Austrian Cluster for Tissue Regeneration

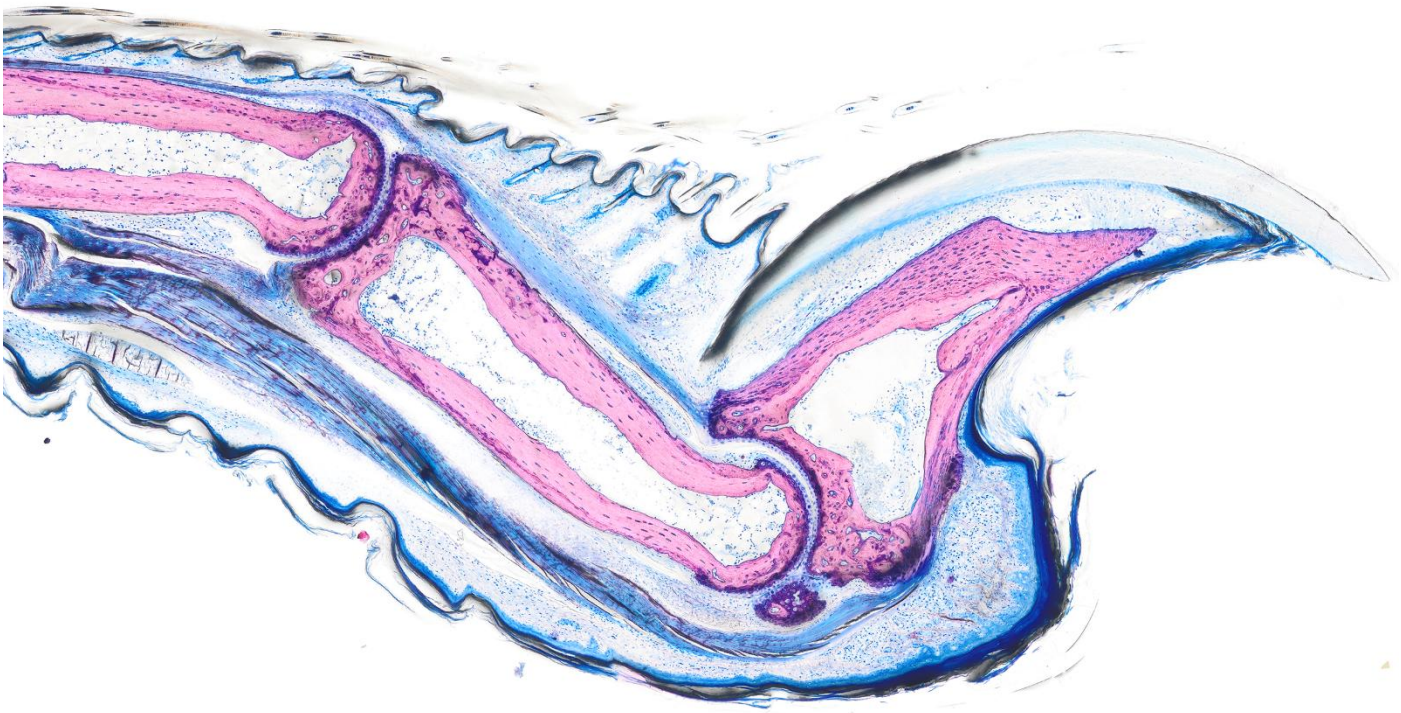
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LUDWIG BOLTZMANN INSTITUTE Traumatology
The Research Center in Cooperation with AUVA

14th TERMIS Winterschool 2027

"An Interactive Seminar Series on Current Hot Topics in Regenerative Medicine"



Bridging Tissue Engineering & Clinical Needs

"Pitch your Project Ideas" Challenge

Poster Session with Wine Tasting

Radstadt – Austria
January 7th-10th, 2027

With support from the Society of the Advancement of Research in Shock and Tissue Regeneration

MatureTissue
Joint DC by UASTW and TUW

FH University of Applied Sciences TECHNIKUM WIEN

Stadt Wien Wirtschaft, Arbeit und Statistik

Universität für Weiterbildung Krems

DONAU UNIVERSITÄT KREMS

Program

Thursday, January 7th

16:00-19:15

16:00 Welcome

Heinz Redl, Johannes Grillari

16:15 – 19:15 From Bedside to Bench

In biomedical research, it is easy to get lost in your own professional bubble of lab organization, scientific details and the peculiarities of academia. The reality check of clinical needs and feasibility might not get the attention it deserves. Often, we go years without ever meeting the target audience of our research or never meet them at all: patients. In this session, we will go into aspects of the "real world" to be taken into account when seeking to meet clinical needs. Two surgeons will give insights into their experiences by the bedside. Finally, in a closing workshop you will reflect upon how you can involve these new insights as well as open innovation concepts into your current or future research projects.

Chair: Conny Schneider (LBI Trauma)

Speakers:

Thomas Hausner (AUVA Trauma Center Salzburg, Austria)

Stefan Nehrer (University for Continuing Education Krems, Austria)

Conny Schneider (LBI Trauma, Austria)

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Friday, January 8th

08:30-11:30 / 16:30-19:00

08:30 – 11:30 Advanced Strategies of Regenerative Medicine

Regenerative medicine faces significant challenges that demand innovative approaches to enhance therapeutic efficacy and consistency. While therapeutic cells play a critical role in triggering regeneration processes, traditional cell therapies are often labor intensive, costly, and unpredictable in their outcomes. To address these limitations, advanced strategies such as modified cells, micro tissue grafting, and external biophysical stimulation techniques are gaining traction. This session will explore biophysical methods such as bioreactor-based cell stimulation, shockwave treatment, and micro tissue grafting as tools to enhance biological processes and tissue regeneration. Participants will also work on integrating these technologies into their own research projects, with a focus on their potential for translational applications.

