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**UNIVERSITÄT
BERN**

**UNIVERSITY OF BERN / SWITZERLAND
MEDICAL FACULTY
FACULTY OF SCIENCE
VETSUISSE FACULTY**

REPORT 2011

gcb

Graduate School
for Cellular and
Biomedical Sciences

GRADUATE SCHOOL FOR CELLULAR AND BIOMEDICAL SCIENCES

PHD PROGRAMME

- ▶ CELL BIOLOGY
- ▶ MOLECULAR BIOLOGY & BIOCHEMISTRY
- ▶ IMMUNOLOGY
- ▶ NEUROSCIENCE
- ▶ EPIDEMIOLOGY
- ▶ BIOMEDICAL SCIENCES
- ▶ BIOMEDICAL ENGINEERING

DETAILED INFORMATION: www.gcb.unibe.ch



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for Cellular and
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Annual Report 2011

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PREFACE

During the last decades, the boundaries between basic research and medically oriented research began to dissolve and historically separated scientific disciplines like genetics, biochemistry, molecular biology, cell biology, physiology and anatomy have merged into today's modern molecular life sciences. The future generations of researchers in molecular life sciences therefore need a good overview of all these topics and of the rapid development of new techniques therein, and at the same time remain highly specialized experts in one specific area of the molecular life sciences. The interfaculty Graduate School for Cellular and Biomedical Sciences (GCB) represents an important step in adapting the training of our best young researchers to these new requirements by unifying the PhD training in molecular life sciences at the University of Bern under one roof. The PhD students carry out their research project in a laboratory of the Medical, the Science or the Veterinary Faculty, whereas the GCB provides an advisory committee, oversees the progress of the research, offers theoretical and practical training and sets the minimal standards required for a PhD. An invaluable side effect of the GCB is that it efficiently connects researchers across the three faculties and enhances information exchange and collaborations among them. These connections take place at different levels and on various occasions, for example within the PhD advisory committees and among the PhD students during common meetings. As the current president of the GCB, my overall goal is to foster and further intensify these connections across the three faculties and to contribute to the consolidation of a thriving Bernese life science community. Fortunately and reassuringly, I am not alone with this aim and I am grateful to all my colleagues inside and outside the GCB who work towards the same goal.

The GCB has now been running for seven years and represents with approximately 300 enrolled students the largest Graduate School of the University of Bern. After a starting phase of 5 years, the executive committee evaluated the entire program, optimized its procedures and improved weaknesses, and accordingly revised the GCB regulations, which have been approved by the Cantonal Government and are valid since July 2011. With these new regulations in place, the continuing support of the rector and the deans of the three involved faculties, and with the relentless dedication of all committee members, supervisors, co-advisors, mentors, co-referees and course instructors, the GCB is primed for succeeding with its ambitious goals: to provide high quality training for the next generation of innovative and original life scientists who hopefully can later in their careers conclude that the base for their success was their PhD at the University of Bern.



Bern, March 26, 2012

Prof. Oliver Mühlemann,
GCB President

PHD PROGRAMME

The *Graduate School for Cellular and Biomedical Sciences of the University of Bern (GCB)* offers structured training in experimental research in the fields of biochemistry, cell and molecular biology, immunology, biomedical sciences, epidemiology, neuroscience, and biomedical engineering, leading to a PhD, MD, PhD or DVM, PhD degree. Its administration is jointly assured by the Medical Faculty, the Faculty of Science and the Vetsuisse Faculty.

Since 1 July 2011, the new regulations (*Organisationsreglement, Promotionsreglement, Studienplan*) of the GCB are in effect. Their contents are based on the old rules of 2005, but they have been adapted and optimized on the basis of past experience, and furthermore they are now compliant with the requirements for PhD study programmes of the University of Bern. The most important changes are: i) each thesis must be evaluated by an external co-referee; ii) the PhD titles awarded define more specifically the candidate's area of research; iii) the co-advisor may also be a collaborator on the project.

By the end of 2011, 308 students were enrolled in the PhD programme. The thesis projects are carried out at laboratories of the three participating faculties or at affiliated institutions; in 2011, these included the Institute of Virology and Immunoprophylaxis (IVI) in Mithelhäusern, the Institute for Research in Biomedicine (IRB) in Bellinzona, and the EMPA St. Gallen.

Each student is supervised by a thesis committee consisting of the **supervisor**, a **co-advisor** and a member of the appropriate Expert Committee (**mentor**).

The **supervisor** is responsible for the research project, adequate supervision, the laboratory infrastructure and the salary of the student.

The **co-advisor** must not be affiliated with the same institute as the supervisor, but should be an expert in the research area of the thesis project. He meets with the student at least twice a year to discuss and assess progress of the thesis work, as well as advising and supporting him/her.

The **mentor** decides, together with the student and the supervisor, on the individual training programme, taking into account the student's previous education.

The training programme requires a certain number of learning credits which can be obtained by participating in approved, project-related and interdisciplinary courses, workshops, seminars, and lectures during the doctoral training period. Prior to graduation, candidates must (i) pass the exams of the individual training programme, and (ii) in the course of the second year, present their work in a scientific seminar in the presence of the thesis committee, to document in-depth knowledge of the research field.

