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UNIVERSITÄT
BERN

University of Bern / Switzerland
Faculty of Medicine
Faculty of Science
Vetsuisse Faculty

Report 2010

gcb

Graduate School
for Cellular and
Biomedical Sciences

Graduate School for Cellular and Biomedical Sciences

Ph. D. Program

- Biochemistry
- Biomedical Engineering
- Cell and Molecular Biology
- Clinical Research
- Immunology
- Pharmacology
- Physiology
- Structural Biology

Detailed information: www.gcb.unibe.ch



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Report 2010

**Graduate School
for Cellular and
Biomedical Sciences**

University of Bern

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PREFACE

During the last decades historically separated scientific disciplines like genetics, biochemistry, molecular biology, cell biology, physiology and anatomy have merged into today's modern life sciences. Likewise, the boundaries between basic research and medically oriented research dissolve more and more: new insights into the molecular details of a certain cellular process often explain the cause for one or several diseases, and *vice versa* thorough investigations of medical problems at the molecular level can lead to the discovery of new basic concepts. Unperturbed by all these developments, our university structure with its institutes, departments and faculties still reflect the old-fashioned divisions between the historical disciplines with the life sciences being split up between the faculties of science, medicine and veterinary medicine. The foundation of the interfaculty Graduate School for Cellular and Biomedical Sciences six years ago was an important step towards unifying the life sciences at the University of Bern under one roof. Even if the Graduate School is only responsible to organize and supervise the training of the life sciences PhD students, its arguably more important "side effect" 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, foremost in the PhD advisory committees formed to accompany each PhD student from his/her acceptance to the Graduate School all the way to the graduation, but also among the PhD students during common meetings. In my role 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 who work towards the same goal.

For our graduate school, 2010 marks the transition from the starting phase to the "courant normal". We have now reached our steady-state with a total of about 270 PhD students and represent therewith the largest Graduate School of the University of Bern. During the set-up phase of the first few years, the executive committee constantly evaluated the procedures, optimized them and eliminated unnecessary bureaucracy wherever possible. Based on this cumulated experience, 2010 was the appropriate time point to revise our regulations for the first time. The new regulations have finally been approved by the cantonal government and are officially valid since July 2011. Even though the implemented changes are moderate, I recommend all PhD students and supervisors to have a brief look [http://www.gcb.unibe.ch/content/regulations/index_eng.html] → *Organisationsreglement*, *Promotionsreglement*, and *Studienplan* (English translations are also available)].

And finally, for the PhD students who might read this annual report, I would like to remind you that the GCB has set aside money for you to organize your own GCB seminar series. This is a unique opportunity to invite and get to know personally your favorite scientists, so please do not hesitate to intensify your activities in this respect and make these seminars memorable "must go" events (information available on the GCB website, → http://www.gcb.unibe.ch/content/curriculum/seminar_series/index_eng.html).

Bern, July 14, 2011

Prof. Oliver Mühlemann,
GCB President since August 2010

ORGANISATION

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, physiology, neuroscience, and biomedical engineering, leading to a PhD, MD,PhD or DVM,PhD degree. Its administration is jointly assured by the Faculty of Medicine, the Faculty of Science and the Vetsuisse Faculty.

By the end of 2010, 273 students were enrolled in the PhD program. The thesis projects are carried out at laboratories of the three participating faculties or at affiliated institutions; in 2010, this included the Institute of Virology and Immunoprophylaxis (IVI) in Middelhäusern, the Institute for Research in Biomedicine (IRB) in Bellinzona, and the Cantonal Laboratory of Pathology in Locarno.

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

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

The **co-referee** must not be affiliated with the same institute as the thesis advisor and not be a collaborator on the project. He/she should be well acquainted with the subject area of the research project. The co-referee 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 thesis advisor, on the individual training program, taking into account the student's previous education.

The training program 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 program and (II) present their work in a scientific seminar in the course of the second year in the presence of the thesis committee to document in-depth knowledge of the research field.

