

Berlin Brandenburg School for Regenerative Therapies (BSRT)

Basic information

Keywords: Regenerative Medicine | Musculoskeletal System | Immune System | Cardiovascular System | Stem cells | Cell Signaling | Biomaterials | Biomechanics | Biological Materials

Program directors: Prof. Dr. Georg Duda (Spokesperson), Prof. Hans-Dieter Volk (Deputy Spokesperson)

Program coordinators: Dr Sabine Bartosch, Bianca Kühn

Program web link: www.bsrt.de

Detailed program information

Program summary description: BSRT provides the educational basis for research that is promoting endogenous tissue regeneration to combat acute and chronic diseases. This requires the integration of cells, drugs and technical products into successful therapeutic approaches. Engineers need to understand biological mechanisms, biologists need a technical background and clinicians require basic biological and biomaterial knowledge. BSRT offers therefore interdisciplinary training and research opportunities in regenerative medicine for outstanding doctoral and postdoctoral researchers with a background in [biology](#), [engineering](#) or [medicine](#). The young scientists benefit from our worldwide unique approach to foster collaborative science ([BioThinking](#)).

Systems medicine and/or translational highlights:

Translational Scientist

A strong focus is put on training that prepares the young scientists for translational research. A first core curriculum has been developed at BSRT to train young researchers in translational science.

- [Clinical Rotations](#)
- [Good Scientific Practice](#)
- [Good Experimental Design](#)
- [How to translate basic research into real-world clinical applications](#)
- [Business Development and Technology Assessment](#)

Clinical Scientist

The Clinical Scientist Program was established as a postdoc programme for medical doctors who wish to combine translational and/or clinical research with the training required for their clinical specialization within medical fields such as orthopaedics, traumatology, haematology, nephrology etc. The BSRT Clinical Scientist Program has been extended to become a Charité - Universitätsmedizin Berlin wide educational program for young physicians from all sorts of disciplines who wish to have protected time for research during their medical specialization. You can find more information on the [Charité Clinical Scientist Program](#) here.

Primary funding source: Deutsche Forschungsgemeinschaft (DFG) Excellence Initiative

Program start date: 11/2007

Number of students recruited per year (estimated): 20

Duration of program: 3-3.5 years (PhD track), 2 years (Postdoc track)

Scientific training

The scientific training takes care of the interdisciplinary nature of regenerative medicine. BSRT students are brought to a sufficient level in the complementary disciplines to enable collaboration between the scientists with different backgrounds in biology, biochemistry, chemistry, physics, engineering and clinical medicine. Therefore all doctoral students at BSRT have to participate in the course "Introduction into Research in Regenerative Medicine" and do a clinical rotation. BSRT also offers in depth education for the specific disciplines. The scientific training modules cover endogenous regeneration from the molecular to the organ level and are listed under optional courses.

Mandatory Courses:

- [Introduction into Research in Regenerative Medicine](#) (three weeks course)
- [Clinical Rotation](#)

Optional Courses

- [Optional BSRT scientific training courses](#)

Mentoring & supervision offered

Scientific Mentoring

Each doctoral researcher is supported by a scientific mentoring committee of three experienced scientists who are experts in the different related disciplines. Doctoral researchers and their mentoring committee meet on a regular basis. The senior scientists assist the PhD students in developing their personal research and education plan and discuss the progress of their work. [Read more...](#)

Career Mentoring

In higher education career mentoring becomes more and more important to guide doctoral researchers in their career development. Special career mentoring programmes are therefore offered in collaboration with the Humboldt Graduate School and the Dahlem Research School. [Read more...](#)

Additional features

Soft skills training: Workshops on complementary modules are offered in cooperation with

- [Humboldt Graduate School](#) (HGS)
- [Dahlem Research School](#) (DRS)
- [Potsdam Graduate School](#) (PoGS)
- [Charité International Academy](#) (ChIA)

