Regenerative Medicine, PhD

Structure
The minimum duration of the PhD training is three years (six semesters) full time. All students are involved in collaborative research projects providing cross-disciplinary experience. Each student is assigned a primary and secondary supervisor with appropriate independent expertise in the project area. The progress is monitored by a PhD Committee that includes the two supervisors and at least one additional senior scientist, who meet to provide feedback on regular written and oral presentations.

Admission
In order to allow for admission, students must hold a Master’s degree (or equivalent) in medicine, dentistry, or in natural or technical sciences related to the field of regenerative medicine. Excellent English skills, both verbally and in writing, are also required.

Degree
Doctor of Philosophy (PhD)

Information
Danube University Krems
Center for Biomedical Technology
Dr.-Karl-Dorrek-Straße 30
3500 Krems, Austria

PhD-Cordinator
Univ.-Prof. Dr. med. Michael Bernhard Fischer
Phone: +43 (0)2732 893-2685
michael.fischer@donau-uni.ac.at

Danube University Krems is specialized in academic continuing education and offers exclusive master’s programs and courses in the fields of • Medicine, Health and Social Services • Economics and Business Management • Law, Administration and International Affairs • Education, Media and Communication as well as • Arts, Culture and Building. With more than 8,500 students and 17,000 alumni from 90 countries, Danube University Krems is one of the leading providers of structured courses throughout Europe. The university combines more than 20 years of experience in postgraduate education with innovation in research and teaching. Krems is located in the unique natural and cultural landscape of the Wachau Region, eighty kilometers outside of Vienna.

www.donau-uni.ac.at/PhD

Doctor of Philosophy / PhD
Regenerative Medicine

6 semesters
www.donau-uni.ac.at/PhD

Imprint
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Danube University Krems with its Faculty of Health and Medicine offers an integrated and structured PhD program incorporating taught and research elements to provide high-level training in theoretical and practical aspects of regenerative medicine. Combined with an expertise that ranges from basics in regenerative medicine to extracorporeal therapies and from stem cells to bone and cartilage regeneration, we offer a strong interdisciplinary research environment to support the development of our students towards independent researchers and scientists.

**Module 1: Methodology**
- Scientific Work and Good Scientific Practice
- Ethics in Science
- Scientific Presentations and Publications
- Medical Biostatistics and Mathematics
- Project Management
- Study Design
- Translation: From Theory to Clinical Application

**Module 2: Biomedical Remedial Course**
- Cell Biology
- Molecular Biology, Signal Transduction
- Biochemistry

**Module 3: Regenerative Sciences: Principles and Methods**
- Principles of Regenerative Medicine
- Principles of Tissue Engineering
- Biology of Stem Cells and Cell-Based Therapy
- Inflammation and Sepsis
- Inherited and Acquired Immunity
- Flow Cytometry and Imaging
- Cell Culture Models in Regenerative Medicine and Tissue Engineering

**Module 4: Biomaterials**
- Biomaterials: Overview and Chemistry
- Scaffolds
- Polymer Materials in Blood Purification
- Blood/Material Interaction

**Module 5: Advanced Regenerative Medicine and Tissue Engineering**
- Liver: Regeneration and Support
- Degeneration and Regeneration of the Nervous System
- Cartilage Regeneration
- Applied Cell Therapy

**Module 6: Journal Club and Degree Candidates Seminar**
- Journal Club
- Doctoral Degree Candidates Seminar

**Rooted in Research: Start your Scientific Career**

Our goal is to promote the ability of our students to conduct research independently in accordance with international standards and in a supportive environment. Thus, during the project-oriented PhD training program, our students will not only be exposed to the latest research findings and methods but will also be encouraged to develop their own research topics, in order to fulfill the requirements for a scientific career and for working on competitive research projects.