



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).

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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.