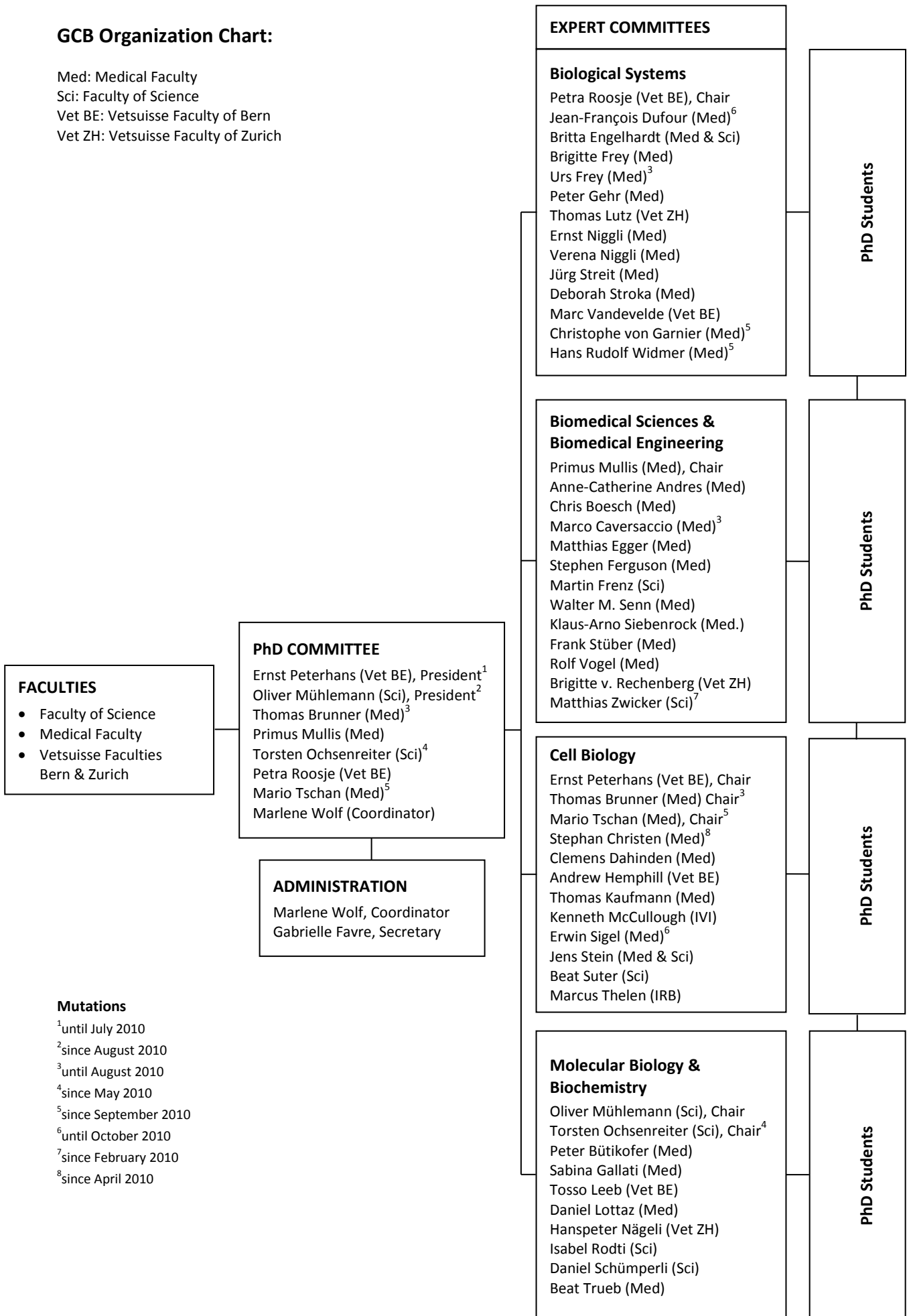
ORGANISATION CHART

The GCB is headed by the PhD Committee, which is composed of two members each of the Faculty of Medicine, the Faculty of Science, and the Vetsuisse Faculty Bern, and the program 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.

GCB Organization Chart:

