ESAO Winter School 2023
— Program —

Artificial Organs and Tissue Engineering
— From Basics to Clinical Application

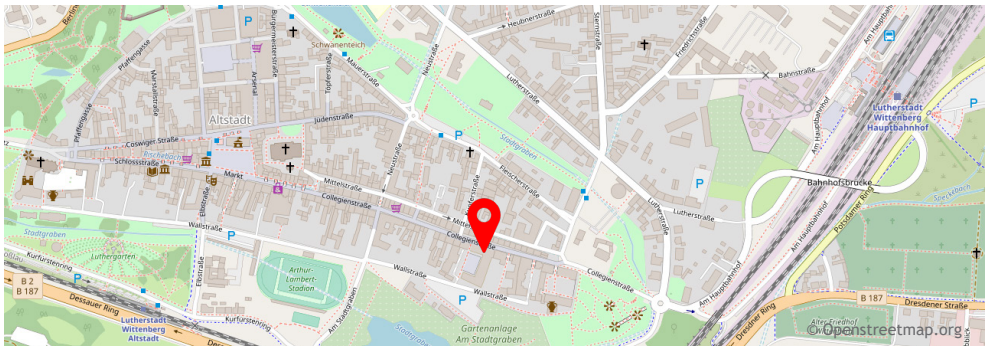
Farewell Symposium
Prof. Dr. Thomas Groth

International Federation for Artificial Organs
IFAO
MARTIN-LUTHER-UNIVERSITÄT
HALLE-WITTENBERG
Fraunhofer
IMWS

Meeting Venue

Stiftung LEUCOREA
Collegienstraße 62
06886 Lutherstadt Wittenberg
Germany

www.leucorea.de/en/



The venue LEUCOREA

The Leucorea was founded as university in 1502 and merged with the Frederic University in Halle in 1817. Today Leucorea is part of the Martin Luther University Halle-Wittenberg and used as venue of colloquia, congresses and other meetings. It has several lecture halls, seminar rooms as well as a cafeteria and is located in the old town of Wittenberg close to many historical sites.

Lutherstadt Wittenberg

Is a town in Saxony-Anhalt, Germany situated on the river Elbe. The town is famous for its close connection with Martin Luther and the Protestant Reformation. Several of Wittenberg‘s buildings are associated with the events, including a preserved part of the Augustinian monastery in which Luther lived. It is considered the world‘s premier museum dedicated to Luther.
Today, Wittenberg is a popular tourist destination, best known for its intact historic centre and various memorial sites dedicated to Martin Luther and Philip Melanchthon, which were added to the UNESCO World Heritage List in 1996.

Accommodation (Deadline for Reservations is January 15, 2023)

Luther-Hotel Wittenberg	Phone	+49 3491 4580
www.luther-hotel-wittenberg.de	Keyword	»ESAO Winterschool 2023«
info@luther-hotel-wittenberg.de	Rates	€ 88 single room / € 121 double room

Travel

By car

Lutherstadt Wittenberg can be reached via the A9 autobahn using the B187 federal road. The A9 runs approx. 30 km away and connects Berlin with Munich.

By train

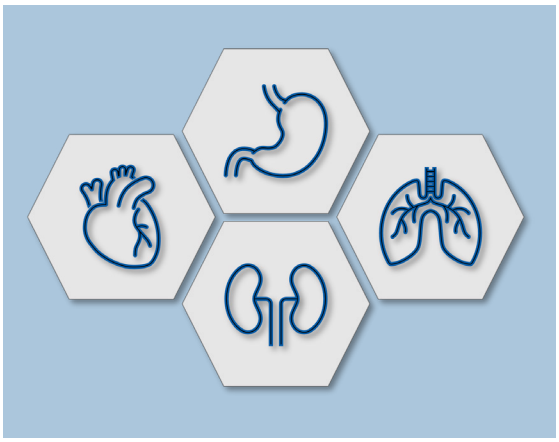
www.fahrplanauskunft.de/

By airplane

International airport Berlin Brandenburg is located 90 km north from Wittenberg. Leipzig Airport is located 60 km south. There are train connections from either Berlin main station or Leipzig main station. Take ICE or RE trains from either city to Wittenberg which takes about one hour.

Content of the Meeting

The motto of this event will be covered by presentations on materials science, development of technologies, and the bedside application of artificial organs and tissue engineering for the treatment of patients.
The organizing committee has succeeded in attracting distinguished international speakers who will give talks on the state of the art in the field. The meeting will also provide an excellent platform for the presentation of the work of regular participants during poster sessions, a get-together party and a social evening as well as guided tours through the historical center of the old town of Wittenberg, the birthplace of reformation.

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The upcoming ESAO Winter School will further represent a Farewell Symposium for Prof. Dr. Thomas Groth, former President of ESAO, who will retire as Professor of Biomedical Materials at Martin Luther University Halle-Wittenberg soon.

Poster Sessions (Deadline for Poster Submission is January 20, 2023)

Regular participants are invited to submit abstracts for a poster presentation using the template found here: www.esao.org/events/winterschool/
and submit this to: abstracts23@esao.org until January 20, 2023.

Abstracts will be published in the congress brochure.

Poster awards will be given for the best three posters.

