ESAO Board of Governors

During the ESAO Meeting in Vienna (September 6<sup>th</sup>, 2017) our past President of the Society, Thomas Groth, expressed his thanks to the **governors leaving the Board**: Marek Darowski (Poland) and Gerardo Catapano (Italy).

At the same occasion, we could welcome our new **President Elect** Piotr Ladyzynski, who was the organiser of the successful ESAO 2016 meeting in Warsaw, and Simon Sonntag and Nuno Neves as new **Board Governors**.

**Simon Sonntag (Germany)** is working as Chief Operating Officer at enmodes GmbH since 2014, an engineering service provider for biomedical device companies. He graduated in Applied Mathematics in 2011 at the Technical University of Munich (Germany) and National University of Singapore and defended his PhD about "Numerical analysis and optimization for implant development and medical imaging" at the RWTH Aachen (Germany) in 2014. Together with Tom Verbelen (Belgium) he was the former coordinator of the yESAO. They managed to increase the number of yESAO members and to organise two successful yESAO meetings.



*"Since my first participation at the ESAO congress in 2012, I have a strong connection to the society with major scientific and organizational contribution in the last years. It is a pleasure and a great honor to continue my service to the society as a member of the board of governors. My goal is to foster the focus on bringing research from Academia to the market with my experience and network in the MedTech Start-Up community, to support the marketing activities of the society in social media, to promote young scientists and to bring innovative thinking and the spirit of the yESAO to the board."*

**Nuno M. Neves (Portugal)** is a Vice-Director of the 3B's Research Group – Biomaterials, Biodegradables and Biomimetics, and Associate Professor at the Department of Polymer Engineering of Univ. Minho in Portugal. This is a research unit of Excellence, directly funded by the Portuguese Foundation for Science and Technology (FCT). The 3B's Research Group also integrates the PT Associate Laboratory ICVS/3B's, as homologated by the Portuguese Ministry for Science and High Education, being Nuno Neves one of the members of the Board of Directors.

His background education includes: (i) BSc in Polymer Engineering, Univ. Minho, (ii) Master degree by research on Polymer Engineering and (iii) PhD on Polymer Science and Engineering, Univ. Minho, Portugal, degree that was prepared in cooperation with the University of Twente, The Netherlands. Nuno M. Neves has been involved in biomaterials research since 2002. He has worked several periods abroad at the University of Twente and recently in a sabbatical leave at the University of Tokyo, Japan, at Prof. Kazunori Kataoka's lab. His main area of research is focused on tissue engineering and regenerative medicine strategies using stem cells and advanced drug delivery scaffolds and medical devices.



*"As a board member of ESAO, I will continue promoting the Working Group in Tissue Engineering of our Society. I will also continue working towards strengthening the links and contributing for stronger networking in the research activities of the community of artificial organs and fostering the recognition of the important contributions of ESAO members for the progress in the field. In this sense, I do intend to propose and also to lead the edition of an in-depth book, aimed to be adopted in undergrad studies but also in post-graduation courses, documenting the progress achieved in artificial organs and the lessons learned along that process, highlighting the important contributions of members of ESAO for the scientific and clinical progress of our field."*

## ESAO 2017 - Vienna (Austria)



The **ESAO-IFAO 2017** conference took place in Vienna (Austria) in September, was organised by Heinrich Schima and co-workers, and has been attended by more than 400 participants from 30 different countries. The meeting was characterised by a strong **scientific program** with almost 400 conference contributions in plenary sessions and symposia, and as oral and poster presentations based on accepted abstracts.

During the Opening Ceremony, dr Guoying Zhou (Germany) and colleagues got the **ESAO-Wichtig Research Award** (certificate and check of 2.500€) for the paper 'Covalent immobilization of glycosaminoglycans to reduce the inflammatory effects of biomaterials'



From the more than 300 submitted abstracts, the **innovation award 2017** went to J. Ryan Stanfield (Oklahoma, USA) for his work 'A novel, miniaturized VAD configured for right-heart MCS'

Also the three best **posters** were awarded:

1. Thomas Schlöglhofer (Vienna, Austria): 'International VAD Coordinator Practices: Clinical Utility and Application of HeartWare HVAD System Waveforms and Logfiles'
2. Reema Anouz (Halle, Saale, Germany): 'Studies on osteogenic differentiation of cells on multilayers loaded with BMP-2'
3. Tom Verbelen (Leuven, Belgium): 'In-vivo study of a novel lung support device for PAH and bridge-to-transplant/candidacy'

The PhD-committee overhanded a '**Certificate of Recognition of Excellence**' to Alexander Köwitsch (Germany) who recently finalised his PhD and passed an important international track.