Collaborative education: BSRT developed in collaboration with the [HPI School for Design Thinking](#) the [BioThinking](#) program which provides a worldwide unique program using design thinking as an innovation driver in biomedical sciences. The design thinking concept is based on the assumption that true innovation can only take place when strong multi-disciplinary groups create a common culture and explore different opinions and perspectives. BioThinking includes:

- A structure process, which is based on understanding and analyzing a problem, identifying needs and prototyping for early testing and feedback.
- A dedicated coach, who takes care of the collaborative atmosphere by using teambuilding methods throughout the innovation process.
- Flexible spaces to provide the team with a creative environment

Support for conference visits:

- Travel grants to present at international conferences
- Allowance for lab exchanges

[Read more...](#)

Clinical visits: [Clinical Rotation](#) for up to a week in the clinical of choice

Stipends/grants funded within your program:

- Doctoral stipends/positions (up to 3 years)
- Postdoc fellowships (up to 2 years)
- Clinical Scientists positions (50% up to 3 years)
- Funding for joint student research assistant
- Funding of stipend for completion of doctoral thesis (up to one year)

Berlin School of Integrative Oncology (BSIO)

Basic information

Keywords: Cancer | Translational and Clinically-Oriented Research | Interdisciplinary Research and Training | Broad Technological Spectrum

Program director: Prof. Clemens A. Schmitt

Program coordinator: Dr Eleanor Horn (eleanor.horn [at] charite.de; +49 30 450 559075)

Program web link: <http://www.bsio-cancerschool.de/>

Detailed program information

Program summary description: The BSIO offers a structured 3-year doctoral program entirely in English jointly educating natural scientists and physicians/medical students in the field of integrative oncology and features excellent research conditions, an inspiring training environment including a comprehensive curriculum and a broad supervision and mentoring network. Students have the opportunity to conduct part of their project in one of the labs of the renowned international partner institutions of the BSIO. With respect to its scientific scope, the BSIO aims to bring our understanding of malignant growth to new conceptual levels, i.e. to expand the molecular, cell biological, organismic and system-mathematical research focus by utilizing advanced experimental and simulatory models to develop novel diagnostics and innovative therapeutic principles, and to make them rapidly available for clinical testing. At the BSIO, highly talented graduate students and postgraduate scientists from all over the world are guided through the early phases of their careers in translational and clinically-oriented cancer research.

Systems medicine and/or translational highlights: The BSIO educates natural scientists and medical students/ clinical scientists hand in hand creating an interdisciplinary research and training atmosphere where both groups ‘speak the same language’. It is the central mission of the interdisciplinary graduate school to introduce basic scientists to the most demanding problems in clinical oncology, and, in turn, to stimulate young research-interested clinicians to translate unsolved clinical challenges into experimentally approachable questions, ultimately leading to their mechanistic explanation. Projects at the BSIO range from more basic to more clinically-oriented research and share their focus on cancer and on how results can be translated to clinical advances.

Primary funding source: Deutsche Forschungsgemeinschaft (DFG) Excellence Initiative

Program start date: 11/2012

Number of students recruited per year: 10-15

Number of program funded positions/places: up to 10

Duration of program: 3 years (PhD track), up to 2 years (MD track)

Scientific training

Lecture series: The BSIO organizes its Cancer lecture series which is covering the modules CancerDissect, CancerInteract, CancerModel and CancerStrike, with two lectures being held per semester. More details are available at <http://www.bsio-cancerschool.de/>

Other activities: The BSIO also organizes an international speaker series, in-house seminars and in 2015 the first Young Scientists in Cancer symposium (organized by BSIO students) as a satellite symposium to the international “Making walls history: Overcoming treatment barriers in Cancer” conference on June 05/06, 2015.

Mentoring & supervision offered

Supervision covers meetings with each doctoral student's first supervisor as well as one or more meeting(s) with every doctoral student's thesis committee including progress reports in preparation of these meetings.

Additional features

Soft skills training: A wide range of soft skill classes offered by Humboldt Graduate School and Dahlem Research School is open to BSIO students.

Support for conference visits: Travel grants are available in the framework of the BSIO program.

Clinical visits: Participation in clinical visits at different departments as well as participation in clinical video conferences are part of the BSIO program.

