

# Introduction to the PhD specialization “Stem Cells and Regenerative Medicine”

Prof. Dr. Volker Enzmann

 **INSELSPITAL**  
UNIVERSITÄTSSPITAL BERN  
HOPITAL UNIVERSITAIRE DE BERNE  
BERN UNIVERSITY HOSPITAL

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**UNIVERSITÄT  
BERN**

Department of Ophthalmology

# Platform for Stem Cells in Regenerative Medicine



- **Mission:**

To foster a new and innovative multidisciplinary approach to unravel the **communication network of stem cells** within the tissue and throughout the body during tissue regeneration. **Educational tracks** for bachelor, master and **PhD students** are scheduled to sustainably implement the assignment of the SCRM.

- **Members:** 37 groups from Inselspital and University of Bern

- **Steering Committee:**

  - Prof. Eliane J. Müller

  - Prof. Benjamin Gantenbein

  - Prof. Volker Enzmann

  - Prof. Thomas Krause

  - Dr. Amiq Gazdhar

- **Web page:** <http://www.stemcellsbern.ch>

# PhD Specialization

- Additionally to the PhD (scientifically supervised by the Platform SC & RM)
- Certificate by GCB
- Administrative coordinators:
  - Prof. Dr. Benjamin Gantenbein
  - Dr. Amiq Gazdhar
- Scientific coordinator:
  - Prof. Dr. Volker Enzmann
- Start: FS 2018
- Eligible: all PhD students of the GCB

# Curriculum

Basic (BM) / Elective (EM)	Lecture / Workshop	Topics	Responsible	When	ECTS
BM	<a href="#">Stem cell lecture series</a>	Basics SC & regenerative medicine, Organoids, SC niche, IPS, ESC, Adult SC in different tissues	Volker Enzmann	SS	2
BM	Practical courses for SC techniques	Adult SCs Pluripotent SCs	Platform SC & RM	Summer	1 / each wet lab
BM	PhD retreat	Academic & industry keynote lectures, student presentations	Student committee	Summer	0.5
EM	<a href="#">Tissue Engineering</a>	TE in the medical treatment for dysfunctional tissues and organs Mechanisms allowing tissue regeneration and functionality	Benjamin Gantenbein	WS	3
EM	<a href="#">Tissue Engineering practical course</a>	2 & 3D culture systems Protocols to characterize culture systems, such as proliferation, activity, and matrix production	Benjamin Gantenbein	WS	2
EM	<a href="#">CNS – Disease and Repair</a>	Basics, BBB, CNS repair strategies, cell-free approaches, meningitis, retina repair, inner ear repair	Hans Ruedi Widmer / Volker Enzmann	SS	1.5
EM (BM)	Journal club	Presentation of SC and RM literature by the students	Amiq Gazdhar	Monthly	1
EM	Stem cell lunch seminar	New developments in SC research	Amiq Gazdhar	Monthly	-

# Basic Courses

- **SC & RM** (Prof. Volker Enzmann):
  - Lecture series during SS
  - Exam w/ 2 ECTS points
- **Wet labs: max. 4 students / max. 1 week**
  - **Adult SCs** (Prof. V. Enzmann)
  - **Pluripotent SCs** (Dr. Amiq Gazdhar)
- **PhD retreat:**
  - End of August
  - Organized by students (contact Felix Beier)

# Elective Courses

- Journal club SC & RM
- CNS – Disease and Repair (Profs. Hans Ruedi Widmer, Volker Enzmann)
  - Lecture series during SS
  - Exam w/ 1.5 ECTS points
- Tissue engineering (Prof. Ben Gantenbein, ISTB)
  - Lectures w/ 3 ECTS points
  - Practical w/ 2 ECTS points
- Lunch seminars

# Forms

## PhD agreement

**EXAMPLE 1**

Lecture "Stem Cells and Regenerative Medicine" (KSL 11474) is part of GCB mandatory requirements

