

PhD-position in Structural Glycobiology: Drug development against bacterial targets

The “Structural Glycobiology” group at the [Max Planck Institute of Colloids and Interfaces](#) in Potsdam is looking for a motivated and ambitious PhD candidate with a background in Biochemistry, Chemistry or related subjects.

Background: Protein-carbohydrate interactions play a key role in the first step of numerous biological processes such as infection, inflammation, and migration of tumor cells. Pathogenic microorganisms (viruses, bacteria, fungi and parasites) have developed strategies for utilizing glycan epitopes on human tissues for specific recognition, for adhesion and sometimes for cellular internalization. The proteins involved can be viral capsid domains, adhesins on top of pili, soluble lectins or carbohydrate binding domains of enzymes or toxins. Their carbohydrate-binding sites are specific for glycans located on human epithelia. Molecules that could interfere with such lectin/glycan interaction are therefore of high interest as anti-infectious agents.

This is a three-years project funded by the DFG/ANR (‘GLYCOMIME’) and embeds you into a multidisciplinary research team of chemists, biochemists and biologist.

What is expected?

- The candidate is expected to be a motivated team player who fits into a multinational and multidisciplinary research environment.
- Confidence in spoken and written English is a requirement.
- Strong experimental and analytical skills. In particular, solid knowledge in basic protein biochemistry, thermodynamics and kinetics.
- Biophysical background to development of practical and theoretical skills in NMR and SPR are required.
- The candidate should be interested in the small molecule drug discovery, fragment-based drug design, chemoinformatics and willing to learn about microbiology.

We offer:

The “Structural Glycobiology” group is an independent research group embedded in the Department of Biomolecular Systems with a strong emphasis on carbohydrate chemistry and biology, led by Prof. Dr. Peter H. Seeberger. The institute is a well-equipped research facility, providing stimulating grounds for scientific progress in an international, multidisciplinary research environment. A comprehensive repertoire of instruments (700 MHz, 600 MHz, and 2x400 MHz NMR, SPR, ITC, FACS etc.) stands alongside with high-profile collaborators in a fruitful research spectrum covering synthetic organic chemistry, biochemistry, glycobiology, nanotechnology, immunology and biophysics.

The Max Planck Society is an equal opportunity employer: Handicapped individuals are strongly encouraged to apply, and so are women in areas in which they are underrepresented.

Contact:

Please submit your electronic application to Dr. Christoph Rademacher (Christoph.Rademacher@mpikg.mpg.de) comprising a curriculum vitae (including scientific publications, posters and talks), your high school, BSc and MSc certificates/transcripts. Also provide at least one scientific reference plus a short summary of MSc thesis work and a motivation letter. Application not fulfilling these requirements will not be considered. The position is available from February 2018. The Deadline for application will be the 3rd of January 2018.

Please also visit: <http://www.mpihg.mpg.de/StructuralGlycobiology>