

Professor (with special responsibilities) in Host-Microbiota Interactions and Systems Immunology

The department of Biotechnology and Biomedicine, Technical University of Denmark, invites applications for a position as Professor (with special responsibilities) with focus on host-microbiota interactions, single-cell analysis, biomarker discovery and systems immunology in the framework of life-style related diseases.

The position will be placed in the section of Protein Science and Signaling Biology with about 40 staff members. The section performs high-impact research and innovation aiming at harnessing the biotechnological and therapeutic potential of proteins and signal molecules covering research topics, such as enzymatic biomass-processing, protein interactions in food and biomaterials, interplay of diet, host and the gut microbiota, enzymatic networks in tissue inflammation repair, and regeneration as well as regulation of the innate immune system and impact of this on lifestyle diseases. The section also teaches Bachelor and Master students in biotechnology, biochemistry, molecular biology and immunology. The section has extensive international and national collaborations with top academic institutions as well as industrial and clinical partners.

Responsibilities and tasks

The successful candidate is expected to head an international competitive research group focusing on host-microbiota interactions with specific emphasis on the interplay between the mucosal barrier, immune cells, the microbiota, and environmental triggering agents, such as dietary factors in health and life-style related diseases. It is also expected that the research has focus on translational studies encompassing human and animal immunological studies. Development of computational models to predict the potential for production of host-interacting metabolites by microorganisms and approaches for integration of multi-omics data at a systems-wide level is expected to be an integrated part of the research strategy.

The Professor is expected to collaborate with other department faculty members to further develop our engineering educations within our biochemistry, immunology, and pharma technology activities by developing and supporting new pedagogical teaching elements and by integrating new research activities into the curriculum of the existing and planned study programmes at the bachelor, master and PhD level.

The research activities are expected to link to other relevant engineering areas in the department and the new professor is expected to engage in collaborative projects with groups in the department and relevant DTU departments (e.g. DTU Food, DTU Nanotech, DTU Bioinformatics, DTU Biosustain). The aim will be to complement existing competences at DTU and create synergies with state-of-the-art methodologies for biomarker identification and studies of host-gut microbiota interactions, effects on the immune system and importance in life-styles diseases to advance existing research agendas and create new ones.

The professor is expected to participate in teaching at the BSc, MSc, and PhD levels. Candidates who do not speak Danish should be willing to learn Danish within the first two-three years in order to be able to teach in Danish.

Qualifications

Candidates should have obtained well-documented international recognition within one or more of the above mentioned research themes. It is required that the candidate has documented experience as research group leader and documented teaching experience at all university levels (bachelor-, master- and PhD) in one or more areas within immunology, biomarker identification, host-microbiota interactions, and use of bioinformatics and systems biology. It is also an advantage if the candidate has a strong national and international network as well as experience in working with private companies. More specifically the candidate is expected to strengthen activities within the following areas:

- Identification of disease-associated microorganisms in complex biological specimens.
- Immune regulation and its importance in the development of life-style diseases
- Analytical technologies to determine signaling pathways and regulatory networks in epithelial and immune cells at the level of single cells.

- Translational studies focusing on diet and host-microbiota interactions in relation to life-style related diseases in children and adults

Assessment

In the assessment of the candidate, consideration will be given to

- Experience and quality of teaching and curriculum development
- Research impact and experience, funding track record, and research vision
- Societal impact
- Documented innovation activities, including commercialization and collaboration with industry
- International impact and experience
- Leadership and collaboration
- Communication skills

Consideration will also be given to:

- Research visions in relation to the position content detailed above

We offer

DTU is a leading technical university globally recognized for the excellence of its research, education, innovation and scientific advice. We offer a rewarding and challenging job in an international environment. We strive for academic excellence in an environment characterized by collegial respect and an academic freedom tempered by responsibility.

Salary and appointment terms

The appointment will be based on the collective agreement with the Danish Confederation of Professional Associations. The allowance will be agreed with the relevant union.

The position is available for a 5-year period and may be extended for up to 3 years more. At the end of the period, the employee in question transfers to a position as associate professor at the university. More information can be found here: [Career paths at DTU](#).

Further information

Further information may be obtained from Head of Department, Bjarke Bak Christensen, +45 3066 4233.

You can read more about the Department of Biotechnology and Biomedicine on www.bioengineering.dtu.dk

Application procedure:

Please submit your online application no later than **X xxx 2018**.

Applications must be submitted as **one PDF file** containing all materials to be given consideration. To apply, please open the link 'Apply online', fill in the online application form, and attach **all your materials in English in one PDF file**. The file must include:

- Application (cover letter) addressed to the President
- CV
- A vision for future research
- Views regarding teaching and research-based on the 'Assessment' bullets
- Documentation of previous teaching and research based on the "Assessment" bullets
- List of publications indicating scientific highlights
- H-index, and ORCID (see e.g. <http://orcid.org/>)
- Diploma (MSc/PhD)

Applications and enclosures received after the deadline will not be considered.

All interested candidates irrespective of age, gender, disability, race, religion, or ethnic background are encouraged to apply.