Beside the scientific part of the meeting, several social events were organised, such as the welcome reception on Wednesday, the Medical Museums' tour in the 'Josephinum' (with special exhibition about artificial hearts) and the 'Narrenturm' (i.e. the worldwide oldest psychiatric hospital with exhibition of medical history) on Thursday, and a cosy Heurigen Evening on Friday evening.



## yESAO 2017 - Vienna (Austria)

100 young researchers from all over the world attended the annual yESAO conference in Vienna. Three keynote lectures led the journey from Failure, Dead Ends, Unexpected Outcomes, to Success Stories, Milestones, Improvements through Alternative Methods and Cost Containment. Few selected abstracts for each of the 3 topics provided practical examples and stimulating discussions.

A company visit was organised on the first day at Lithoz to familiarise with the process of ceramic 3D printing and its applications. On the closing day, the workshop on "Best Practices and Workarounds – common experimental and lab setups" was held: firstly, yESAO members were grouped based on their interest, then each group was encouraged to exchange best practices and discuss challenges, followed by a presentation to all the members. A "Speed Geeking" was held at the end of the day, to better know each other and stimulate new collaborations.

For the yESAO meeting night, a typical Viennese dinner was held in a traditional tavern in the heart of Vienna, followed by home-made beers brewed in Hannover by the yESAO coordinators and the core team. Multiple other social events were organised throughout the congress week, together with the ESAO members, of which a visit to the medical museums and dinner at a traditional Viennese Heurigen.



During the congress, the winners of the fourth edition of the **yESAO Exchange Award**, who finished their exchange during **2017**, presented their work:

- **Kristin Hugenroth** (Aachen, Germany) & **Anastasios Petrou** (Zurich, Switzerland): '*Hemodynamic and hydraulic properties of TCPCs in Fontan patients*'
- **Sanja Stojanovic** (Nis, Serbia) & **Syamend Saeed** (Berlin, Germany): '*In vitro adipose tissue engineering using adipose derived stem cells and collagen-based scaffolds combined with hyaluronic acid*'

The yESAO chairs are also proud to announce the winners of the fifth edition of the **yESAO Exchange Award 2018**, who will be organising their exchange in the upcoming months and will present their work in Madrid:

- **H. Al-Khoury** (Halle, Germany) & **E. Espinosa-Cano** (Madrid, Spain)  
'*Immobilization strategies with glycosaminoglycans- polymeric drug conjugate on biomaterials for anti-inflammatory purposes*'
- **Seraina Dual** (Zürich, Switzerland) & **Leonie Korn** (Aachen, Germany)  
'*Left ventricular volume measurement from a VAD cannula perspective*'



All young researchers are invited to our next meeting in Madrid 11-12 September 2018. The meeting motto is

**“Remedies to shared challenges in Artificial Organs”.**

The meeting will be centered on failures, problems, challenges in the field of Artificial Organs, and there will be very productive conversations, workshops and round tables with invited speakers on in vivo bio-interaction, exchange of data as well as experimental and computational modelling. The meeting is free to attend for ESAO congress attendees.

### yESAO news

The coordinators of yESAO have the honour to be guest editors of the first **yESAO focus issue in the IJAO**. The issue addresses innovations and advancements made by young researchers in the field of organs support, replacement and regeneration based on artificial organs, tissue engineering and regenerative medicine. All submissions are currently in a review process and the issue is intended to be published at the end of spring 2018.

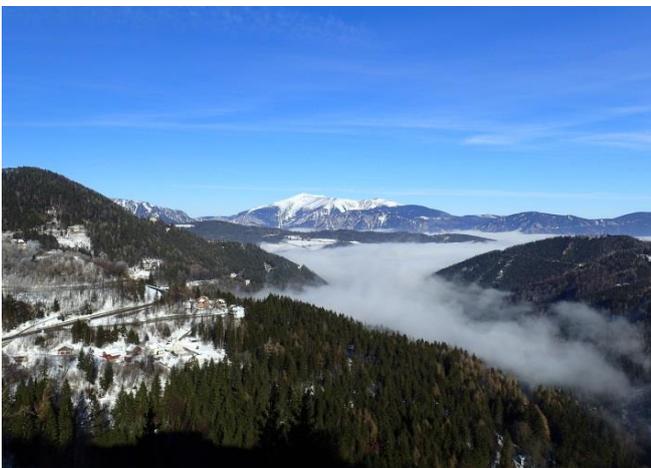
The yESAO community has the aim to encourage international and interdisciplinary cooperation, to exchange ideas and experiences while producing innovation and advancement in the field. To fulfill this aim, we are creating the **yESAO database**, which collects the main areas of research and core competencies of the yESAO members and their affiliations, so laboratories, hospitals and companies. The database will provide several functions, of which to search for specific methods, institute by core competencies, yESAO members by names. This tool will certainly favor new collaborations in the field of Artificial Organs and push forward the knowledge of the society as a unit, in an enjoyable atmosphere without the limitations of conventional organisations.