Stipends/grants funded within your program: PhD and MD positions funded by the BSIO are available.



Integrated Graduate Program in Adoptive T Cell Therapy

Basic information

Keywords: Gene Therapy | Immunology | Adoptive T Cell Therapy | Immunotherapy.

Program directors: Dr Thomas Kammertöns (thomas.kammertoens [at] charite.de), Prof. Dr. Elfriede Nößner (noessner [at] helmholtz-muenchen.de).

Program coordinator(s): Lara Le Wührmann, Dorothee Brech.

Program weblink: <http://www.sfb-tr36.com/>

Detailed program information

Program summary description: The IRTG is the training program of the SFB-TR36 and offers a student-oriented teaching program to allow dissertations to be completed with high quality. PhD and MD students are trained side by side to bridge the gap between research and clinical practice. The study program includes specialty courses, soft skill seminars, lectures, laboratory exchanges, visiting scientist program and annual retreats. The study program and the co-supervisory concept bring students and PIs from both locations together on a regular basis allowing exchange of valuable expertise and establishing the IRTG as key component of the SFB-TR36 concept.

Systems medicine and/or translational highlights: The teaching program has a translational focus. We aim to better understand T cell biology and try to apply this knowledge to improve immunotherapy. In particular, we study how T cells fight cancer or viral diseases with the aim to make adoptive T cells therapy of cancer and viral diseases more effective and more widely applicable.

Primary funding source: Deutsche Forschungsgemeinschaft (DFG)

Program start date: 11/2007 - 06/2018

Number of students recruited per year (estimated): 2-5

Number of program funded positions/places: 20 (plus approx. 20 third party funding)

Duration of program: 1 year (MD track) 3-4 years (PhD track).

Scientific training

Lecture series:

- Immunotherapy lecture monthly, Berlin, 2nd Wednesday of the month, 13.30 – approx. 18.00h; Munich, 4th Friday of the month, 14.00 – 19.00 h.

Practical courses: 2 practical courses per year, duration 3 days.

Mentoring & supervision offered

A supervisory concept is implemented.

Additional features

Student organized 2-day retreat once a year. Students can invite guest scientists.



Soft skills training: such as scientific writing, grant application, statistics, bioinformatics etc.

Support for: conference visits, lab exchanges, publication costs.

Stipends/grants funded within your program: for MD students, PhD students, MD residents, school students, student assistants/undergraduate stipends.

Guest scientist program

International Helmholtz Research School Translational Cardiovascular and Metabolic Medicine (TransCard)

Basic information

Keywords: Cardiovascular & Metabolic Diseases | Translational Research | Cell Biology | Molecular Biology | Biochemistry | Genetics | Imaging | Pathomechanism | Development | Systems Biology | Systems Medicine

Program director(s): Prof. Dr. Michael Gotthardt & Dr Francesca Spagnoli

Program coordinator: Dr Inka Gotthardt (transcard [at] mdc-berlin.de; +49 30 9406 4258)

Program weblink: <https://www.mdc-berlin.de/transcard>

Detailed program information

Program summary description: The International Helmholtz Research School 'Translational Cardiovascular and Metabolic Medicine' (TransCard) trains excellent young researchers at the interface of basic molecular, genetic, and clinical research with the goal to elucidate the molecular mechanisms causing cardiovascular and metabolic diseases and to transfer this knowledge from bench to bedside.

The program is a joint endeavor of the Max Delbrück Center for Molecular Medicine (MDC), the Charité - Universitätsmedizin Berlin, Humboldt-Universität zu Berlin, Freie Universität Berlin, and its international partners (Hubrecht Laboratory, Utrecht/The Netherlands; University of Arizona, Tucson/USA). TransCard offers a comprehensive and structured training program for talented doctoral students in a unique translational research environment with internationally renowned faculty, access to the expertise of the associated teaching hospitals, as well as high-end technology platforms. What makes TransCard unique is our goal to provide a stimulating environment and a curriculum that trains students at the interface of basic and clinical research for improved patient benefit and diversification to prepare students for careers in academics and beyond.