Social Program

- ✓ Get-together
- ✓ Social Dinner
- ✓ Guided City Tour


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Scientific & Social Program

Wednesday, February 15

13:30 - 16:00	Registration
16:00 - 16:30	Welcome & Opening of Winter School
16:30 - 17:30	**Opening Lecture 1** ***Research on biomaterials, artificial organs & tissue engineering – a résumé and survey*** Thomas Groth, Martin Luther University Halle-Wittenberg, Germany
17:30 - 18:30	**Opening Lecture 2** ***New approaches for TERM and some innovative high-throughput tissue engineering strategies for better understanding and optimizing biomaterial/cell interactions*** Rui Reis, University of Minho, Portugal
19:30 - 22:00	**Get-together at Luther-Hotel Wittenberg**

Thursday, February 16

Session 1	**Tissue Engineering I**
8:30 - 9:10	***Advanced microgels and hydrogels for soft tissue engineering*** Gloria Gallego Ferrer, Polytechnical University Valencia, Spain
9:10 - 10:10	***Protein-based hydrogels in stem cell engineering*** Manuel Salmeron Sanchez, University of Glasgow, Scotland
10:10 - 10:40	**Coffee Break**
Session 2	**Tissue Engineering II**
10:40 - 11:20	***Fabrication of elastin materials*** Christian Schmelzer, Fraunhofer IMWS Halle, Germany
11:20 - 12:00	***Surface functionalised biomaterials and nanostructures for advanced therapies*** Nuno Neves, University of Minho, Portugal
12:00 - 14:30	**Lunch Break & Poster Session**
Session 3	**Tissue Engineering III**
14:30 - 15:10	***Transfection-active surfaces as tool to design smart biomaterials*** Christian Wölk, University of Leipzig, Germany

15:10 - 16:10	***Precise design of biomaterials to support cell adhesion and differentiation*** Joao Mano, University of Aveiro, Portugal
16:10 - 16:40	**Coffee Break**
Session 4	**Tissue Engineering and Controlled Release**
16:40 - 17:20	***Biocompatibility issues for TERM: back to basic*** Gilson Khang, Chonbuk National University, South Korea
17:20 - 18:00	***Biodegradable materials for controlled drug delivery: a comparison of polymers, lipids, and phospholipids*** Karsten Mäder, Martin Luther University Halle-Wittenberg, Germany
20:00	**Social Evening at Luther-Hotel Wittenberg**

Friday, February 17

Session 5	**Biomaterials and Anti-inflammatory Therapies**
8:30 - 9:20	***Heparin-functionalized surfaces and their potential to bind mediators of immunothrombosis in sepsis and COVID-19*** Viktoria Weber, University of Continued Education, Krems, Austria
9: 20 - 10:00	***Anti-inflammatory polymeric nanoparticles and their immobilization in surface coatings by LbL methodology*** Maria Rosa Aguilar de Armas, Madrid, Spain
10:00 - 10:30	**Coffee Break**
Session 6	**Biomaterials, Cells & Modelling**
10:30 - 11:20	***Sustainable biobased compounds for functional and biorelevant materials*** Kai Zhang, University of Göttingen, Germany
11:20 - 12:10	***Dynamic adhesive environments - a tool toward control of stem cells behavior*** George Altankov, University of Pleven, Bulgaria
12:10 - 12:50	***Information modes and processes in biological systems*** Yannis Missirlis, University of Patras, Greece
12:50 - 14:30	**Lunch Break & Poster Session**
Session 7	**Artificial Organs I**
14:30 - 15:10	***Artificial organs — Historical reflections and ESAO*** Horst Klinkmann, Rostock, Germany

15:10 - 15:50	***The right thing for the wrong reason? Actual and future perspectives of dialysis therapy*** Jörg Vienken, Usingen, Germany
15:50 - 16:30	**Coffee Break & Poster Session**
17:30 - 19:00	**Guided Tour through Wittenberg**

Saturday, February 18

Session 8	**Artificial Organs II**
8:30 - 9:10	***Membranes for portable and wearable artificial kidney systems*** Dimitrios Stamatialis, University of Twente, The Netherlands
9:10 - 9:50	***Hurdles and hassles in bioreactor design and production for substitutive and regenerative medicine*** Gerardo Catapano, University of Calabria, Italy
9:50 - 10:20	**Coffee Break**
Session 9	**Artificial Organs III**
10:20 - 11:10	***Material, science and development of microbubble removing technologies and applications within an extracorporeal circuit in artificial organs: Focus on hemodialysis*** Bernd Stegmayr, Umea University, Sweden
11:10 - 11:50	***Usability of life-supporting systems: Importance, experiences and methods for improvement examplified on cardiac assist devices*** Heinrich Schima, Medical University Vienna, Austria
11:50 - 12:30	***VA-ECMO for pulmonary embolism*** Tom Verbelen, Catholic University Leuven, Belgium
12:45 - 13:15	**Poster Award Ceremony and Closing Remarks** Thomas Groth, Martin Luther University Halle-Wittenberg, Germany

Organizers

- ✓ European Society for Artificial Organs (ESAO)
- ✓ Fraunhofer Institute for Microstructure of Materials and Systems IMWS
- ✓ Martin Luther University Halle-Wittenberg

Scientific Committee

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Contact with Local Organizers

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Dept. Biological and Macromolecular Materials

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Registration & Fees

Registration via the following link:
www.esao.org/registration-form-esao-winter-school-2023/

Registration fee	before / after Jan. 10, 2023
ESAO Member	€ 300 / € 350
Non-Member	€ 350 / € 400
Student / Senior Member	€ 200 / € 250
One-Day-Ticket	€ 100

Payment by bank transfer only!

On-site registration by cash only!

Contact for Registration

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