

## Organizers

European Society for Artificial Organs (ESAO)  
& Martin Luther University Halle-Wittenberg



## Scientific Committee

Thomas Groth            Martin Luther University, Halle, Germany  
Nuno Neves            University of Minho, Braga, Portugal  
Viktoria Weber        Danube University Krems, Austria

## Local Organising Committee

Sophie Bendix & Christian Willems  
Martin Luther University, Halle, Germany  
Christian Schmelzer, Fraunhofer Institute IWMS, Halle,  
Germany

## Contact with local organiser

Sophie Bendix  
Phone: +493455528451  
email: [sophie.bendix@pharmazie.uni-halle.de](mailto:sophie.bendix@pharmazie.uni-halle.de)

## Registration & fees

Online by bank transfer only:

[www.esao.org/registration-form-esao-winter-school-2020/](http://www.esao.org/registration-form-esao-winter-school-2020/)

Anita Aichinger  
ESAO Office  
Danube University Krems  
Dr.-Karl-Dorrek-Strasse 30  
3500 Krems, Austria  
phone: +43 2732 893 2633  
email: [anita.aichinger@donau-uni.ac.at](mailto:anita.aichinger@donau-uni.ac.at)

**Registration fee**                      **before/after Jan. 10, 2020**

ESAO Member	€ 250,- / € 300,-
Non-Member	€ 300,- / € 350,-
Student	€ 150,- / € 200,-

**On-site registration only by cash**

Credit cards are not accepted

# ESAO Winter School 2020 2nd Circular & Preliminary Program

***Materials, Surfaces & Cells:  
Science & Technology for Bio Artificial  
Organs and Tissue Engineering***

**Leucorea  
Lutherstadt Wittenberg, Germany  
February 26-29, 2020**

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



## Venue

### Leucorea

Collegienstraße 62  
06886 Lutherstadt Wittenberg, Germany  
<https://leucorea.de/en/>

### The venue Leucorea

The Leucorea was founded 1502 as university and merged in 1817 with the Frederic University in Halle. Today Leucorea is part of Martin Luther University Halle-Wittenberg and used as venue of colloquia, congresses and other meetings. It has several lecture halls, seminar rooms and a cafeteria and is located in the old part 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 associated with the events, including a preserved part of the Augustinian monastery in which Luther lived, considered to be 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 added to the UNESCO world heritage list in 1996.

### Accommodation

Luther-Hotel Wittenberg  
phone: +49 3491 4580  
mail: [info@luther-hotel-wittenberg.de](mailto:info@luther-hotel-wittenberg.de)  
<https://www.luther-hotel-wittenberg.de/en/>  
65,- € single room/ 85,- € double room

**Keyword:** "ESAO Winterschool"

Deadline for reservations January 8, 2020

## Travel

### By car

Lutherstadt Wittenberg is located 30 km from the A9 motorway, which connects Berlin with Munich using federal road No. 187.

### By train

<http://www.fahrplanauskunft.de/>

### By airplane

International airports Berlin Tegel (TXL) and Berlin Schönefeld (SFX) are 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 that takes about one hour.

<http://www.fahrplanauskunft.de/>

## Topics

- Biogenic biomaterials
- Engineering of biomaterial surfaces & 3D systems
- Hydrogels, scaffolds, bioprinting, Organ-on-a-Chip
- Stem cell biology and tissue engineering
- Translation from bench to bed site

## Poster Sessions

Regular participants are invited to submit abstracts for a poster presentation of not more than 400 words to [anita.aichinger@donau-uni.ac.at](mailto:anita.aichinger@donau-uni.ac.at) until February 3, 2020  
Poster Awards will be given for best three posters

## Social Program

- Get-together
- Guided city tours
- Social dinner

## Scientific & Social Program

### Wednesday, February 26

- 13.30 – 16.30 **Registration**
- 16:30 - 16:40 **Welcome & Opening of Winter School**
- 16:40 - 17:30 **Opening Lecture 1**  
**The roles of materials, surfaces and cells on the engineering of different tissues and organs.**  
Rui Reis, Braga, Portugal
- 17:30 - 18:20 **Opening Lecture 2**  
**Elastic biomaterials and advanced wound repair**  
Antony Weiss, Sydney, Australia
- 18:30 – 20.00 **Get together**