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



Mutations

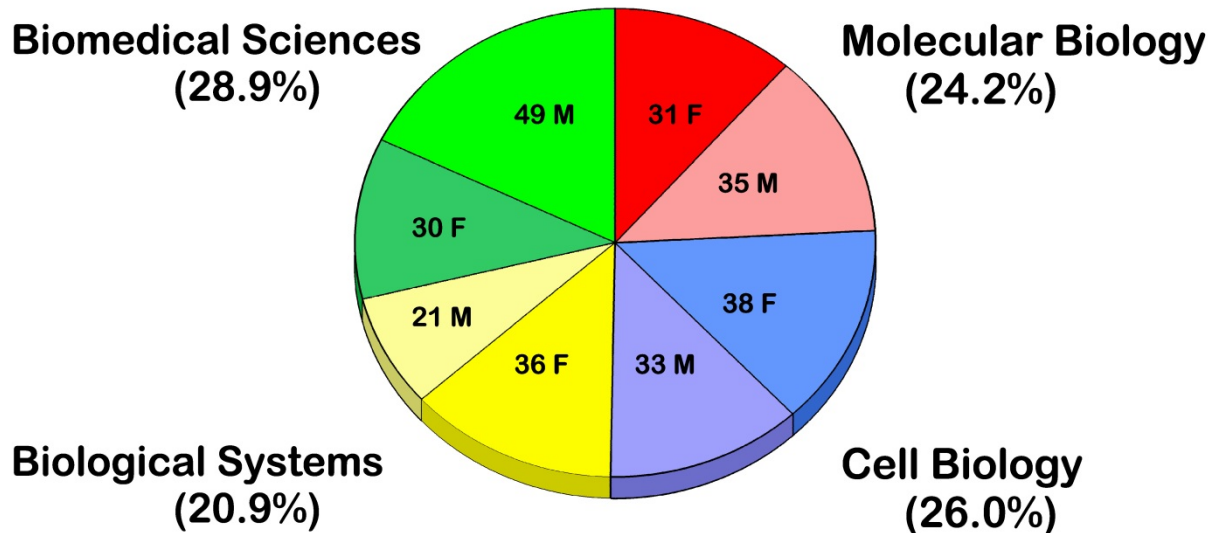
- ¹until July 2010
- ²since August 2010
- ³until August 2010
- ⁴since May 2010
- ⁵since September 2010
- ⁶until October 2010
- ⁷since February 2010
- ⁸since April 2010

DOCTORAL STUDENTS

Students could apply for admission to the Graduate School on 15 April, 15 August and 15 December.

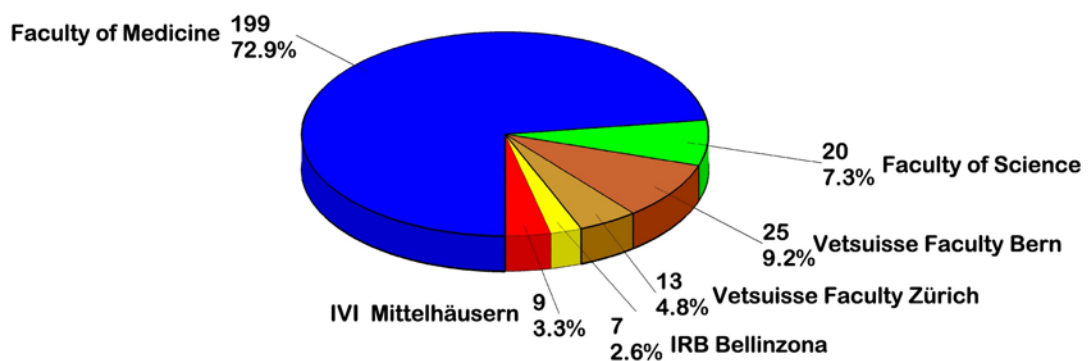
At the end of 2010, 273 doctoral students (135 women, 49.45%) were registered with the GCB, almost equally distributed among the four expert committees.

PhD Students per Expert Committee



The experimental work is carried out in research groups of the Medical Faculty, the Faculty of Science, the Vetsuisse Faculties in Bern and Zurich, the Institute for Research in Biomedicine in Bellinzona, and the Institute of Virology and Immunoprophylaxis in Mittelhäusern, (December 2010).

Research of PhD Students at Faculties/Institutions



The GCB is internationally oriented and represented by doctoral students with master diplomas from 32 different countries. 138 students (50.6%) have a degree from a foreign university.

COURSES AND SEMINARS

The PhD program 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 ETHZ or EPFL for the field of Biomedical Engineering.