Systems medicine and/or translational highlights: The research areas covered by TransCard include cardiovascular and metabolic diseases, with a strong focus on understanding the underlying molecular mechanisms and pathomechanisms as a basis for improved therapy. This includes basic research utilizing model organisms, cellular systems, systems biology, and high throughput approaches as well as clinical research – preferably in combination. Several members of the TransCard faculty and students use high throughput approaches to understand and model cardiovascular and metabolic disease (in part affiliated with the Berlin Institute for Medical Systems Biology), with training and personal consultations available for analysis of omics type data and modeling. As part of the TransCard curriculum, we have created a 'clinical visits' program, which increases the awareness of students for the translational potential of their research. Students spend three days at Helios-Klinikum in Berlin-Buch and learn about diagnostics, clinical decision making, and therapy of cardiovascular disease (see “Scientific training” below for additional details).

Primary funding source: Helmholtz Association

Program start date: 02/2009

Number of students recruited per year (estimated): 10-12

Number of program funded positions/places (excluding third party funding): 11

Duration of program: 3-4 years

Scientific training

Lecture series: TransCard Lecture Series – A weekly core lecture series covering the basics on concepts and methods of cardiovascular and metabolic biology as well as clinical topics. In addition we offer a corresponding **E-Learning** platform to revisit the educational material using SharePoint.

Seminar series: TransCard Seminar Series – A monthly seminar series that offers students the possibility to present and discuss their research projects with other students within the field. Presentations of biographies of important scientists, relevant techniques, or high-ranking publications with reference to own research projects. **Wollenberger Seminar** - This is a monthly seminar series, in which research groups of the Cardiovascular and Metabolic Diseases Research Program (CMD) present their most recent work. For additional information on lectures and seminars, including past schedules, please visit the MDC event database at <https://www.mdc-berlin.de/events>.

Practical courses: Workshops on experimental or computational techniques offered by students or invited speakers.

Clinical Visits Program: In collaboration with PD Dr. Ralf Dechend from Charité - Universitätsmedizin Berlin and the Helios-Klinikum in Berlin-Buch, we have established a 'clinical visits' program that allows TransCard students to get first-hand insight into the clinical perspective of their research. During their visit, students learn about diagnostic and therapy of cardiovascular diseases, measure their own heart function and attend ward rounds, non-invasive diagnostics as well as live surgeries commonly used in cardiovascular medicine. The 'clinical visits' program thus provides a unique opportunity to literally move 'from bench to bedside'.

Mentoring & supervision offered: PhD students are supervised by a group leader and a PhD project committee consisting of at least two more senior scientists monitoring the progress of the research project. Annual PhD project committees consist of a written report and oral presentation of conducted research.

Additional features:

Collaborative lab visits: TransCard supports students who would like to participate in methods workshops and courses in Germany or abroad that will advance their research project. Likewise, students who work in close collaboration with other research groups outside of Berlin can apply for fellowships to support their travel and stay at a host lab.

Soft skills training: Training in professional & career development as well as language courses are organized on campus and externally with the Helmholtz Association and international partners.

PhD Retreats: The annual PhD retreat gives TransCard students a unique opportunity to present their work in an informal setting, and to network within the TransCard community. Students also get the chance to contribute to the program of the retreat and invite external speakers from Germany or abroad.



Summer School: The joint Summer School of TransCard and the Aviesan (Alliance nationale pour les sciences de la vie et de la santé) / INSERM (Institut National de la Santé et de la Recherche Médicale), and the corresponding university hospitals responds to the need of training young scientists to follow a multidisciplinary approach and perspective in their research on cardiovascular and metabolic diseases. The international summer school provides intensive training on a fundamental interrelated topics at the frontiers of research on cardiovascular and metabolic diseases - from systems biology in basic science to clinical research.

Support for conference visits: 3 Travel Grants (à 1000 €), 1 Collaborative Lab Visit Grant (à 2000 €)

Clinical visits: 2.5 days

Stipends/grants funded within your program: PhD student fellowships, support with application for external funds.