### Thursday, February 27

#### Session 1 Biopolymers I

- 08:30 - 09:10 **Synthesis of stimuli-responsive bioactive compounds from polysaccharides**  
Kai Zhang, Göttingen, Germany
- 09:10 - 09:50 **Polysaccharide chemistry and modification for chemical and photochemical cross-linking reactions**  
Matthias Schnabelrauch, Jena, Germany

09:50 - 10:20 **Coffee Break**

#### Session 2 Biopolymers II

- 10.20 – 11.10 **From natural resources to engineered artificial matrices**  
Antonella Motta, Trento, Italy
- 11:10 – 11:50 **Elastin analytics and electrospinning - Understanding the biomolecular world with the power of mass spectrometry**  
Christian Schmelzer, Halle (Saale), Germany

12:00 – 14:00 **Lunch Break**

14:00 – 16:00 **Guided Tour through Lutherstadt Wittenberg**

#### Session 3 Engineering cellular microenvironments I

- 16:30 – 17:20 **Engineering the cellular microenvironment with biomaterials and growth factors”**  
Manuel Salmeron Sanchez, Glasgow, Scotland
- 17.20 – 18.10 **Programmable cell instructive materials to control cell morphogenesis in vitro’**  
Paolo Netti, Naples, Italy
- 18:00 -19:30 **Poster Session I with snacks, beer & wine**

### Friday, February 28

#### Session 4 Cellular microenvironments

- 08:30 - 09:20 **Immunological challenges in regenerative medicine**  
Hans-Dieter Volk, Berlin, Germany
- 09:20 - 10:00 **Extracellular vesicles and their roles in inflammation and regeneration**  
Viktoria Weber, Krems, Austria
- 10:00 - 10:30 **Coffee Break**

#### Session 5 Cells, Materials & Scaffolds I

- 10:30 – 11:20 **Cell-rich microstructures in bottom-up tissue engineering**  
Joao Mano, Aveiro, Portugal
- 11.20 – 12.10 **Application of improved gellan gum-based scaffolds for Tissue Engineering in vivo**  
Gilson Kang, Jeonju, South Korea
- 12.10 – 12:50 **The interplay between structural and transport properties of the scaffold and cells metabolism in bioengineered tissues**  
Gerardo Catapano, Arcavada di Rende, Italy

12:40 - 14:30	<b>Lunch Break</b>	11:10 - 11:50	<b>Biology-inspired microphysiological systems to advance medicines</b> Eva Dehne, Berlin, Germany
14:30 – 16:00	<b>Guided Tour through Workshop of painter Lucas Cranach or Luther Museum</b>	11.50 – 12:30	<b>Pioneering solid organ bioengineering: past, present and future perspectives, and the politics within</b> Pedro Baptista, Zaragoza, Spain
<b>Session 6</b>	<b>Bioengineering cellular microenvironments II</b>	12:45 - 13:15	<b>Poster Award Ceremony &amp; Closing remarks</b> Thomas Groth, Halle (Saale), Germany
16.00 – 16:50	<b>Polymeric hydrogels: From fundamental physicochemistry to tissue engineering</b> Gloria Gallego Ferrer, Valencia, Spain		
16.50 – 17.30	N.N.		
<b>17:30 – 19:00</b>	<b>Poster Session II</b>		
<b>19:30 – 22:00</b>	<b>Social Dinner</b>		

## Saturday, February 29

<b>Session 7</b>	<b>Cells, Materials &amp; Scaffolds II</b>
08:30 – 09:10	<b>Biomaterials, Porous Scaffolds and Cells for Advanced Therapies</b> Nuno Neves, Bragha, Portugal
09:10 - 09:50	<b>Clinical translation of fibrin agarose-based artificial tissues</b> Antonio Campos, Granada, Spain
09:50 - 10:20	<b>Coffee Break</b>
<b>Session 8</b>	<b>Bioprinting, Organ-on-Chips and Solid Organ Engineering</b>
10:20 - 11:10	<b>Bioprinting cell laden building blocks for Tissue Engineering applications</b> Claudio Migliaresi, Trento, Italy