ORGANIZATION

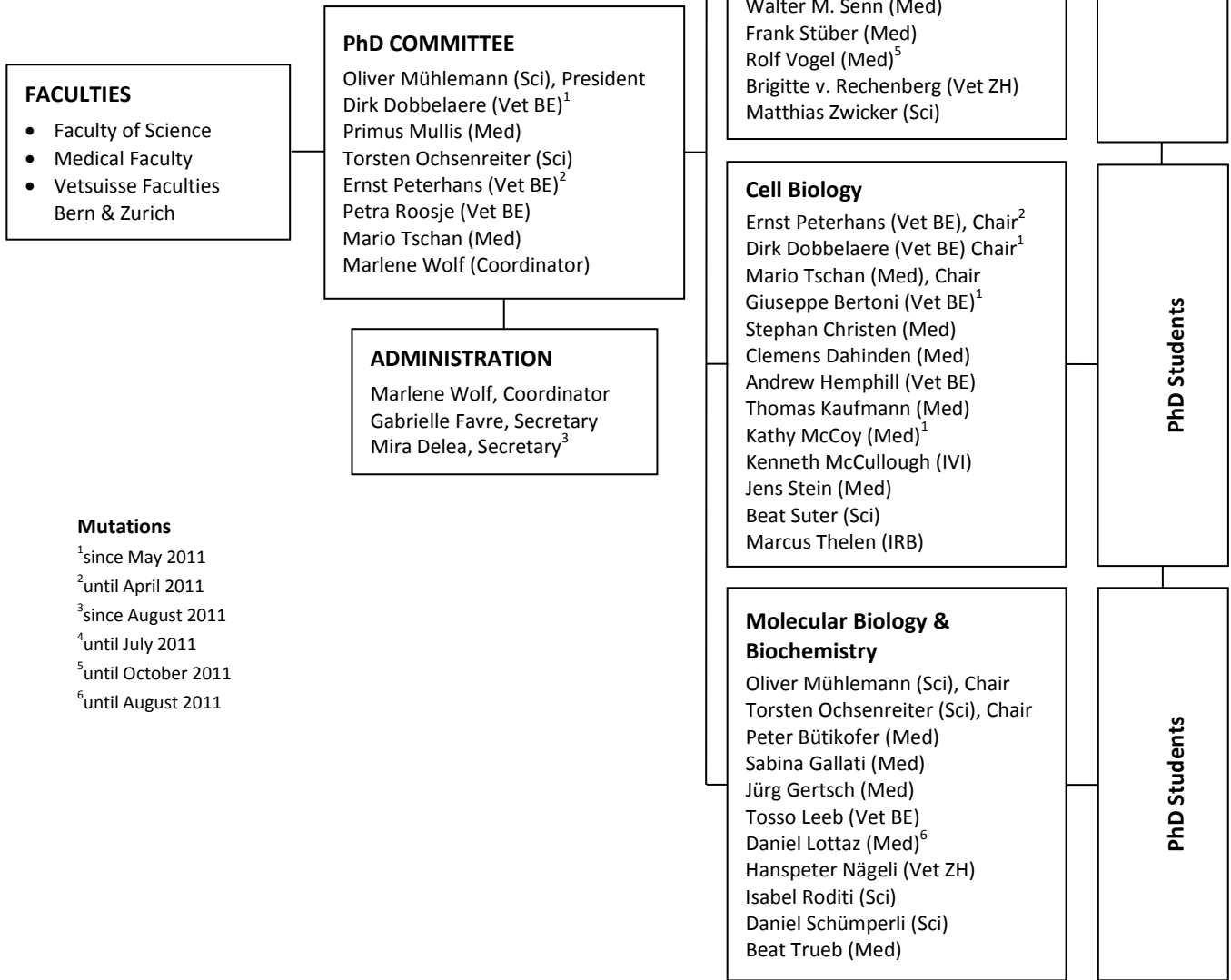
The GCB is headed by the PhD Committee (executive committee), which is composed of two members each of the Medical Faculty, the Faculty of Science, and the Vetsuisse Faculty Bern, and the Programme Coordinator. Taking turns, each faculty member acts as President.

Four Expert Committees – Molecular Biology & Biochemistry, Cell Biology, Biological Systems, and Biomedical Sciences & Biomedical Engineering – ensure that the different research fields are represented by experts in the respective areas.

Thanks to financial support from the Medical Faculty, it was possible to increase the occupation of the GCB-office from 75% to 120%, as from August, and to employ Mira Delea. This reinforcement was absolutely indispensable to meet the increased number of PhD students. Mira Delea is responsible for finances and administrative matters concerning the PhD degrees.

GCB Organization Chart

Med: Medical Faculty
 Sci: Faculty of Science
 Vet BE: Vetsuisse Faculty Bern
 Vet ZH: Vetsuisse Faculty Zurich

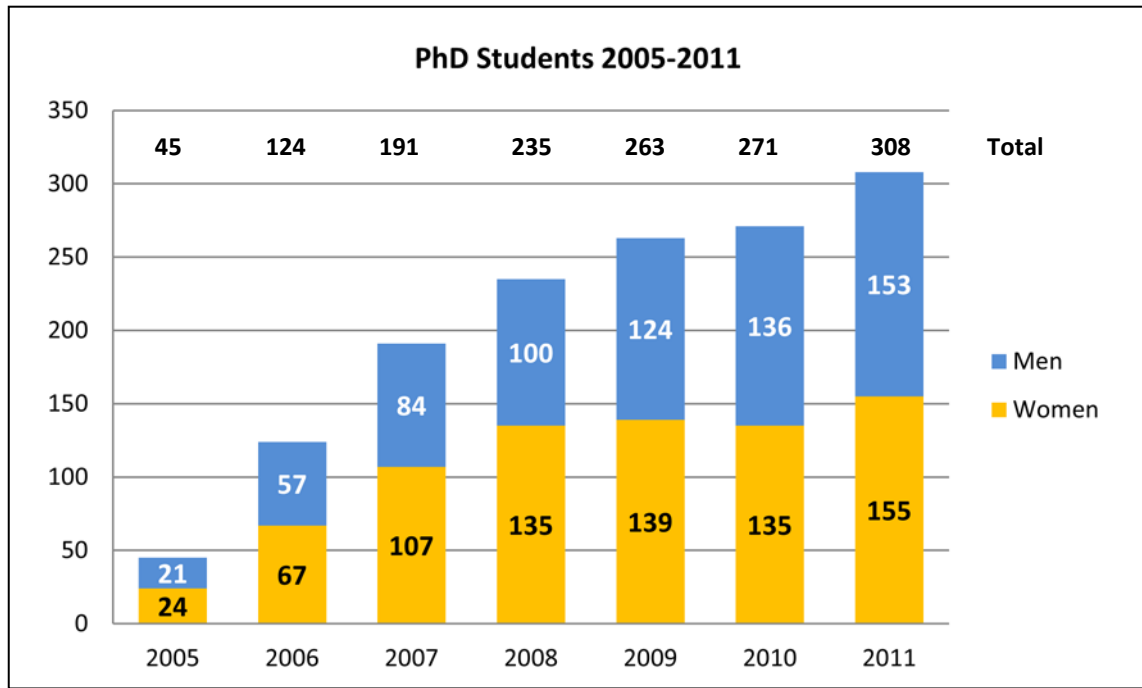


Mutations
¹since May 2011
²until April 2011
³since August 2011
⁴until July 2011
⁵until October 2011
⁶until August 2011

