Within the scope of the H2020 grant Epic-XS (https://epic-xs.eu/), which aims at developing and advancing proteomics exploration within life sciences, we are looking to fill a position for a

Doctoral candidate in phage-microbe interaction proteomics

The ideal candidate should have a biological or chemical background and a high interest in mass-spectrometry based proteomics and its application in life sciences.

The successful candidate will be a member of the Chair of Proteomics and Bioanalytics (Professor Bernhard Küster) as well as the proteomics core facility (BayBioMS) of the TU Munich. Further, this project will be carried out in close collaboration with the research group of Dr. Li Deng from the Institute of Virology at the Helmholtz Center in Munich.

The PhD project will entail the following research topics and milestones:

- Optimal sample preparation of microbes, phages and mixed cultures
- Automation of proteomic workflows towards high-throughput applications
- Optimization of mass spectrometric data acquisition and data analysis
- Establishing a public phage proteome database
- Studying the molecular basis of phage assembly
- Elucidating molecular mechanisms of phage-microbe interactions

Requirements: Candidates should hold a degree in Biology, Biochemistry, Chemistry or related disciplines. The applicants should ideally have some background in microbial biology or virology as well as a basic understanding of proteomic and genomic technologies. Additional desirable skills include hands-on experiences with mass-spectrometry or bioinformatics analysis of big data, for examples programming skills in R or Python. Further, good English skills, both written and spoken, are required.

We are looking for a self-motivated and broadly interested individual with high potential. Flexibility and the ability to work in a multidisciplinary environment on multiple scientific and infrastructure projects are essential. Good communication and interpersonal skills and experience in presenting concepts and data in oral and written formats are also important.

Application: Applications should include a motivational statement (max. one page), a curriculum vitae summarizing qualifications and experience, copies of degrees/university transcripts, names and email addresses of at least one referee. Applications should be sent as a single PDF to Dr. Christina Ludwig (tina.ludwig@tum.de).