



PhD Program between the Freie Universität Berlin (FUB) and the China Scholarship Council (CSC)

**Open PhD Position at Freie Universität Berlin,
offered only to Chinese CSC scholarship candidates 2023**

Department/Institute: [BCP]

Subject area: [Plant-Microbe interactions]

Name of Supervisor: [Prof. Dr. Remus-Emsermann]

Number of open PhD positions: [up to 2]

Type of the PhD Study: [1]

Project title: [Leaf surface microbiology ecology and its implication for plant
and consumer protection]

PhD Project description:

Leaves are colonised by many different bacteria. These bacteria can decide upon the fitness of the plant host and as a consequence the host thrives or dies. In this project we seek to understand the ecological basis for bacteria-conferred plant leaf protection. To do so, we are investigating bacterial colonisation pattern at the micrometre resolution and competition in *in vitro* cultures. Coupled with genomic information, we are interested in the factors that lead to co-existence and exclusion of pathogens. We will use this information to design synthetic communities of fluorescently labelled bacteria that can be used to keep plants healthy. Dependent on the interest of the applicant(s), additional factors such as the effect of temperature or humidity may be also part of this investigations.

In this project it will be possible to work with and learn about cutting edge technologies such as automated fluorescence microscopy, automated fluorescence plate readers, long-read sequencing technologies, genome editing and bioinformatics.

The successful candidate will be well prepared for a career in academia and for the ever-growing plant protection industry during this project.

Language requirements:

The language requirement for this PhD project are good command of English as demonstrated by IELTS results ≥ 6.5 or TOEFL ≥ 95 ibt (Internet based test)

Academic requirements:

The candidate must hold a MSc degree in microbiology, plant biology, plant pathology or a related field and should have a firm background in microbiology, plant-microbe interactions, and/or microbial ecology. Experience with fluorescence microscopy, image cytometry, "R" and genomics are advantageous.

Information of the professor or research group leader (website, awards etc.):

We are currently starting to build our group at the Freie Universität Berlin after the labs were shifted from the University of Canterbury, Christchurch, New Zealand. In Berlin, we are aiming to build an international group that hosts diverse and colourful members to learn from and with each other. The lab's language is English and we thrive to guide our members to become good presenters and communicators. We also believe in the importance of disseminating our research to the scientific community by publishing papers and presenting talks at seminars and conferences.

More about our research and group can be found at the link below:

https://www.bcp.fu-berlin.de/en/biologie/arbeitsgruppen/mikrobiologie/ag_remus-emsermann/index.html

Publications:

<https://scholar.google.com/citations?user=7Cb3030AAAAJ&hl=en>

Curriculum vitae Prof. Dr. Mitja Remus-Emsermann

Since May 2021

- *Prof. Microbiology* Freie Universität, Berlin, Germany
- *Adjunct Senior Researcher*, University of Canterbury, School of Biological Sciences, Christchurch, New Zealand

since 2017

- Associated investigator Biomolecular interaction centre, University of Canterbury, Christchurch, New Zealand

2016 – April 2021

- *Lecturer and Senior lecturer* University of Canterbury, School of Biological Sciences, Christchurch, New Zealand

2014 – 2016

- *Postdoctoral researcher* Agroscope, Department for food microbiology, Wädenswil, Switzerland

2011 – 2014

- *Postdoctoral researcher* Institute of Microbiology, ETH Zurich, Switzerland.

2007 – 2012

- *Ph.D. in Microbial Ecology* Dutch Institute for Ecology, Wageningen, The Netherlands.

2001 – 2007

- *Diploma in Biology* University Bonn, Germany

Awards and honors

- 2018 University of Canterbury Early and Emerging Career Researcher 2018 Award
- 2015 10th International Symposium on Phyllosphere Microbiology – Travel grant
- 2012 28th New Phytologist Symposium, Rhodes, Greece – Best poster Award
- 2012 28th New Phytologist Symposium, Rhodes, Greece – Travel grant
- 2010 NERN Publication Award for Remus-Emsermann MNP and Leveau JHJ (2010) *The ISME Journal* 4, 215–222

Acquired funding

- 2018 University of Canterbury Early and Emerging Career Research Award (10,000 NZD)
- 2018 Royal Society of New Zealand - Marsden grant (PI Monica Gerth (939,000 NZD)
- 2017 Royal Society of New Zealand - Marsden Fast Start grant (300,000 NZD)
- 2017 BIC PhD scholarship 2017 (~90,000 NZD)
- 2017 Brian mason trust grant (15,000 NZD)
- 2017 BIC seed funding (10,000 NZD)
- 2017 University of Canterbury, College of Science, PhD scholarship (~90,000 NZD)
- 2014 ETH D-Biol strategic IT project startup funding for the project "PyCIAL" an integrated environment for microscopy image analysis (10,000 CHF)
- 2011 Competitive internal funding Dutch institute for Ecology (NIOO-KNAW) (12,000 €)

Please Note: In a first step, the complete application should be uploaded to the [online portal](https://fuberlin.moveon4.de/form/60acfece5d328710e40bdbc5/eng) (<https://fuberlin.moveon4.de/form/60acfece5d328710e40bdbc5/eng>) for evaluation by January 15th, 2024. Please do not contact the professor before. He/she will get in contact with you after having received the complete application via the International Office of Freie Universität Berlin in January.