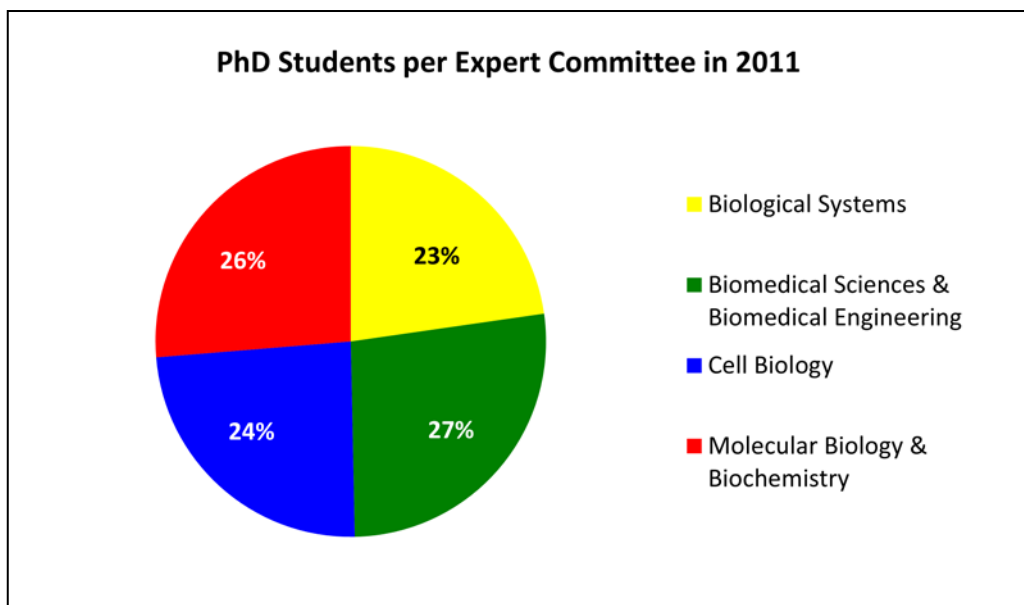
DOCTORAL STUDENTS

Students could apply three times per year for admission to the Graduate School: on 15 April, 15 August, and 15 December.

The GCB is internationally oriented and represented by doctoral students with master diplomas from 37 different countries. 160 students (52.0%) have a degree from a foreign university.



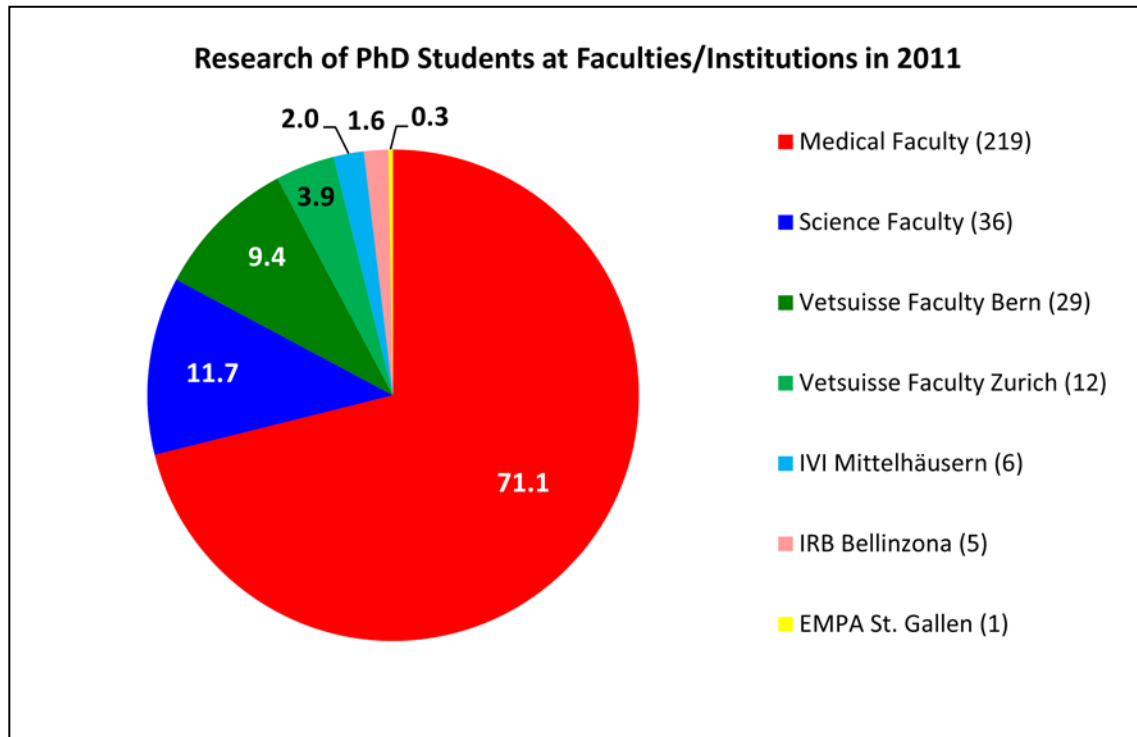
Since the start of the PhD programme in 2005, the GCB has experienced an almost 7-fold increase of doctoral students



As in previous years, the students were distributed equally among the four Expert Committees

Expert Committee	F	M	Total
Biological Systems	51	19	70
Biomedical Sciences & Biomedical Engineering	25	58	83
Cell Biology	40	34	74
Molecular Biology & Biochemistry	39	42	81
Total	155	153	308

Number of students per Expert Committee (F = women, M= men)



The experimental work is carried out in research groups at the Medical Faculty, the Faculty of Science, the Vetsuisse Faculties in Bern and Zurich, the Institute for Research in Biomedicine in Bellinzona, the Institute of Virology and Immunoprophylaxis in Mittelhäusern, and the EMPA St. Gallen (December).

