

Studying in Bochum

Ruhr-Universität Bochum

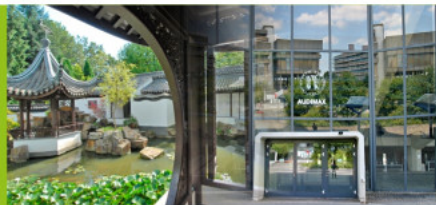
The RUB is one of Germany's largest universities and is on its way to becoming one of the leading research universities in Europe. It has character and charm, a clear research profile and a diverse spectrum of degree programs. It is closely interconnected with the thriving research and business initiatives of the surrounding Ruhr region, yet is still strongly international in its outlook. Its impressive campus is home to 34,000 students, over 4000 of which are international, as well as more than 400 guest researchers every year.

Aside from the RUB, the surrounding Ruhr region offers a lot of opportunities to young researchers, such as 15 universities, 4 Fraunhofer institutes, 4 Leibniz institutes and 2 Max-Planck institutes.

The RUB also offers a wide variety of on-campus activities from sport to drama groups. It also has its own university orchestra, choir, and photography and painting studios. Theatre and musical performances regularly take place on campus, such as the Bochum Symphony Orchestra and organ concerts.

Dozens of former industrial sites in the region have been given a new function - as theatres, opera houses, galleries, discos, museums and a UNESCO world heritage site, all within minutes from the RUB.

Visit our website to find out more about the DD-SCBRM program and how to apply: www.rub.de/istem



Studying in China

In the past 3 decades, China has grown to one of the world's largest economies. Along with this economic growth China is seeking to promote the development of world-class universities. The Chinese government has invested heavily in higher education and the number of tertiary education institutions has nearly doubled in the past ten years.

Jinan University, Guangzhou, China

Jinan University is one of the oldest universities in China and pioneered the recruitment of international students. As one of the „Project 211“ Key Universities it meets high levels of scientific, technical and human resources standards. Clinical Medicine ranks top 1% in the global ESI (Essential Science Indicators). Jinan University was the first comprehensive university in China to establish its own medical school.

The university is situated in Guangzhou City, which is a famous metropolis in the South of China, neighboring Hong Kong and Macao.

Experience multifaceted Chinese culture firsthand while obtaining world-class academic qualifications.

Read more about JNU on their official website: <http://welcome.jnu.edu.cn/en2014/index.html>



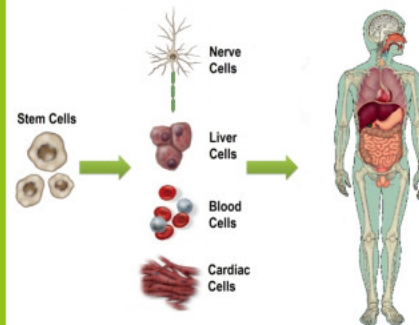
RUHR-UNIVERSITÄT BOCHUM
FACULTY OF MEDICINE

INTERNATIONAL MASTER PROGRAM
MOLECULAR AND DEVELOPMENTAL STEM CELL BIOLOGY
ISTEM

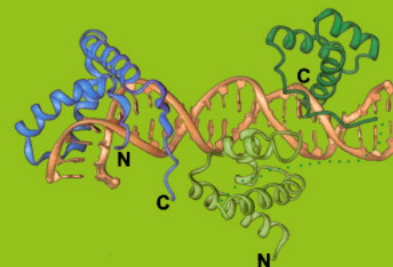
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DOUBLE-DEGREE MASTER PROGRAM



STEM CELL BIOLOGY AND REGENERATIVE MEDICINE



Stem Cells and Regenerative Medicine

Stem cell biology represents the cutting-edge of modern biomedical research. Ever since stem cells were first grown in the lab, researchers have sought ways of using them to repair damaged tissue or create new organs. Stem cells possess two key characteristics: they are capable of dividing and renewing themselves for long periods and they are unspecialized. Drawing on these two fundamental properties, the very young but rapidly advancing field of regenerative medicine uses stem cells in combination with the body's own repair mechanisms to restore damaged cells, tissues and organs. Owing to their two defining features, stem cells can form healthy replacements for diseased or damaged cells that make up body parts including the kidney, heart, liver, blood, skin, muscles, bones and even brain.

Stem Cell Biology and Regenerative Medicine – two of the most innovative research fields providing new opportunities to treat conditions ranging from cancer to blindness, from cardiovascular to degenerative diseases, from organ failure to HIV. The Ruhr-University Bochum and Jinan University in Guangzhou, China, offer the opportunity to participate in these cutting-edge fields of biomedical research through the Double-Degree Master program Stem Cell Biology and Regenerative Medicine (M.Sc. DD-SCBRM).

Introductory courses and clinical background

- Stem cell physiology
- Molecular genetic methods
- Biotechnology and tissue engineering
- Pathology of degenerative diseases
- Advances in stem cell research

Professional Skills

- Project organization
- Teamwork
- Scientific responsibility in biomedicine
- Grant writing
- Training in different languages

Research Skills

- Stem cell handling
- Biochemical and molecular methods
- Bioinformatics
- Molecular tracing

DAAD Stipend

This program is supported by the **DAAD** (Deutscher Akademischer Austauschdienst) with a stipend of **800,- Euros/month** plus travel expenses (flight) for participating students.

Course structure and duration

The course comprises four semesters, including a six-months master's thesis. All courses in the program will be taught in English. The total number of credit points awarded is 120. With the successful completion of the course, the participant will be awarded a Master Double-Degree from both partner-universities.

Students participating in this 4-semester program will be required to spend their first year of studies at the Jinan University in Guangzhou, China. In their second year the students will return to the Ruhr-University, where they will attend the remaining courses. They can decide whether to pursue their lab bench and Master project at the RUB or at one of the many collaborating international laboratories.

Course Program

- Language Course (Mandarin) - Chinese Culture
- Tissue Engineering & Regenerative Medicine
- Stem Cell Practical Courses
- Molecular Genetic Methods
- Stem Cell Lecture Series
- Stem Cell Physiology
- Signalling in Development
- Lab Rotation

- Bioinformatics
- Pathology of Degenerative Diseases
- Advances in Stem Cell Research
- Responsibility in Biomedical Sciences
- Lab Bench Project
- Molecular Tracing Methods
- Master-Thesis

Admission requirements

Applicants are required to have a top bachelor's degree in the life sciences or a state examination/master's in a medical subject. Proof of good basic mathematical skills are required, as is proof of English language skills at TOEFL level.

Profile of degree holders

Graduates of the Double Degree Master of Stem Cell Biology and Regenerative Medicine are trained to work in international, intercultural and interdisciplinary teams. They have a thorough understanding of stem cell biology and cultivation, and their application in biomedical as well as in translational research. They have gained knowledge of the basic principles in the pathology of degenerative diseases as well as theoretical and practical skills in biomedical research towards clinically relevant subjects.

Alumni of the program continue to pursue a doctorate in the life sciences or medicine or go on to start successful careers in the pharmaceutical industry or research facilities.