International PhD Program at the MDC (HGS-MCB)

Basic information

Keywords: Cancer Biology | Cardiovascular & Metabolic Disease | Neurobiology | Medical Systems Biology | Developmental Biology | Structural Biology | Computational Biology | Mathematical Modeling | Epidemiology | Imaging

Program director: Prof. Uwe Ohler

Program coordinator: Dr Michaela Herzig (michaela.herzig [at] mdc-berlin.de; +49 30 9406 4243)

Program web link: <https://www.mdc-berlin.de/phd>

Detailed program information

Program summary description: The International PhD Program at the Max Delbrück Center for Molecular Medicine (MDC) is a collaboration between MDC, Humboldt-Universität zu Berlin, Freie Universität Berlin and Charité - Universitätsmedizin Berlin and currently hosts 350 doctoral researchers. The Graduate School combines academic research, and access to high-end technology in a stimulating environment on campus and with our international partners thereby offering outstanding research opportunities and an interdisciplinary platform for structured PhD training in biomedical sciences.

Primary funding source: MDC

Program start date: 09/2007

Number of students recruited per year (estimated): 80

Number of program funded positions/places (excluding third party funding): 20

Duration of program: 4 years

Scientific training

Lecture series:

- Thursday Lunchtime Seminar (weekly presentation by MDC group leaders)
- Departmental seminars and lecture series in neurobiology, cancer biology, cardiovascular biology and medical systems biology

Practical courses: visit the MDC event calendar for all events <https://www.mdc-berlin.de/events>

Mentoring & supervision offered

All doctoral researchers are supervised by a group leader and PhD Project Committee consisting of at least 2 more senior scientists monitoring progress of the research project. Annual PhD Project Committees consist of a written report and oral presentation of conducted research.

Additional features

Soft skills training: Training in professional & career development are organized on campus and externally with Helmholtz Association and international partners.

Support for conference visits: Travel and work visit grants are available for doctoral students.

International Research School in Molecular Neurobiology (MolNeuro)

Basic information

Keywords: Neurobiology | Development of the Nervous System | Physiology of the Nervous System
| Animal Behavior | Cell Biology of the Nervous System

Program director: Prof. Gary Lewin

Program coordinator: Dr Michaela Herzig (michaela.herzig [at] mdc-berlin.de; +49 30 9406 4243)

Program web link: <https://www.mdc-berlin.de/molneuro>

Detailed program information

Program summary description: The International Research School Molecular Neurobiology is a joint activity of MDC, Freie Universität Berlin and Charité-Universitätsmedizin Berlin. The aim of the Research School is to provide state of the art training to elucidate the molecular basis of neurobiological processes. Our curriculum is composed of a lecture series covering basic and advanced concepts of Neurobiology, a seminar series, and complementary training courses in the framework of the MDC Graduate School.

Primary funding source: MDC

Program start date: 09/2007

Number of students recruited per year (estimated): 15

Number of program funded positions/places (excluding third party funding): 4

Duration of program: 4 years

Scientific training

Lecture series:

- MolNeuro Lecture (winter semester)
- MolNeuro Seminar (monthly seminar for doctoral researchers and researchers)
- Neuroscience Seminar (monthly seminar for invited speakers)

Practical courses: visit the MDC event calendar for all events <https://www.mdc-berlin.de/events>

Mentoring & supervision offered

All doctoral researchers are supervised by a group leader and PhD Project Committee consisting of at least 2 more senior scientists monitoring progress of the research project. Annual PhD Project Committees consist of a written report and oral presentation of conducted research.

Additional features:

Soft skills training: Training in professional & career development are organized on campus and externally with Helmholtz Association and international partners.

Support for conference visits: Travel and work visit grants are available for doctoral students.