In parentheses: number of students; in chart: students' ratio (%)

COURSES AND SEMINARS

The PhD programme involves theoretical training in addition to the experimental work on the research project. For each student, seminars and courses are individually selected from courses organized and supported by the GCB, from the teaching units of the faculties, and also from courses offered by other Swiss Universities, in particular by the ETHZ or the EPFL for the field of Biomedical Engineering, or by interuniversity programmes like StarOmics (CUSO), the Doctoral Program in Population Genomics (Universities of Basel, Bern, Fribourg & Lausanne), the Forum for Genetic Research (sc | nat, Swiss Academy of Sciences), the BENEFRI Neuroscience Programme (Universities of Bern, Neuchâtel & Fribourg), or the Swiss Institute of Bioinformatics. Some students also take part in internationally organized Summer Schools which provide high quality training in specific fields.

Special Courses for GCB Students

Lectures, Tutorials and Book Clubs

A relevant textbook, or selected scientific publications of the field are studied and discussed in small groups which are chaired by a senior scientist.

- *Immunology* (book by Abul K. Abbas, *Cellular and Molecular Immunology*), coordinated by M. Wolf & G. Favre, GCB
- *Molecular Biology of the Cell ("Happy Cell")*, (book by Bruce Alberts et al.), coordinated by M. Wolf & G. Favre, GCB
- *Selected Topics of Cell Biology*, organized by IRB in Bellinzona, for IRB students
- *Molecular Aspects of Psychoactive Drugs* (lecture), organized by J. Gertsch, Institute of Biochemistry & Molecular Medicine IBMM
- *Evolution and Physiology of Adaptive Mechanisms in Mammals* (lecture), organized by R. Bruckmaier, Division of Veterinary Physiology, Vetsuisse Bern
- *Stem Cells & Regenerative Medicine* (lecture), organized by V. Enzmann and G. Karoubi, DKF
- *Topics in Tumor Biology* (lectures and discussions of scientific publications), organized by D. Stroka, M. Tschan, and Y. Zimmer, DKF
- *Challenges of our modern world to human health: Climate change, pollution, ultrafine particles and nanomaterials*, organized by H. Krug, EMPA St. Gallen & Institute of Anatomy
- *Excitation-Contraction Coupling and Cardiac Contractile Force* (book by Donald M. Bers), organized by E. Niggli, Dept. of Physiology
- *Childhood Cancer Epidemiology* (discussions of scientific publications), organized by C. Kuehni, ISPM
- *Classical Papers in Public Health* (discussions of scientific publications), organized by M. Egger, ISPM
- *Critical Review of Scientific Manuscripts* (epidemiology field), organized by C. Kuehni and M. Egger, ISPM
- *Epidemiology* (book by Leon Gordis), organized by C. Kuehni, ISPM
- *Essential Medical Statistics* (book by B.R. Kirwood and J.A.C. Sterne, Blackwell Publishing), organized by M. Zwahlen, ISPM
- *Infectious Diseases* (discussions of scientific publications), organized by N. Low, ISPM
- *Writing a Grant Application* (Tutorial), organized by C. Kuehni, M. Egger, and M. Zwahlen, ISPM

Practical Courses, Workshops, Summer Schools

- *Stereology Workshop*, organized by S. Tschanz, Institute of Anatomy
- *Introduction to Epidemiology & Biostatistics*, organized by M. Doherr and G. Schuepbach, Vetsuisse Faculty
- *Cell Migration*, organized by B. Engelhardt and J. Stein, Theodor Kocher Institute
- *International Summer School on Inflammation, Immunomodulation, Inspiration*, organized by H.-U. Simon and S. Yousefi, Institute of Pharmacology
- *Microscopy: Basic and Advanced/Special Modules*, organized by MIC

- *DNA Sequencing and Mutation Analysis*, organized by T. Leeb and B. Haase, Vetsuisse Faculty
- *Molecular Biological Methods in Clinical Research*, organized by A.-C. Andres, DKF
- *Positional Cloning*, organized by C. Drögemüller, Vetsuisse Faculty
- *Vascular Cell Biology*, organized by B. Engelhardt, U. Deutsch and R. Lyck, Theodor Kocher Institute

Graduate School Seminar Series

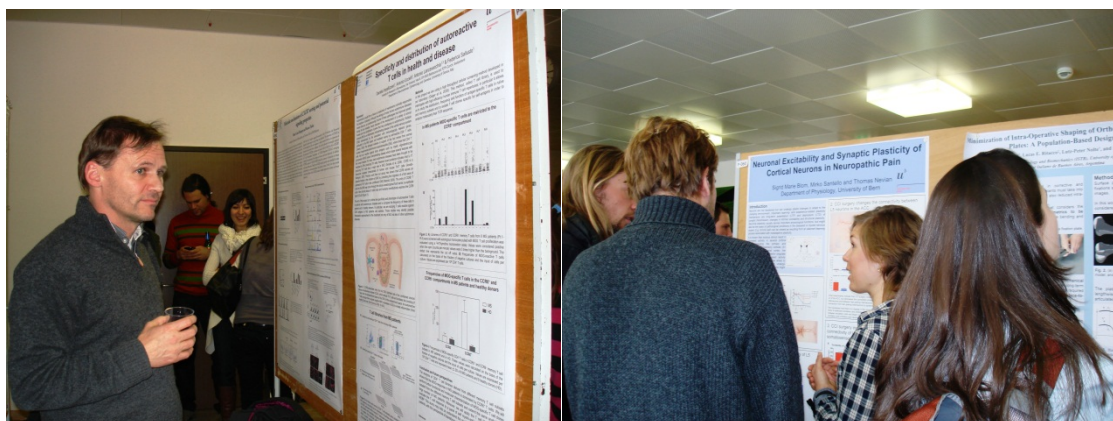
The Graduate School Seminar Series is organized by the PhD students, who have the opportunity to invite internationally renowned specialists from their field of research for an interactive teaching lecture and a research seminar intended for a broad audience.

