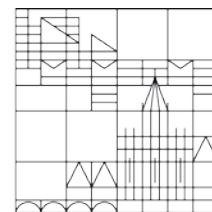




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PhD positions in Biological Chemistry

Title: “Chemical Manipulation of Bacterial Population Behaviour”

Our new interdisciplinary research group at the University of Konstanz welcomes highly motivated students to join the lab. We are interested in the chemistry of bacterial behaviour and discovery of natural products.

Manipulating bacterial population behaviour may result in novel therapies for infectious diseases especially in the light of the increasing resistance development against antibiotics. We are thus employing a novel platform to discover small molecules that inhibit or modulate bacterial population behaviour.

These small molecules will be found in metabolite extracts of microbes, algae, or plants and will be tested using a combination of microbiology, proteomics and natural product isolation techniques. Finally, active compounds will be identified by structure elucidation with NMR and mass spectrometry.

Research Topics include:

- Chemical Manipulation of Bacterial Population behaviour
- Isolating small molecules and structure elucidation
- Chemical tools for the isolation of small molecules
- Discovery of new antibiotics
- Investigating bacterial communication (quorum sensing)

Tasks include:

- Organic synthesis
- Structure elucidation by NMR spectroscopy and mass spectrometry
- Microbiology, isolation of bacteria and development of bioassays
- Extraction of natural products
- Genetic and Proteomic techniques
- Medicinal Chemistry

Dr. Thomas Böttcher

Independent Emmy Noether research group leader at University of Konstanz, Department of Chemistry
Supported by the Emmy Noether program (DFG) and a Marie Curie ZIF Zukunftskolleg Research Fellowship (EU).

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The University of Konstanz is one of the 11 German Excellence Universities and is situated on the shore of Lake Constance close to the Swiss border. The Konstanz Research School of Chemical Biology additionally provides an interdisciplinary research and training program.

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