International Research Training Group for Myology

Basic information

Keywords: Myology | Cell Biology | Molecular Biology | Neurology | Gene Repair

Program directors: Prof. Simone Spuler MD (Berlin Spokesperson); Prof. Thomas Voit MD, Prof. Gisèle Bonne PhD, Prof. Helge Amthor MD (Paris Spokespersons)

Program coordinator: Susanne Wissler (susanne.wissler [at] charite.de; +49 30 450 540504)

Program web link: <http://www.myograd.org>

Detailed program information

Program summary description: Muscle wasting and weakness are devastating problems in patients with muscular dystrophies, cancer, cachexia, critical illness myopathy, and in aging people. New findings and treatment approaches are becoming increasingly important. MyoGrad is the first structured PhD training in muscle sciences worldwide. Highly qualified international PhD students complete a bi-nationally supervised thesis in the field of muscle-related cell and molecular biology or clinical aspects of muscle diseases. Participating institutions are Charité - Universitätsmedizin Berlin, Freie Universität Berlin, Max Delbrück Center for Molecular Medicine, Université Pierre et Marie Curie, Paris 6, and Université de Versailles Saint-Quentin-en-Yvelines.

Systems medicine and/or translational highlights: The MyoGrad program includes basic research (developmental biology, signal transduction with more applied (development of new therapies) and clinical expertise (muscle metabolism)

Primary funding source: Deutsche Forschungsgemeinschaft (DFG), Université franco-allemande (UFA)

Program start date: 04/2010

Number of students recruited per year (estimated): 3

Number of program funded positions/places (excluding third party funding): 35

Duration of program: 12/2016

Scientific training

In order to enable students to acquire a comprehensive knowledge of all aspects of muscle sciences, to gain hands-on experiences in practical workshops, and to prepare for a scientist's life in career development courses without constant travel between the various locations in Berlin and Paris/Versailles, we offer onsite teaching in block schedules as well as single seminars via online conference technique:

Lecture series:

- MyoGrad Guest Lectures. Internationally renowned scientists are invited to give talks and discuss their research work with MyoGrad PhD students. The discussion round is led by one of the students. Guest lectures are announced on the MyoGrad website at <http://www.myograd.org>

- Interdisciplinary lectures at the Max Delbrück Center. Students are encouraged to attend lectures and seminars offered by the Max Delbrück Center (e.g. BIMS Seminar Series, Lunchtime Seminar Series, TRANSCARD Lectures, and Wollenberger etc.). For more information, please visit <http://www.mdc-berlin.de/events>
- The Ecole Doctorale “Complexité du vivant” of Université Pierre et Marie Curie, Paris 6 offers interdisciplinary seminars in French. For more information, please visit <http://www.ifd.upmc.fr/fr/organisation/ed/ed515.html>

Practical courses:

- German-French Research Summer Schools Part I: Basic Muscle Science & Part II: Clinical Myology Each year in June (2 weeks). For more information, please visit <http://www.myograd.org>
- MyoGrad Journal Club. Each Wednesday 9.00 -10.00 a.m.

Mentoring & supervision offered

Each doctoral student is jointly supervised by one scientist from Berlin and one scientist from Paris/Versailles. The details of the collaboration are laid down for each doctoral candidate in an individual cotutelle contract at the beginning of the thesis work. Together with the two thesis supervisors the doctoral student sets up a thesis committee consisting of

- Thesis supervisor in Paris
- Thesis supervisor in Berlin
- Scientific Expert (to be chosen with the help/suggestion of the thesis supervisors, should have professor-rank, extern of the laboratory and expert on the topic)
- Representative of Freie Universität Berlin, Department of Biology, Chemistry, Pharmacy
- Representative of Ecole Doctorale „Complexité du vivant“ (ED515), Paris

The thesis committee meets twice during the doctorate. The first meeting is conducted after one year (months 12-15), the second one after 2.5 years (months 28-33). This council is designed to support the doctoral student and give advice as to the orientation of the PhD project.

Apart from regular exchanges with the thesis supervisors and meetings with the committee, each candidate is allocated a tutor, usually a postdoc in the respective research group.

Every two years the MyoGrad faculty together with the doctoral students meets for a retreat, where students present and discuss current research results in talks and posters sessions.