06 April 2011: **Mirjam Kretzschmar**, Julius Centre for Health Sciences & Primary Care, University Medical Centre Utrecht, NL-Utrecht, and Centre for Infectious Disease Control, NL-Bilthoven
“Incidence and Reproduction Numbers of Pertussis: Estimates from Serological and Social Contact Data in Five European Countries”
 Host: Sereina Herzog, PhD student, Institute of Social and Preventive Medicine

Unfortunately, the students of the GCB still take advantage far too infrequently of this great opportunity of meeting distinguished scientists, learning from them and exchanging ideas. It is to be hoped that the number of GCB seminars hosted by GCB students will increase with time.

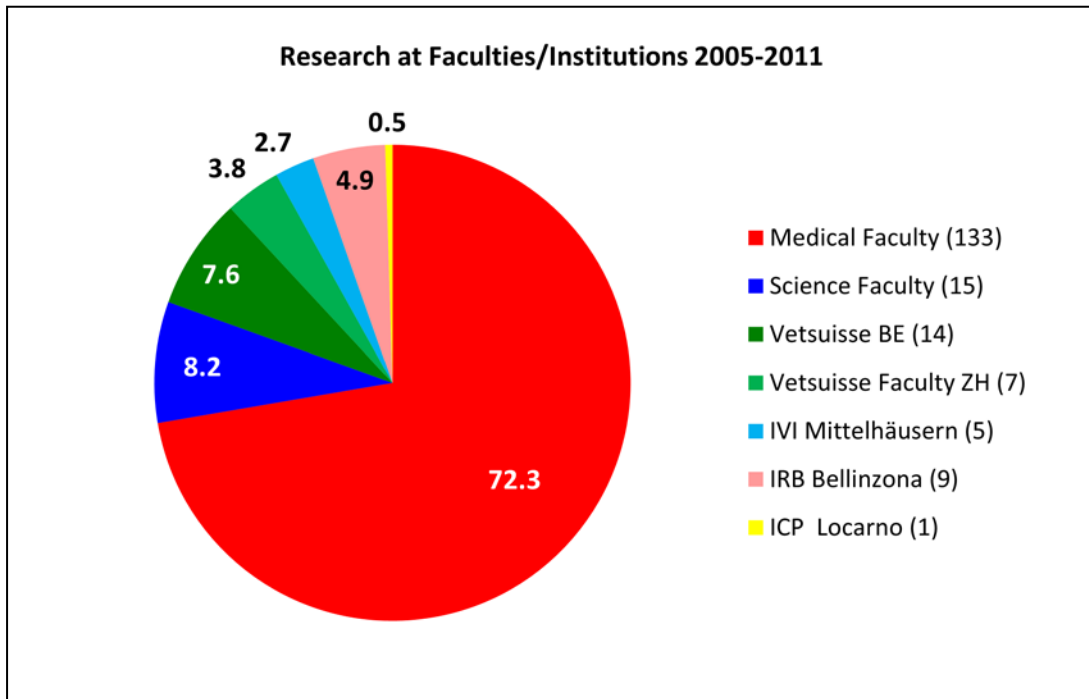
Students’ Symposium

On 28 January 2011, the GCB Students’ Symposium 2011 was held once again on the premises of the Department of Chemistry and Biochemistry. During a whole day, the different research projects of the GCB doctoral students were presented in 48 short talks (for the first time, in four parallel sessions) and 75 posters (two sessions). The presentations illustrated the wide range of topics covered by the GCB and demonstrated the students’ consistently high level of competence in the fields of cellular and biomedical sciences, epidemiology and biomedical engineering. The symposium offered an excellent opportunity for both GCB students and their supervisors to engage in a reciprocally rewarding and highly stimulating discussion on the research work going on at the GCB. The invited guest speaker, Dr. Stan Gorski, Editor of the EMBO Journal, Heidelberg (Germany), gave a highly acclaimed talk on “A behind the scenes look at Scientific Publishing”. The breaks were extensively used for further informal discussions and active networking.

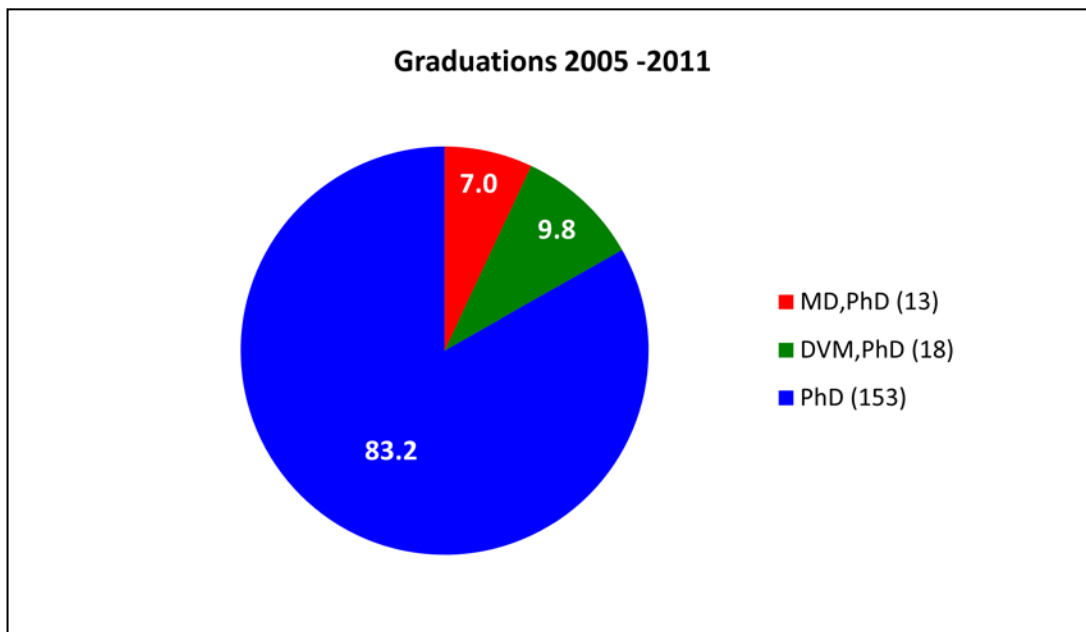


Lively discussions at the poster presentations during the symposium (left: Prof. Oliver Mühlemann, GCB President)