Special Courses for GCB Students

Tutorials and book clubs

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

- *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
- *Excitation-Contraction Coupling and Cardiac Contractile Force* (book by Donald M. Bers), organized by E. Niggli, Dept. of Physiology
- *Immunology* (book by Abul K. Abbas, *Cellular and Molecular Immunology*), coordinated by M. Wolf & G. Favre, GCB
- *Infectious Diseases* (discussions of scientific publications), organized by N. Low, ISPM
- *Long-term Outcome of Childhood Cancer* (discussions of scientific publications), organized by C. Kuehni, ISPM
- *Molecular Biology of the Cell (Happy Cell)*, (book by Bruce Alberts et al.), coordinated by M. Wolf & G. Favre, GCB
- *Topics in Tumor Biology* (lectures and discussions of scientific publications), organized by D. Stroka, M. Tschan, and Y. Zimmer, DKF
- *Writing a Grant Application (Tutorial)*, organized by C. Kuehni, M. Egger, and M. Zwahlen, ISPM

Practical Courses, Workshops, Summer Schools

- *Cell Migration*, organized by B. Engelhardt and J. Stein, Theodor Kocher Institute
- *DNA Sequencing and Mutation Analysis*, organized by T. Leeb and B. Haase, Vetsuisse Faculty
- *Positional Cloning*, organized by C. Drögemüller, Vetsuisse Faculty
- *Immunofluorescent Staining*, organized by S. Yousefi, Institute of Pharmacology
- *International Summer School on Inflammation, Immunomodulation, Inspiration*, organized by H.-U. Simon and S. Yousefi, Institute of Pharmacology
- *Introduction to Epidemiology & Biostatistics*, organized by M. Doherr and G. Schüpbach, Vetsuisse Faculty
- *Microscopy: Basic and Advanced/Special Modules*, organized by MIC

- *Molecular Biological Methods in Clinical Research*, organized by A.-C. Andres, DKF
- *Vascular Cell Biology*, organized by B. Engelhardt, U. Deutsch and R. Lyck, Theodor Kocher Institute
- *Stereology Workshop*, organized by S. Tschanz, Institute of Anatomy

Graduate School Seminar Series

The Graduate School seminar series is organized by the 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.

27 August 2010: **Matthias Hentze**, European Molecular Biology Laboratory EMBL, Heidelberg, Germany
“Control of protein synthesis by miRNAs and RNA-binding proteins”
 Host: Stefanie Metze, Dept. of Chemistry and Biochemistry

Students’ Symposium

On 27 January 2010, the 4th Graduate School Students’ Symposium was held 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 18 short talks and 142 posters. They 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. 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. Gottfried Schatz, Prof. em. Biozentrum, University of Basel, gave a highly regarded on “What science is – and what it asks from us”. The breaks were extensively used for further informal discussions and active networking.

GRADUATIONS

In the course of 2010, 79 students successfully completed the PhD program of the GCB and obtained their doctoral degree, jointly issued by the Faculty of Medicine, the Faculty of Science, and the Vetsuisse Faculty.

Of the graduates, 31 are students with a master diploma from a foreign University who joined the GCB for their PhD studies.

2010 GCB Graduates (alphabetical order)

Helge Abicht, PhD (15 September)
 Institute of Clinical Pharmacology and Visceral Research (Prof. M. Solioz)
“Copper-inhibition of cytochrome maturation in *Lactococcus lactis*— A novel copper-toxicity mechanism”

Alireza Abouhossein, PhD (18 October)
 Institute for Surgical Technology and Biomechanics ISTB (PD Dr. S. Ferguson)
“A dynamic, non-linear multibody model to estimate segmental forces in the lumbar spine”

Martin Adam, PhD (24 March)
 Institute of Social and Preventive Medicine ISPM (PD Dr. C. Kuehni, Prof. M. Zwahlen)
“Epidemiology of childhood cancer in Switzerland: Access to care and socioeconomic differentials in incidence and survival”

Maxime Albesa, PhD (22 December)
 Dept. of Clinical Research, Ion Channels and Channelopathies (Prof. H. Abriel)
“Post-translational regulation of cardiac ion channel expression”

Ursula Amstutz, PhD (5 March)

University Institute of Clinical Chemistry (Prof. C. R. Largiadèr)

“Pharmacogenetics of 5-fluorouracil toxicity: Old suspects, new culprits, and novel approaches”

Nora Bandi, PhD (16 December)

Institute of Pathology (PD Dr. E. Vassella)

“miRNA involvement in cell cycle control of non-small cell lung cancer”

Jasmin Batliner, PhD (11 October)

Dept. of Clinical Research, Oncology/Haematology (Adults) (PD Dr. M. P. Tschan)

“Identification and characterization of microRNAs and novel PU.1 targets involved in the pathogenesis of acute myeloid leukemias”

Dirk Baumjohann, PhD (19 March)

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

“Dissection of the reciprocal interaction between T helper cells and B cells during immune responses *in vivo*”

Michael Beyeler, PhD (28 May)