Additional features

A unique feature of MyoGrad is the cotutelle contract between Berlin and Paris based universities enabling a binational degree.

Soft skills training:

- Charité - Universitätsmedizin Berlin: Courses on LabAnimal Science, Modul I and II
- Freie Universität Berlin: MyoGrad is member of the Dahlem Research School of Freie Universität Berlin, thus having access to the *Professional Development Program* offered by FUB.
- MyoGrad Courses: Biostatistics Course – Statistics basics: Introduction to experimental and clinical research, Good clinical practice, Scientific writing

Support for conference visits: MyoGrad covers travel costs for one national and one international conference per year. Moreover, students who spend time in their partner lab in Berlin or in Paris/Versailles receive a monthly mobility aid.

Stipends/grants funded within your program: On the Berlin side MyoGrad PhD students receive a monthly stipend of 1.365 EURO plus 103 EURO per month for research consumables.

On the Paris/Versailles side MyoGrad PhD students receive a salary of 1.380 EURO per month which includes social insurance and retirement pension.



MDC-NYU PhD Exchange Program in Medical Systems Biology

Basic information

Keywords: Medical Systems Biology | Computational Biology | Mathematical Modeling | Developmental Biology | RNA Biology | Gene Regulation | -Omics Technologies | Imaging Technologies

Program director(s): Prof. Nikolaus Rajewsky (Berlin) and Prof. Stephen J. Small (New York)

Program coordinators: Dr Jutta Steinkötter (management) and Dr Grietje Krabbe (administration).

Enquiries to mdc-nyu@mdc-berlin.de

Program weblink: www.mdc-berlin.de/bimsb

Detailed program information

Program summary description: The Berlin Institute for Medical Systems Biology offers an exceptional PhD Exchange Program to support interdisciplinary research projects and international PhD education. PhD topics are structured as collaborative projects between the Center for Genomics and Systems Biology at New York University and the Berlin Institute for Medical Systems Biology at the MDC. A Principal Investigator from each institution supervises each student, students who are expected to divide their time between Berlin and New York, taking advantage of complimentary research and training expertise. Resources are available for travel from Berlin to New York for short and long term working periods as well as for course and conference participation. The regular guidance of an international PhD Committee supports the creation of individual research and training portfolios.

Systems medicine and/or translational highlights: extensive bioinformatics; training in and access to BIMSB and BIH state of the art genomic, transcriptomic, proteomic and metabolomics technologies; major national and international collaborations e.g. Charité and MRC Clinical Sciences Center London.

Primary funding source: Helmholtz Association

Program start date: 02/2009

Number of students recruited per year (estimated): 2-3

Number of program funded positions/places (excluding third party funding): up to 10

Duration of program: 3-4 years

Scientific training

Lecture series: Each semester Systems Biology Lectures tackle a new topic in the field. Previous topics have included RNA Biology, Epigenetics, Developmental Biology, Cell Signalling. Every second week two students present their ongoing research to fellow BIMSB/MDC students, postdocs and faculty at the Student Seminar in Systems Biology. All BIMSB students are encouraged to attend the regular BIMSB seminar series along with relevant seminars and conferences on campus at MDC /FMP as well as Berlin partners such as IRI for the Life Sciences and BIH.

Practical courses: BIMSB offers occasional Summer Schools in relevant topics. In 2013 the subject was Epigenetics, in 2015 the subject is Computational Genomics.

Mentoring & supervision offered

Each student is jointly supervised by one scientist from Berlin and one scientist from New York. Together with these two supervisors, each student sets up a thesis committee with an additional 1-2 members drawn from MDC and NYU faculty. The details of the collaboration and the work plan are set out at the first annual PhD committee meeting where the student is required to present and defend their PhD project proposal. Subsequent annual PhD committee meetings support the student until the end of the research project. Committee meetings normally take place in the context of bilateral scientific meetings regularly held either in Berlin or New York.