GRADUATIONS



In parentheses: number of research projects completed at each Faculty or affiliated institution since the start of the GCB in 2005; in chart: research projects' ratio (%)



Since the start of the PhD programme of the GCB in 2005, 184 students have successfully completed their studies and obtained a doctoral degree, either PhD, MD,PhD or DVM,PhD. In parentheses: number of graduates; in chart: graduates' ratio (%)

Graduations in 2011

In the course of 2011, 53 students successfully completed the PhD programme of the GCB and obtained their doctoral degree, jointly issued by the Medical Faculty, the Faculty of Science, and the Vetsuisse Faculty.

Of the graduates, 24 were students with a master diploma from a foreign University who joined the GCB for their PhD studies.

GCB Graduates (alphabetical order):

Ali Al Kaabi, PhD (5 May)

Dept. of Clinical Research, Mass Spectrometry and Proteomics Laboratory (PD Dr. M. Heller)

“The role of endothelial cells in human coronary collateral growth”

Tiziana Apuzzo, PhD (19 January)

Institute for Research in Biomedicine IRB, Bellinzona (Prof. Dr. M. Thelen)

“Characterization of eIF2B as a putative novel CXCR4 effector branch”

Elvis Achiri Atanga, PhD (25 May)

Dept. of Clinical Research, Bone Biology & Orthopaedic Research (Prof. Dr. W. Hofstetter)

“Characterization of tumor necrosis factor-alpha dependent inhibition of osteoclast development”

Matthias Bachtler, PhD (22 November)

Dept. of Clinical Research, Nephrology and Hypertension (Prof. Dr. B. Frey, Dr. A. Pasch)

“Role of enteroviruses in mesangial renal disease”

Michael Bel, PhD (8 June)

Institute of Virology and Immunoprophylaxis IVI, Mithelhäusern (PD Dr. A. Summerfield)

“Interaction of influenza A viruses from avian, human and porcine origin with porcine plasmacytoid dendritic cells”

Eva Johanna Bönzli, PhD (6 September)

Clinical Laboratory, Vetsuisse Zurich (Prof. Dr. H. Lutz)

“In vitro inhibition of feline leukaemia virus infection by synthetic peptides derived from the transmembrane domain”

Saskia Brunner-Agten, PhD (2 August)

University Institute of Immunology & Kantonsspital Aarau (Prof. Dr. B. Stadler, Prof. Dr. A. R. Huber)

“Translational laboratory medicine: From basic findings to test development”

Antonia Bünter, PhD (29 August)

Institute of Pathology (Prof. Dr. C. Müller)

“Characterisation of unconventional type b intestinal intraepithelial lymphocytes”

Zeinab Cheaib, PhD (29 April)

Dept. of Preventive, Restorative and Paediatric Dentistry (Prof. Dr. A. Lussi)

“The role of salivary proteins in dental erosion: Assessment of buffer properties and pellicle modification”

Manuel Chiusa, PhD (14 October)

Dept. of Clinical Research, Cardiology (Dr. C. Zuppinger)

“The role of growth and survival factors in the myocardium challenged by cardiotoxic cancer therapy”

Daniel Guo Quae Chong, PhD (25 October)

Dept. of Clinical Research, Magnetic Resonance Spectroscopy and Methodology MRSM
(Prof. Dr. R. Kreis)

“Two-dimensional linear-combination model fitting: Tools and applications for in-vivo magnetic resonance spectra”

Flurina Christina Clement Frey, DVM-PhD (19 January)

Institute of Pharmacology and Toxicology, Vetsuisse Zurich (Prof. Dr. H. Naegeli)

“Mechanism of versatile DNA damage recognition by xeroderma pigmentosum group C (XPC) protein”

Barbara Daubner, PhD (11 October)

University Clinic of Rheumatology, Clinical Immunology & Allergology (Prof. Dr. W. J. Pichler)

“Multiple Drug Hypersensitivity (MDH): Characterization of clinical and immunological features”

Ana Rike Fiebach, PhD (6 July)

Institute of Virology and Immunoprophylaxis IVI, Mittelhäusern (Dr. N. Ruggli)

“Inhibition of innate immune responses by classical swine fever virus N^{pro}”

Michela Frascoli, PhD (20 June)

Institute for Research in Biomedicine IRB, Bellinzona (Dr. F. Grassi)

“ATP as a signaling molecule in haematopoietic stem cell and early T cell development”

Carine Gennari-Moser, DVM-PhD (27 January)

Dept. of Clinical Research, Nephrology and Hypertension (Prof. Dr. M. Mohaupt)

“Aldosterone in normal and preeclamptic pregnancy”

Thomas Gentinetta, PhD (13 December)

University Clinic of Rheumatology, Clinical Immunology & Allergology (Prof. Dr. W. J. Pichler)

“Basophils as a tool for *in vitro* diagnosis”

Markus Germann, PhD (29 April)

Dept. of Clinical Research, Urology (Prof. Dr. G. Thalmann)

“The cellular basis of prostate cancer progression to castration resistance”

Christine Göpfert, DVM-PhD (6 January)

Dept. of Clinical Research, Nephrology and Hypertension (Prof. Dr. B. Frey)

“Effect of electroporation-mediated diphtheria toxin A expression on human prostate xenograft tumors in SCID mice”