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

“Identification of a fibronectin interaction site in the extracellular matrix protein ameloblastin”

Tobias Binser, PhD (25 January)

Dept. of Clinical Research, Magnetic Resonance Spectroscopy and Methodology MRSM

(PD Dr. P. Vermathen)

“Evaluation of kidney function by multi-modal magnetic resonance imaging and spectroscopy in renal transplantation”

Cornelia Blaser, PhD (10 December)

Institute for Infectious Diseases ifik (Prof. S. Leib)

“Adjuvant therapies in experimental pneumococcal meningitis”

V. N. Chandra Sekhar Boddupalli, PhD (22 October)

Laboratory of Experimental Hematology, University Hospital Zurich, and Institute of Research in Biomedicine IRB, Bellinzona (Prof. M. G. Manz)

“Flt3L mediated dendritic cell development during steady state and inflammation”

Katrin A. Bolanz, PhD (21 January)

Institute of Biochemistry and Molecular Medicine (Prof. M. Hediger)

“The role of TRPV6 in breast carcinogenesis”

Rémy T. Boscacci, MD-PhD (22 January)

Theodor Kocher Institute (Prof. B. Engelhardt)

“Involvement of ICAM-1 and ICAM-2 in multistep recruitment of lymphocytes across the endothelium in health and disease”

Dora Christina Brandenberger, PhD (24 February)

Institute of Anatomy (Prof. P. Gehr)

“Interaction of engineered nanoparticles with the respiratory epithelium *in vitro*: Cellular uptake and effects”

Amadé Bregy, MD, PhD (21 October)

Dept. of Clinical Research, Neurosurgery (PD Dr. M. Reinert)

“Neuroprotection by sutureless vascular tissue fusion and artificial oxygen carriers”

Anna Martina Bröhan, PhD (22 June)

ARTORG Center for Biomedical Engineering Research (Prof. J. H. Kowal, Prof. L.-P. Nolte)

“Computer assisted retinal laser photocoagulation”

Silvio Daniel Brugger, MD, PhD (30 June)

Institute for Infectious Diseases ifik (Prof. K. Mühlemann)

“Interactions of *Streptococcus pneumoniae* with the human nasopharynx”

Ellen Inga Bruske, PhD (22 July)

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

“Thio-modifications in cytosolic and mitochondrial tRNAs of *Trypanosoma brucei*”

Christina Claus, PhD (25 October)

Dept. of Clinical Research, Tumor-Immunology (Prof. A. Ochsenbein)

“Treating chronic viral infections and solid tumors by blocking CD27 signaling”

Alexander Eggel, PhD (13 April)

University Institute of Immunology (Prof. B. Stadler)

“Selection of designed ankyrin repeat proteins for the inhibition of allergic reactions”

Marianne Eyholzer, PhD (30 April)

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

“miR-223 and -29b trigger granulocyte differentiation and are regulated by the myeloid key transcription factor CEBPA—an interplay disrupted in human AML”

Rahel Gäumann, PhD (22 October)

Institute for Infectious Diseases ifik (Prof. K. Mühlemann)

“Molecular epidemiology of tick-borne encephalitis viruses in Switzerland”

Simon Daniel Gerber, PhD (16 December)

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

“Role of fibroblast growth factor receptor like 1 in mouse kidney development”

Eva Greganova, PhD (30 March)

Institute of Biochemistry and Molecular Medicine (Prof. P. Bütikofer)

“Attachment of ethanolamine phosphoglycerol to eukaryotic elongation factor 1A and glycosylphosphatidylinositol lipid remodelling in African trypanosomes”

David Haberthür, PhD (30 June)

Institute of Anatomy (Prof. J. C. Schittny)

“High resolution tomographic imaging of the alveolar region of the mammalian lung”

Vladimira Hinić, DVM-PhD (1 February)

Institute of Veterinary Bacteriology, Vetsuisse Bern (Prof. J. Frey, Dr. C. Abril)

“Differentiation and virulence of *Brucella* species”

Sandra Hofer, PhD (27 August)

Institute for Infectious Diseases ifik (Prof. S. Leib)

“Neurogenesis in bacterial meningitis: *In vitro* studies on pathogenesis & regeneration”

Leila Idrissova, MD-PhD (18 August)

Institute of Clinical Pharmacology and Visceral Research (Prof. J. Reichen)

“Mechanisms of fibrosis progression in a rat model of advanced cholestatic liver disease”

Svenja Illien-Jünger, PhD (17 March)