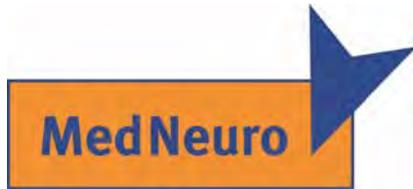
Additional features

Soft skills training: Are offered through the Helmholtz Graduate School Molecular Cell Biology and the personal development office of MDC.

Support for conference visits: In addition to regular travel to NYU, travel grants for conference participation and training courses are available both through the MDC-NYU PhD Exchange Program and also through the Helmholtz Graduate School Molecular Cell Biology.

Stipends/grants funded within your program:

Students receive a salary including health insurance and social security contributions. Net salaries are around 1100 EUR in year one and around 1500 EUR in subsequent years.



Medical Neurosciences

Basic Information

Keywords: Neurobiology | Neurophysiology | Neuropathophysiology | Clinical Neuroscience | Translational Neuroscience

Program directors: Prof. Dr. Helmut Kettenmann, Prof. Dr. Ulrich Dirnagl

Program coordinators: Dr Benedikt Salmen (benedikt.salmen [at] charite.de), Lutz Steiner (lutz.steiner [at] charite.de)

Program web link: www.medical-neurosciences.de

Program brochure: http://www.medical-neurosciences.de/fileadmin/user_upload/microsites/studiengaenge/neurosciences/brochure-medneuro.pdf

Detailed program information

Program summary description: Medical Neurosciences, hosted by the Charité – Universitätsmedizin Berlin, offers research-focused training for natural scientists and medical doctors alike. The program aims to provide a thorough education qualifying participants for career options in both the basic neurosciences and translational bench-to-bedside research. As the central training branch of the cluster of excellence NeuroCure, it offers students the opportunity to develop their scientific interests by choosing from among the many different research institutions associated with the cluster, with research focuses ranging from molecular to systems neuroscience.

Systems medicine and/or translational highlights: Students and faculty with a background in natural sciences or medicine, teaching content ranging from basic neurobiology to clinical neuroscience and research projects from mouse to men attest to the translational nature of the program. Furthermore, the program cooperates with the [NeuroCure Clinical Research Center](#) (NCRC) and [Charité's Department for Technology Transfer](#) (intellectual property and patents). Lastly, a special curriculum in translational research based on blended learning has recently been launched.

Primary funding source: Charité – Universitätsmedizin Berlin, Cluster of Excellence NeuroCure, BIH

Program start date: 2002

Number of students recruited per year (estimated): 30-50

Number of program funded positions/places (excluding third party funding): 10-15 PhD positions/year funded by the Cluster of Excellence NeuroCure

Duration of program: 3 years

Scientific training

The 3-year PhD program consists of a personalized curriculum, which supplements and supports the main research project. The individual backgrounds as well as the requirements of the thesis project are taken into account when constructing this individual curriculum. At this stage, special care is taken to train and sensitize students for important non-academic skills like financial accounting, legal issues, grant proposal writing, and communication to prepare them for the next career step. Furthermore, opportunities to foster early independence are continuously offered. The PhD degree is awarded based on at least three publications or a dissertation.



Mentoring & supervision offered

Each PhD student is supervised by a principal project leader and an additional senior scientist, as set forth in the supervision agreement. Often, this agreement is also signed by a junior scientist (post doc) as third supervisor who is available on a daily basis at the bench.

In addition, mentoring by experienced senior faculty is available through our cooperation with Humboldt Graduate School. See https://humboldt-graduate-school.de/en/services-en/mentor-en/mentoring-1?set_language=en

Additional features

Soft skills training: Transferable or soft skills are an important factor in employability, be it in science or outside. Completing a set of courses in this respect based on personal skills and need is a mandatory part of the program. In cooperation with Humboldt Graduate School we offer a variety of such courses. See: <https://humboldt-graduate-school.de/en/services-en/schluesselkomp2-en>

Support for conference visits: Funds for conference participation are included in the NeuroCure stipends. Otherwise, regular project funds must be used.

Clinical visits: Can be arranged where needed.

Stipends/grants funded within your program: Scholarships for PhD students are available through generous funding by the Cluster of Excellence Neuro Cure.