Simon Andreas Häfliger, MD, PhD (29 September)

Dept. of Clinical Research, Oncology/Haematology (Adults) (Prof. Dr. T. Pabst)

“Protein disulfide isomerase blocks CEBPA translation and is up-regulated during the unfolded protein response in acute myeloid leukemia”

Andrea Hirsch, PhD (19 September)

Dept. of Clinical Research, Endocrinology/Diabetology/Metabolism (Paediatrics) (Prof. Dr. C. E. Flück)

“Beyond human adrenal androgen biosynthesis”

Miroslav Hons, PhD (27 April)

Theodor Kocher Institute (PD Dr. J. Stein)

“Role of Rac and ROCK signalling and integrin deactivation during physiological T lymphocyte migration”

Linda Hüsler, PhD (29 September)

Institute of Virology and Immunoprophylaxis IVI, Mittelhäusern (PD Dr. A. Summerfield)

“Mechanisms of innate immune system activation by classical swine fever virus”

Pranitha Jayadev Kamat, PhD in Biomedical Sciences (10 November)
Dept. of Clinical Research, Cardiovascular Research (Prof. Dr. R. Rieben)
“Ischemia reperfusion injury: The role of immune response and the endothelium during myocardial infarction”

Hyungmin Kim, PhD (17 February)
Institute for Surgical Technology and Biomechanics ISTB (Dr. M. Reyes, Prof. Dr. L.-P. Nolte)
“Computer assistance in cranio-maxillofacial surgery: A clinically-driven approach”

María Paula Larenza, DVM-PhD (2 November)
Equine Dept., Div. of Anaesthesiology, Vetsuisse Zurich (Prof. Dr. R. Betttschart-Wolfensberger)
“Pharmacological aspects of S-ketamine in the equine species”

Christoph Lauer, PhD (20 December)
Institute of Pathology (PD Dr. N. Corazza)
“Role of the Bcl-2 homolog Bim in T cell-mediated liver immunopathology”

Felicitas Anna Maria Lauer, PhD (8 December)
Institute of Anatomy (Prof. Dr. H. Hoppeler)
“Functional impact of neuronal nitric oxide synthase (nNOS) on angiogenesis and the molecular characterization of its isoform expression pattern in skeletal muscle”

Meret Ann Lauterburg, PhD (7 November)
Dept. of Clinical Research, Nephrology and Hypertension (Prof. Dr. F. Frey)
“Uninephrectomy reduces 11 β -hydroxysteroid dehydrogenase type 1 and type 2 concomitantly with an increase in blood pressure in rats”

Olivier Louis Raymond Levionnois, DVM-PhD (8 March)
Division of Veterinary Pharmacology & Toxicology, Vetsuisse Bern (Prof. Dr. M. Mevissen)
“Pharmacokinetics and pharmacodynamics of ketamine as an analgesic for rational intravenous infusion in ponies”

Benjamin Peter Lüscher, PhD (21 December)
Institute of Biochemistry and Molecular Medicine (Prof. Dr. E. Sigel)
“On the benzodiazepine binding site in different α subunit containing GABA_A receptor isoforms”

Jan Mani, PhD (1 April)
Institute of Cell Biology (Prof. Dr. I. Roditi)
“*Trypanosoma brucei*: Functions of Alba-domain proteins and transcriptome analysis by next generation sequencing”

Dipak Maskey, PhD of Science in Biochemistry and Molecular Biology (29 November)
Institute of Pharmacology (Prof. Dr. H.-U. Simon, Prof. Dr. S. Yousefi)
“Nuclear localization and function of autophagy-related gene 5 (Atg5) during chemotherapy”

Cristina Claudia Mihalache, PhD (3 May)
Institute of Pharmacology (Prof. Dr. H.-U. Simon)
“A novel CD44-mediated death pathway in human neutrophils”

Catherine Nicolo, PhD (4 July)
Dept. of Clinical Research, Endocrinology/Diabetology/Metabolism (Paediatrics) (PD Dr. A. Pandey)
“Pharmacogenomics of human P450 oxidoreductase”

Thiago Oliveira dos Santos, PhD in Biomedical Engineering (12 December)
ARTORG Center for Biomedical Engineering Research & Institute for Surgical Technology and Biomechanics ISTB (Prof. Dr. L.-P. Nolte, Prof. Dr. S. Weber)
“A soft tissue image guidance system for percutaneous needle interventions based on multimodal images”

Melania Osto, DVM-PhD (21 February)

Institute of Veterinary Physiology, Vetsuisse Zurich (Prof. Dr. T. Lutz)

“Effects of subacute endotoxemia on the pathogenesis of β -cell dysfunction and impaired insulin sensitivity in cats. A molecular study”

Pascal Bruno Pfiffner, MD,PhD (24 February)

University Institute of Immunology (Prof. Dr. B. Stadler)

“Predicting allergen cross reactions by protein sequence”

Cornelia Eva Rebholz, PhD (12 January)

Institute of Social and Preventive Medicine ISPM (Prof. Dr. C. Kuehni, PD Dr. N. von der Weid)

“Long-term outcomes following childhood cancer”

Christoph Reutlinger, PhD in Biomedical Engineering (10 October)

Institute for Surgical Technology and Biomechanics ISTB (PD Dr. P. Büchler)

“Patient specific properties of scoliotic spinal motion segments: Experiments and parameter identification”

Janine Rohrbach, PhD (2 August)

Division of Infectious Diseases, University Hospital (Inselspital) (PD Dr. A. Rauch)

“The impact of HIV and antiretroviral therapy on Hepatitis C Virus infection”

Sacha Rothschild, MD,PhD (26 August)

Dept. of Clinical Research, Oncology/Haematology (Adults) (PD Dr. O. Gautschi)

“Posttranscriptional regulation by microRNAs and autophagy – two new mechanisms involved in the Src-ID1 signaling pathway in lung cancer”

Julia Schäfer, PhD (31 May)

Theodor Kocher Institute (Prof. Dr. B. Engelhardt)