There is a new section “opportunities” in our **yESAO website**. This platform allows to share and select job opportunities, calls for project proposals and yESAO and ESAO awards. Send your proposals and job descriptions to [info@yesao.org](mailto:info@yesao.org) and they will be published on <http://www.esao.org/yesao/opportunities/>





The 9<sup>th</sup> ESAO Winter School of the European Society for Artificial Organs (ESAO) took place from the 25<sup>th</sup> to the 27<sup>th</sup> of January 2018 with the picturesque scenery of Semmering, Austria, and its surrounding mountains as background. The topic of the Winter School was **'Therapeutic Apheresis, Biomaterials & Cellular Therapies'**. The scientific committee was represented by Prof. Viktoria Weber (Danube University Krems), Prof. Michael B. Fischer (Danube University Krems), and Dr. Volker Witt (St. Anna Children's Hospital Vienna).

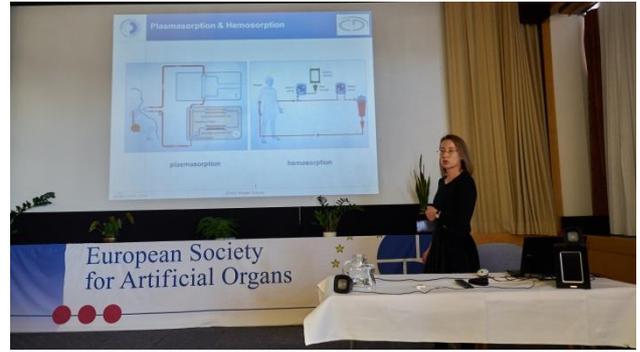


60 researchers attended the two-day event, and a total of 19 lectures were held by international speakers. The organized sessions covered the topics of:

- Coagulation and Anticoagulation
- Separation Techniques and Devices
- Application of Apheresis and Clinical Outcome
- The Blood-Biomaterial Interface
- Innovative Methods of Cell Therapy and Functional Aspects

A keynote lecture on "Cellular Therapies for Tissue Regeneration and Drug Delivery" was held by Prof. Massimo Dominici (Modena, Italy) and sponsored by the Austrian Society for Tissue Engineering and Regenerative Medicine (ÖGTERM; [www.oegterm.at](http://www.oegterm.at)).

To dig into the history of extracorporeal therapies, a movie collection showing a time travel over the past century was held by Prof. Jörg Vienken (Usingen, Germany) during the second evening: "Dialysis and Extracorporeal Blood Circuits – When The Movies Were Young!".



The evening poster session for young researchers was organised by Dr. Volker Witt, Dr. Jens Hartmann and Dr. Carla Tripisciano. The **three best posters** were awarded to:

1. **Dominik Egger** (University of Natural Resources and Applied Life Sciences, Vienna): *'Three-Dimensional Aggregate Cultivation of Mesenchymal Stem Cells in a Stirred Tank Reactor'*
2. **Olga Kuten** (Danube University Krems): *'Anti-Adipogenic Factors in Platelet Rich Plasma Counter its Pro-Adipogenic Effects, while Serum from Platelet Rich Fibrin Supports Stem Cell Adipogenic Differentiation'*
3. **Tanja Eichhorn** (Danube University Krems): *'Inflammatory Mediator Profiles in Sepsis Patients'*



## Announcements



### We are pleased to announce a new partnership with SAGE Publishing

As of 1<sup>st</sup> January, SAGE is the publisher of *International Journal of Artificial Organs*. SAGE is a global company publishing more than 1,000 journals across scientific, medical and technical disciplines, as well as the social and behavioural sciences. SAGE's international reach will help grow *IJAO* in terms of awareness and visibility, and help support the development of the journal by working closely with the editorial team and the ESAO.

The first SAGE issue has published! However, SAGE is still in the process of transferring all the arrangements from the previous publisher, including ESAO member access. You will shortly receive your new access information, but in the meantime all content is freely available on the journal's new website