Institute for Surgical Technology and Biomechanics ISTB (PD Dr. S. Ferguson, Prof. K. Ito, Eindhoven)

“Use of intervertebral disc whole organ culture for degenerative and regenerative studies”

Marion Jetter, PhD (30 November)

University Children's Hospital, Inselspital (Prof. C. Aebi)

“Phenotypical characterisation of *Moraxella catarrhalis* porin M35 and the 16S rRNA type 2/3 subpopulation”

Philip Känel, PhD (26 November)

Dept. of Clinical Research, Mammary Gland Biology and Carcinogenesis (Prof. A.-C. Andres)

“The role of EphB4 and ephrin-B2 in the regulation of the mammary epithelial cell fate”

Alexander Leo Laemmle, MD-PhD (8 June)

Dept. of Clinical Research, Visceral and Transplantation Surgery (Dr. D. Stroka, PD Dr. S. Vorburger)

“Interplay between hypoxia-inducible factor 1 α and SIRT1 protein deacetylase in hypoxic cancer cells”

Debora Ledergerber, PhD (21 September)

Dept. of Physiology (Prof. M. Larkum)

“Signal processing in neocortical pyramidal neuron dendrites”

Andrea Daniela Lehmann, PhD (17 May)

Institute of Anatomy (Prof. P. Gehr, PD Dr. B. Rothen-Rutishauser)

“Interplay of lung cells and their cellular responses upon exposure to combustion-generated and engineered nanoparticles”

Didier Lochmatter, PhD (9 July)

Dept. of Clinical Research, Endocrinology/Diabetology/Metabolism (Paediatrics) (Prof. P. Mullis)

“Autosomal dominant forms of isolated growth hormone deficiency and its therapeutic approach by RNA interference”

Edith Luginbuehl, PhD (2 June)

Institute of Cell Biology (Prof. T. Seebeck)

“Cyclic nucleotide signalling in *Trypanosoma brucei*. A detailed analysis of the two phosphodiesterases TbrPDEB1 and TbrPDEB2”

Vincent Magloire, PhD (14 July)

Dept. of Physiology (Prof. J. Streit)

“Modulation of rhythmic activity in spinal networks”

Stefano Mancini, PhD (16 November)

Institute of Clinical Pharmacology and Visceral Research (Prof. M. Solioz)

“New copper homeostasis components in *Enterococcus hirae* and *Lactococcus lactis*”

Orlando Mani, PhD (8 July)

Institute of Biochemistry and Molecular Medicine (Prof. C. Albrecht)

“The role of ATP-binding cassette (ABC) lipid transporters in mammary gland physiology”

Maxi Christine Margos, PhD (26 November)

Institute of Parasitology, Vetsuisse Bern (Prof. B. Gottstein)

“*Echinococcus multilocularis*: Immunological investigations on experimental alveolar echinococcosis (AE) in mice”

Michaela Medová, PhD (10 December)

Dept. of Clinical Research, Radiation Oncology (Dr. Yitzhak Zimmer)

“Evaluation of anti-MET small molecules in inhibition of tumor-associated angiogenesis and in sensitization of tumor cells to DNA damaging agents”

Mélanie Jeanne Mermod, PhD (14 September)

Institute of Clinical Pharmacology and Visceral Research (Prof. M. Solioz)

“New components of copper homeostasis in *Lactococcus lactis* and *Escherichia coli*”

Kathrin Meyer, PhD (18 March)

Institute of Cell Biology (Prof. D. Schümperli)

“Investigation of SMN and its potential in a gene therapy for Spinal Muscular Atrophy”

Francesca Molinari, PhD (18 October)

Istituto cantonale di patologia, Locarno (Prof. L. Mazzucchelli)

“Analysis of molecular markers relevant for targeted therapies in colorectal cancer patients”

Loretta Lina Müller, PhD (17 August)

Institute of Anatomy (Prof. P. Gehr, PD Dr. B. Rothen-Rutishauser)

“Toxicity of scooter exhaust emissions”

Matthias Mueller, PhD (4 February)

Institute of Anatomy (Prof. H. Hoppeler)

“Strength training for the elderly: from a functional, structural and molecular perspective”

Barbara Nerima, PhD (8 March)

Institute of Cell Biology (Prof. P. Mäser)

“Diagnostics and chemotherapy of *Trypanosoma brucei*”

Eveline Bettina Nüesch, PhD (24 March)

Institute of Social and Preventive Medicine ISPM (Prof. P. Jüni, Dr. S. Trelle)