“The role of tight junction molecules in central nervous system neuropathology”

Katja Schulze, DVM-PhD (26 September)

Institute of Animal Pathology, Div. of Molecular Dermatology, Vetsuisse Bern (Prof. Dr. E. Müller)

“Disrupted cadherin-mediated adhesion in the hair follicle stem cell niche – functional analyses in a novel pemphigus vulgaris mouse model”

Alexandre Simonin, PhD (12 May)

Dept. of Clinical Research, Nephrology and Hypertension & Institute of Biochemistry and Molecular Medicine (PD Dr. D. Fuster, Prof. Dr. M. Hediger)

“Regulation of Na^+/H^+ exchanger 1 (NHE1) plasma membrane abundance”

Emilie Tifanny Stauffer, PhD (27 October)

Dept. of Clinical Research, Nephrology and Hypertension (Dr. S. Farese, Prof. Dr. B. Frey)

“Sodium thiosulfate in uremia induced vascular calcification”

Georgette Stern, PhD (19 April)

Dept. of Clinical Research, Pulmonary Medicine (Paediatrics) (Prof. Dr. U. Frey)

“Environmental influences on autonomic regulatory processes and airway function”

Christian Strauss, PhD of Science in Cell Biology (15 November)

Institute of Animal Pathology, Div. of Molecular Dermatology, Vetsuisse Bern (Prof. Dr. E. Müller, Prof. Dr. M. Suter)

“Plakoglobin transcriptional regulation: An orphan rescued”

Rolf Suter, PhD (4 March)

Institute of Virology and Immunoprophylaxis IVI, Mithelhäusern (Dr. N. Ruggli)

“Classical swine fever virus replicon particles: A versatile and robust system for vaccine and gene expression applications”

Florence Tschopp, PhD (22 March)

Dept. of Chemistry and Biochemistry (Prof. Dr. A. Schneider)

“Genetic evidence for a connection between mitochondrial protein and tRNA import in *Trypanosoma brucei*”

Patricia Maria Welz, PhD in Biomedical Engineering (4 November)

Institute for Surgical Technology and Biomechanics ISTB (Prof. Dr. S. Ferguson)

“Direct electrical stimulation of intervertebral disc tissue to support solute transport and cell metabolism”

Christoph Wigge, PhD (3 November)

Institute of Anatomy (Prof. Dr. M. Geiser-Kamber)

“Distribution and macrophage clearance of nanoparticles in lung disease”

Lei Zhuang, PhD (15 December)

Dept. of Clinical Research, Rheumatology (Prof. Dr. B. Trueb)

“Functional domains of the receptor FGFR1”

We congratulate all graduates on their achievement and wish them all the very best for their future careers. Many of them have already moved on to new, challenging postdoc positions at universities all over the world.

Number of Graduations per Expert Committee					
Degree	Biological Systems	Biomed. Sciences & Biomed. Engineering	Cell Biology	Molecular Biology & Biochemistry	Total
PhD	9	11	16	7	43
MD,PhD	1			2	3
DVM,PhD	2	3	1	1	7
Total	12	14	17	10	53

Distribution of graduations among the four Expert Committees

Graduations 2011 at Faculties/Institutions					
Faculty/Institution	Number of Graduations				%
	PhD	MD,PhD	DVM,PhD	Total	
Medical Faculty	33	3	2	38	71.7
Faculty of Science	2			2	3.8
Vetsuisse Faculty BE	1		2	3	5.7
Vetsuisse Faculty ZH	1		3	4	7.5
IVI Mittelhäusern	4			4	7.5
IRB Bellinzona	2			2	3.8
Total	43	3	7	53	100.0

The graduates’ research work was carried out at the three participating faculties and affiliated institutions

GCB Award for Best PhD Thesis

The 2011 GCB prize for the “Best PhD Thesis” (CHF 3'000.–) was awarded to **Janine Rohrbach** in January 2012 during the GCB Students' Symposium for her work entitled “The impact of HIV and antiretroviral therapy on Hepatitis C Virus infection”. She performed her work under the supervision of PD Dr. med. Andri Rauch at the Division of Infectious Diseases, University Hospital (Inselspital) Bern.



Through a Skype video call to Cambridge (MA), USA, Janine Rohrbach was able to receive her award personally and speak to the Symposium audience

Our special congratulations go to Janine Rohrbach, PhD, for her outstanding success. The laureate is now pursuing a career as a Postdoctoral Fellow at the Ragon Institute, a research institution associated with the Massachusetts General Hospital, Harvard University and MIT, Cambridge (MA), USA.

MD-PHD PROGRAMME

The MD-PhD programme is intended for medical graduates interested in experimental research and aiming at an academic career. A structured training programme within the framework of the GCB enables them to acquire a high standard of knowledge in natural sciences and physiology. According to the guidelines of the National MD-PhD Programme, candidates should already start their training in the course of their medical studies and follow relevant courses and exams in cell and molecular biology or other related fields simultaneously with their medical curriculum.

In 2011, we interviewed about 5 medical students in their second to fourth year. An individual training programme was put together for each of them. They now attend basic science courses.

The National MD-PhD Programme, which is supported by the Swiss National Science Foundation (SNSF), the Swiss Academy of Medical Sciences (SAMW) and several other foundations, awards 10 to 12 fellowships every year to outstanding medical candidates studying at Swiss Universities (for information, see <http://www.samw.ch/de/Forschung/MD-PhD-Programm.html>).

In 2011, the following MD,PhD-students have been awarded one of the prestigious 3-year fellowships:

- **Monika Müller** (Laboratory of Prof. Dr. Michele Curatolo, University Clinic of Anaesthesiology & Pain Therapy, Inselspital)
- **Julian Wampfler** (Laboratory of PD Dr. Mario P. Tschan, Department of Clinical Research, Oncology/Haematology)
- **Marc Wehrli** (Laboratory of Dr. med. Dr. phil. Stephan von Gunten, Institute of Pharmacology)

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INFORMATION

www.gcb.unibe.ch

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