Date	GCB Mandatory requirements. At least 6.0 ECTS (transferable skill not included), of which 3.0 ECTS must be lecture courses or book clubs which include a graded examination	ECTS
	Stem Cells and Regenerative Medicine	2.0
	Lecture or book club from GCB list, free choice	3.0
	SCRM Retreat 1	0.5
	SCRM Retreat 2	0.5

Date	SCRM curriculum, basic (4 ECTS)	ECTS
	Stem Cells and Regenerative Medicine*	2.0
	Practical course "Adult Stem Cells" or "Pluripotent Stem Cells"	1.0
	SCRM Retreat 1**	0.5
	SCRM Retreat 2**	0.5

\*This lecture is visited as part of the GCB, and also credited in the SCRM curriculum

\*\* The SCRM PhD retreat can be visited as part of the GCB, also credited in the SCRM curriculum

Date	SCRM curriculum, elective (4 ECTS)	ECTS

Additional lectures, seminars, courses, workshops

Date	Description	ECTS

Meetings / Conferences

Date	Description	ECTS

**EXAMPLE 2**

Lecture "Stem Cells and Regenerative Medicine" (KSL 11474) was taken and exam was successfully passed during Master studies

Date	GCB Mandatory requirements At least 6.0 ECTS (transferable skill not included), of which 3.0 ECTS must be lecture courses or book clubs which include a graded examination	ECTS
	Lecture or book club from GCB list, free choice	3.0
	Practical course "Adult Stem Cells"	1.0
	Practical course "Pluripotent Stem Cells"	1.0
	SCRM Retreat 1	0.5
	SCRM Retreat 2	0.5

Date	SCRM curriculum, basic (4 ECTS)	ECTS
	Practical course "Adult Stem Cells"	1.0
	Practical course "Pluripotent Stem Cells"	1.0
	SCRM Retreat 1	0.5
	SCRM Retreat 2	0.5
	Journal club SCRM	1.0

\*This journal club is visited as part of the GCB, but credited in the Cutting Edge Microscopy curriculum

Date	SCRM curriculum, elective (4 ECTS)	ECTS

Additional lectures, seminars, courses, workshops

Date	Description	ECTS

Meetings / Conferences

Date	Description	ECTS

# PhD agreement

**EXAMPLE 3**

Lecture "Stem Cells and Regenerative Medicine" (KSL 11474) is not part of GCB mandatory requirements

Date	GCB Mandatory requirements At least 6.0 ECTS (transferable skill not included), of which 3.0 ECTS must be lecture courses or book clubs which include a graded examination	ECTS
	Lecture or book club, free choice	3.0
	Courses offered by the GCB, free choice	3.0

Date	SCRM curriculum, basic (4 ECTS)	ECTS
	Stem Cells and Regenerative Medicine*	2.0
	Practical course "Adult Stem Cells" or "Pluripotent Stem Cells"	1.0
	SCRM Retreat 1	0.5
	SCRM Retreat 2	0.5

Date	SCRM curriculum, elective (4 ECTS)	ECTS

**Additional lectures, seminars, courses, workshops**

Date	Description	ECTS

**Meetings / Conferences**

Date	Description	ECTS

# Registration form



Registration for the PhD specialization program "Stem Cells and Regenerative Medicine"

1. Personal data

Last name	First name	
Supervisor		
Starting date of PhD studies		
Institute		
Office address		
Zip code	Town	
Phone	Mobile phone	
E-mail	Matriculation no.	

After registration, you will receive a form where course work for "Stem Cells and Regenerative Medicine" can be listed. Those who have already completed the doctoral agreement for GCB will receive a personalized form in order to adapt it to the "Stem Cells and Regenerative Medicine" requirements.

2. Signatures

PhD Student

Place, date	Signature
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Supervisor

Name	
Place, date	Signature

Please send to Marlene Wolf (marlene.wolf@gcb.unibe.ch)



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