ZIEL - Institute for Food & Health
Technische Universität München

ZIEL PhD Program:
"Chemical sensing and functionalization of food constituents in the digestive tract"

About us

ZIEL - Institute for Food & Heath is integrated within the life science campus Weihenstephan at the Technical University of Munich (TUM), one of Europe's top universities. TUM is committed to excellence in research and teaching, interdisciplinary education and the active promotion of promising young scientists. For our PhD program, we are hiring two excellent young scientists for the following projects:

- **Impact of flavor enhancers for the structure and function of the intestinal microbiome**
  (Prof. Dr. M. Schloter, Prof. Dr. P. Schmitt Kopplin)

- **Chemical sensing and immune alertness in response to algae protein: a human intervention study**
  (Prof. Dr. T. Skurk, Prof. Dr. V. Somoza)

The research activities at ZIEL – Institute for Food & Healtch are focusing on the role of nutrition and food components on the gut microbiome and human health. Odorants and flavors in foods will be investigated for their effect on metabolic-, immune-, and gut-functions as well as their impact on microbiome composition and function. The intestinal microbiome plays a fundamental role in the regulation of human health. Changes in this complex microbial ecosystem contribute to the development of chronic and nutrition-related diseases. Nutrient uptake and metabolism have a strong influence on the bacterial communities and functional adaptions will be assessed by using cutting-edge next-generation sequencing, gut chemostat and organoid cultures in human and murine models. Thus, the complex interplay between novel food components, the microbiome and the human body are major factors in determining health and human wellbeing. All five projects aim to elucidate these complex relationships by cutting edge molecular biological and microbiological methods in close conjunction with human intervention trails in our human study unit. The ZIEL PhD program is supported by the DFG-funded Collaborative Research Center 1371 "Microbiome signatures" (www.sfb1371.tum.de).

Candidate profile

We are looking for an outstanding self-motivated doctoral researchers. Candidate should have a strong track record and experience in molecular biology, biomedicine or microbiology (e.g. high-throughput sequencing, microbial ecology). The candidate should also have the ambition and commitment to achieve excellence in a highly productive environment.

Our offer

We offer challenging interdisciplinary projects at the interface of nutrition, microbiome research and biomedicine, well-equipped laboratories with top-notch facilities (germ-free mouse house, high-throughput techniques for sequencing and mass spectrometry), access to patient cohorts and a fruitful scientific atmosphere. Since these positions are embedded in ZIELs PhD program successful candidates will strongly interact with each other and their (co-) supervisors.

The positions are available from July 1 and funded for 3 years. Salary will be determined according to the German collective wage agreement in public service (TV-L 13).

Application

If you are interested in one of the projects, please send your electronic application in one single pdf-document by **latest June 31, 2023** to the respective group leader.
For full consideration, the application should include a cover letter, a detailed CV, a brief statement of your research experiences and interests, certificates and the names and contact information of two references.

TUM is an equal opportunity employer. Qualified women are therefore particularly encouraged to apply. Handicapped persons having an equivalent experience will be preferred.

Contact

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