



Graduate School
for Cellular and
Biomedical Sciences



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**UNIVERSITÄT
BERN**

GCB PhD Specializations



GCB PhD Specializations Overview

Within the framework of the GCB PhD Program, six PhD Specialization Programs are offered. Participants acquire ECTS in the specialization which will be listed as a separate achievement on the diploma supplement, thus complementing their PhD degree.



Cutting Edge Microscopy (CEM)

The main aim of the CEM program is to provide an interdisciplinary training program to PhD students to become first-class experts in biological imaging. Here, the unique and interdisciplinary framework established by the Microscopy Imaging Center (MIC) provides the necessary infrastructure and expert knowledge. The profile of PhDs at the end of their training is that of a life science researcher with a deep insight into advanced microscopy and image analysis and with the necessary know-how to develop automated image analysis protocols. By providing this complementary training in different disciplines, the Cutting-Edge Microscopy PhD program educates young researchers with the ability to bring innovative approaches to academia and industry, closing an exciting knowledge gap amongst the life science experts in advanced microscopy. More information on the CEM website: [Cutting Edge Microscopy PhD Program](#)



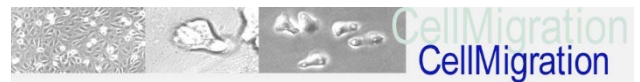
SCRM
Bern Stem Cell Research
and Regenerative Medicine
www.scrm.unibe.ch

Stem Cells and Regenerative Medicine (SCRM)

SCRM launched in August 2018, is jointly offered by the GCB and the Platform for Stem Cells in Regenerative Medicine (SCRM). The program aims at fostering a new and innovative multidisciplinary approach to unravel the communication network of cells within the tissue and throughout the body during tissue regeneration.

More information:

[Stem Cells & Regenerative Medicine PhD Program](#)



Cell Migration

The PhD Program Cell Migration started as an [SNSF-supported ProDoc program](#) on October 1st, 2011. It has brought together a growing group of highly innovative and successful Swiss research groups in the field of cell migration in morphogenesis, immunosurveillance, inflammation and cancer. The presently participating institutions with their principal investigators bring together complementary scientific expertise and methodological skillsets in the field of cell migration that permit for embedding a cutting-edge Swiss training program on Cell Migration for highly qualified and motivated PhD and MD-PhD students in the fields of biology, biochemistry, (molecular) human and veterinary medicine, immunology, pharmaceutical sciences, chemistry, physics, bioinformatics and mathematics with a focus on life sciences.

More information: [Cell Migration PhD Program](#)



Cancer Research Network Bern (Tumor Biology)

The Tumor Biology curriculum is embedded in the Graduate School for Cellular and Biomedical Sciences of the University of Bern (GCB) and will benefit from the existing Bern Cancer Research Cluster (BCRC) network. PhD students registered to the program will benefit from: Basic knowledge in molecular and cell biology, as well as advanced cancer research methods and concepts from the 20 cancer research groups currently participating in BCRC activities. These cancer research groups are part of 8 different Departments and Institutes at the University of Bern (DBMR, Institute of Pharmacology, Medical Oncology, Institute of Pathology, Institute of Anatomy, Vetsuisse, TKI and the Department of Nuclear Medicine). More information: [GCB PhD Specializations website page](#)



Cardiovascular Research PhD Program

The Cardiovascular Research PhD Program will offer PhD or MD-PhD students the opportunity to receive indepth cardiovascular education and to complement their PhD degree with a special diploma supplement in Cardio-vascular Research. As cardiovascular diseases are the leading cause of death globally, a greater understanding of cardiovascular physiology and pathophysiology is of utmost importance. Consequently, several teams of the University of Bern and of the Inselspital, Bern University Hospital are actively involved in research concerning the function and development of the heart, arteries, and veins, as well as the mechanisms involved, in healthy and diseased states. This research ranges from fundamental science to pre-clinical and clinical studies; and relies on a multitude of different experimental models. To promote cardiovascular research teams in Bern as leaders in cardiovascular (patho) physiology and in the development of approaches to reduce disease burden, the Cardiovascular Research Cluster (CVRC) Bern was established in 2015 for all UniBE and Inselspital members with an interest in cardiovascular research. One of the CVRC's aims is to enrich the training environment of junior researchers. Another goal of the CVRC is to promote interactions and collaborations among clinical and fundamental cardiovascular research, which will be addressed with the development of this dynamic PhD Specialization option by incorporating students from the MD,PhD program. More information: [CVRC website](#).



Neuroscience PhD Program

The Neuroscience PhD specialization program supports training for GCB doctoral students in neuroscience during their doctorate. It includes a basic training in neurophysiology, with an optional neuro-anatomy course, and provides an up-to-date teaching in current areas of neuroscience research and techniques through the BENEFRI Neuroscience Workshop and the BENEFRI Hands-on Workshop, respectively. The BENEFRI Neuroscience program is integrated into the course offered by both the Graduate Schools for Health Science (GHS) and Graduate School for Cellular and Biomedical Sciences (GCB) including the BENEFRI program between the University of Bern and the University of Fribourg. The theoretical and practical teaching are organized in the Universities of Bern and Fribourg and include external international-standing lecturers from Swiss or European academic institutions. GCB students who apply will be granted admission at the request of the doctoral student by the Program Committee of the Specialized Neuroscience Program consisting of two representatives from the Universities of Bern and Fribourg without any additional evaluation or selection of the doctoral students or their projects. The program is open to students with background in Neuroscience including Neurology, Psychiatry, Physiology, Anatomy, Biology, Neuropsychology. More information can be found on the [BENEFRI](#) website at the University of Bern.



Precision Medicine PhD Program

Precision Medicine is a new paradigm. It incorporates individual characteristics in the treatment of patients, such as genetic predisposition, environmental factors, and lifestyle – therapies will be “tailored” to individuals to allow measurable health improvements and to avoid adverse effects.

The PhD Specialization in Precision Medicine is a cutting-edge training program on the subject, organized in a close collaboration between the Graduate School for Cellular and Biomedical Sciences (GCB) and the Bern Center for Precision Medicine (BCPM).

For more information, check out www.bcpm.unibe.ch.

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