“Bias and variation in meta-analyses of randomised clinical trials”

Manuela Ocaña, PhD (19 April)

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

“Innate immune response against influenza A viruses”

Matthias Peterhans, PhD (10 September)

Institute for Surgical Technology and Biomechanics ISTB (Prof. S. Weber, Dr. M. Reyes)

“Ultrasound-based non-invasive referencing of anatomical structures for computer-assisted soft tissue surgery”

Flurin Andriu Pfiffner, PhD (7 April)

Dept. of Clinical Research, Audiology (Prof. M. Kompis)

“Optimizing the benefit of bone anchored hearing aids”

Marc Puls, PhD (2 December)

Institute for Surgical Technology and Biomechanics ISTB (Prof. L.-P. Nolte)

“A comprehensive software tool for the diagnosis, planning and navigation for the minimally-invasive surgical treatment of femoroacetabular impingement”

Tomas Regueira, MD-PhD (1 July)

Dept. of Clinical Research, Intensive Medicine, (Prof. S. Jakob)

“Mitochondrial function in sepsis. Regulation and impact of common interventions”

Meret E. Ricklin Gutzwiller, DVM-PhD (24 June)

Dept. of Clinical Veterinary Medicine, Vetsuisse Bern (Prof. P. Roosje, PD Dr. A. Summerfield)

“Canine dendritic cells and their involvement in atopic dermatitis”

Verónica Sánchez Freire, PhD (5 February)

Institute of Anatomy (PD Dr. E. Monastyrskaya)

“Mediators of neurogenic inflammation in the urinary tract as key factors in the chronic pelvic pain syndrome/interstitial cystitis and bladder dysfunction”

Anna Schaffartzik, DVM-PhD (31 August)

Dept. of Clinical Veterinary Medicine, Vetsuisse Bern, and Swiss Institute of Allergy and Asthma Research SIAF, Davos (Prof. E. Marti, Prof. R. Cramer)

“Molecular characterization of allergens associated with insect bite hypersensitivity in the horse”

Thomas Schaffer, PhD (18 February)

Dept. of Clinical Research, Gastroenterology (Adults) (Prof. F. Seibold)

“Significance of mannan in the pathogenesis of Crohn's disease”

Claudia Schwab, PhD (7 June)

Theodor Kocher Institute (Dr. Urban Deutsch)

“Induced expression of Angiopoietin-2 in adult mice leads to multiple alterations in vascular morphology and function”

Chiara Secondini, PhD (5 November)

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

“Osteolytic bone metastasis: It is not all about bone resorption”

Daniel Sidler, MD, PhD (6 May)

Institute of Pathology (Prof. Th. Brunner)

“Regulation of glucocorticoid synthesis and apoptosis in colorectal cancer cells”

Ben Daniel Spycher, PhD (9 March)

Institute of Social and Preventive Medicine ISPM (PD Dr. C. Kuehni, Prof. L. Dümbgen)

“Analysis of phenotypic variation in childhood wheezing disorders”

Britta Stadelmann, PhD (25 February)

Institute of Parasitology, Vetsuisse Bern (Prof. A. Hemphill)

““To be or not to be”—the importance and applications of EmPGL in alveolar echinococcosis”

Florian Steinberg, PhD (20 May)

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

“A functional study of the FGFR1 receptor in cell fusion and FGF signaling”

Oliver Steiner, PhD (3 March)

Theodor Kocher Institute (Dr. R. Lyck, Prof. B. Engelhardt)

“T cell extravasation across the blood-brain-barrier: Differential roles for endothelial ICAM-1 and ICAM-2”

Silvia Steiner, PhD (1 July)

Institute of Cell Biology (Prof. J. Kohli)

“The meiotic recombination initiation complex in *Schizosaccharomyces pombe*”

Angela Julia Suana, PhD (1 December)

Dept. of Clinical Research, Nephrology and Hypertension (Prof. H.-P. Marti)

“Therapeutic application of immunoliposomes in experimental mesangial proliferative glomerulonephritis”

Arzu Gül Tasci, PhD (16 March)

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

“Determining appropriate loading patterns for avascular tissue engineering”

Oliver Benjamin Urwyler, PhD (19 February)

Institute of Cell Biology (Prof. B. Suter)

“Roles of Xpd in cell cycle control and of Sosie in epithelium formation”

Isabelle Astrid Vögeli, PhD (17 August)