Chairs: Andreas Teuschl-Woller (University of Applied Sciences Technikum Wien)
Speakers:
Andreas Teuschl-Woller (UAS Technikum Wien, Austria)
Justin Cooper-White (University of Queensland, Australia)
Andreas Traweger (Paracelsus Medical University, Austria)

❄ Pitch your Project Contest ❄

BREAK
11:30-16:30

16:30 – 18:00 Senescence and EVs

Ageing and regeneration are shaped by how cells change, communicate and respond to injury. Cellular senescence can impair tissue function and repair, while extracellular vesicles provide a natural means of communication between cells – and a promising platform for therapeutic intervention. At the same time, highly regenerative organisms offer an opportunity to investigate the biological mechanisms that enable successful tissue repair. This session explores these different perspectives on ageing, regeneration and intercellular communication, and how understanding them could open new approaches in regenerative medicine.

Chairs: Johannes Grillari (LBI Trauma)
Speakers:
Ingo Lämmermann (Rockfish Bio, Austria)
Ines Fischer (LBI Trauma, Austria)
Madhusudhan Bobbili (BOKU University, Austria)

18:00-19:30: Poster Session

Chair: Veronika Hruschka

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Saturday, January 9th

08:30-11:30 / 16:30 – 18:00

08:30 – 11:30 Tissue Regeneration

When tissue is lost or irreversibly damaged after an accident, the ultimate goal is to replace it with new, fully functional tissue. This session explores how cells, biomaterials, scaffolds and biofabrication can be combined to engineer living tissue that restores both structure and function.

Chair: Regina Brunauer (LBI Trauma)
Speakers:
Jos Malda (University Medical Center Utrecht, The Netherlands)
Petra Kluger (Fraunhofer Institute for Interfacial Engineering and Biotechnology, Germany)
David Hercher (LBI Trauma, Austria)

B R E A K
11:30-16:30

16:30 – 18:00 From Innovation to Implementation: Translating Medical Inventions into the Market

Bringing novel medical products from the lab to the clinic involves navigating a complex landscape of development, regulation, and intellectual property. In this session, speakers will share insights on transforming inventions into market-ready solutions, while an expert patent attorney will discuss the crucial role of securing intellectual property rights to protect and commercialize innovation. Attendees will gain a comprehensive understanding of the strategies, challenges, and legal considerations involved in successfully launching medical technologies.

Chair: Paul Slezak (LBI Trauma)
Speakers:
Gerda Redl (Redl Life Science Patents, Austria)
Klaus Weinberger (Rockfish Bio, Austria)

SOCIAL EVENT
18:00

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Sunday, January 10th

08:30-11:30

08:30 – 11:30 Understanding human Disease – from biomimetic Modelling to (patho)mechanistic and translational Research

Human pathologies have been studied for centuries, however, translating the vast amount of existing knowledge into efficient clinical therapies remains challenging. A major hurdle is the lack of adequate organotypic disease models for pre-clinical research, as current approaches barely reflect the complexity and functionality of adult tissues in vivo, e.g. including vascularisation. In addition, diseases which manifest early in development are particularly hard to model because of the heterogeneity observed in embryonic and somatic stem cell models. While Omics approaches have generated vast amounts of useful data, the complexity of translating them into clinically relevant findings requires the use of advanced methods for biomimetic modelling, such as advanced predictive in vitro modelling, integrated big data approaches or high content analyses.
This session will critically deal with recent advances and current challenges in personalised and tissue-engineering based modelling of tissue homeostasis and disease – with the aim to spark discussion on feasible strategies to more accurately represent functional human tissues for identification of druggable pathomechanisms in human pathologies.

Chairs: Peter S. Zammit (King's College London) & Philipp Heher (Newcastle University)
Speakers:
Peter S. Zammit (King's College London, UK)
Philipp Heher (John Walton Muscular Dystrophy Research Centre, Newcastle University, UK)
Francesco Saverio Tedesco (University College London/The Francis Crick Institute, UK)
Sigmar Stricker (Karl Landsteiner University of Health Sciences, Austria)

Closing Remarks

Registration

Early bird registration until November 4th
Registration Deadline: November 18th

Information: https://trauma.lbg.ac.at/14th-termis-winterschool/?lang=en
Registration form: https://eveeno.com/14-termis-winterschool

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Scientific Committee:
Susanne Wolbank, Veronika Hruschka, Johannes Grillari (LBI Trauma)
Conny Schneider (NanoPrecMed Consortium)
Stefan Nehrer (University for Continuing Education Krems)
Andreas Teuschl-Woller (FH Technikum Wien)
Heinz Redl (Austrian Cluster for Tissue Regeneration)

Event venue:
The TERMIS Winterschool takes place at Hotel "Zum jungen Römer", Römerstraße 18, 5550 Radstadt. The town is reachable via train and there are several buses between the station and the hotel. Alternatively, shuttle service can be organized with the hotel via phone or you can take the opportunity have a nice walk (about 2 km) through beautiful Radstadt.

Cover picture
Cross-section of a mouse digit, visualized using Levai-Laczko staining. © Regina Brunauer