Dept. of Clinical Research, Nephrology and Hypertension, (PD Dr. G. Escher)

“Effect of CYP27A1 on steroid metabolism and reverse cholesterol transport”

Silvia Volpe, PhD (14 April) (Co-tutela with *the Università Vita-Salute San Raffaele, Milano, Italy*)

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

“Exploring signal events elicited by chemotactic-receptor engagement in migrating cells”

Thomas von Känel, PhD (25 November)

Dept. of Clinical Research, Human Genetics (Prof. S. Gallati)

“Characterization of genetic factors affecting disease outcome in cystic fibrosis”

Conrad von Schubert, PhD (29 September)

Div. of Molecular Pathobiology, Vetsuisse Bern (Prof. D. Dobbelaere)

“Studies on the host-pathogen interactions in *Theileria*-transformed leukocytes during host cell G2/M phase”

Ying Wang, PhD (9 August)

Dept. of Physiology (Prof. H.-R. Lüscher)

“GABAergic receptor-mediated modulation of network activity”

Benjamin Weber, PhD (13 December)

Institute of Pathology (Prof. C. Müller)

“Intestinal mononuclear phagocytes and expression of TREM-1 in mice”

Dominique Wiener, DVM-PhD (3 August)

Div. of Experimental Clinical Research; Vetsuisse Bern (Prof. A. Zurbriggen)

“Investigation of two potential mechanisms which may favour persistence of CDV, the driving force behind the chronic progression of demyelination in canine distemper”

Monika Lucyna Wnuk, PhD (16 June)

Dept. of Clinical Research, Nephrology and Hypertension (Prof. U. Huynh-Do)

“Glomerular capillary repair in Thy1.1 nephritis: Identification of underlying mechanisms and molecular players”

Zijiang Yang, PhD (8 September)

Dept. of Clinical Research, Angiology (Prof. I. Baumgartner, PD Dr. C. Kalka)

“The role of endothelial progenitor cell in therapeutic neovascularization”

Rahel Zulliger, PhD (29 November)

Dept. of Clinical Research, Ophthalmology (PD Dr. V. Enzmann)

“Cellular and molecular changes in animal models of retinal degeneration”

The graduations were distributed among the Expert Committees as follows:

Degree	Number of students from expert committees				
	Molecular Biology	Cell Biology	Biological Systems	Biomedical Sciences	Total
PhD	17	15	17	19	68
MD-PhD ¹⁾	1		5	1	7
DVM-PhD ²⁾	3	1			4
Total	21	16	22	20	79

¹⁾ Doctor of Medicine and Philosophy

²⁾ Doctor of Veterinary Medicine and Philosophy

The graduates' research work was carried out at the participating faculties and institutions as follows:

Faculty/Institution	Number of graduations				
	PhD	MD,PhD	MD-PhD	DVM-PhD	Total
Faculty of Medicine	54	3	4		61
Faculty of Science	6				6
Vetsuisse Faculty Bern	3			4	7
Vetsuisse Faculty Zurich					
IRB Bellinzona	3				3
IVI Mittelhäusern	1				1
Cantonal Laboratory of Pathology, Locarno	1				1
Total	68	3	4	4	79

The 2010 GCB prize for the “Best Doctoral Thesis” (CHF 3'000.–) was awarded to Conrad von Schubert in January 2011 during the GCB Students' Symposium for his work entitled “Studies on the host-pathogen interactions in *Theileria*-transformed leukocytes during host cell G2/M phase”. He performed his work under the supervision of Prof. Dirk Dobbelaere at the Division of Molecular Pathobiology, Vetsuisse Faculty Bern.

Our special congratulations go to Dr. Conrad von Schubert for his success.

Furthermore, 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.

MD-PHD PROGRAM

The MD-PhD program is intended for medical graduates interested in experimental research and aiming at an academic career. A structured training program 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 Program, 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 2010, we interviewed about 8 medical students in their second to fourth year. An individual training program was put together for each of them. They now attend basic science courses.

The National MD-PhD Program, 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>).

This year, the following MD,PhD-students have been awarded one of the prestigious 3-year fellowships: Stefan Essig (Laboratory of PD Dr. Claudia Kuehni, ISPM), Susanne Hösli (Laboratory of Prof. Hans-Uwe Simon, Institute of Pharmacology), and Victor Jeger (Laboratory of Prof Stephan Jakob, University Clinic of Intensive Medicine, Inselspital).

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Information

www.gcb.unibe.ch

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