

Professor in Next Level Enzymology

The Department of Biotechnology and Biomedicine at Technical University of Denmark invites applications for a position as professor in Next Level Enzymology. The position is granted by the Novo Nordisk Foundation and will be placed in the section of Protein Science and Signaling Biology with about 30 staff members.

The mission of the section is to perform high-impact research and innovation, aiming at harnessing the biotechnological and therapeutic potential within 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. We employ tools within protein structure, function, engineering, and molecular interactions as well as proteomics, genomics, and immunology. The section also teaches BSc and MSc students in biotechnology, biochemistry, molecular biology, and immunology. The section has extensive international and national collaborations with top academic institutions as well as with industrial and clinical partners.

Responsibilities and tasks

The successful candidate is expected to deliver forefront research and innovation within enzyme specificity and catalysis in heterogeneous systems, including understanding, experimental investigation and modelling of molecular determinants underpinning enzyme function. Specific focus areas include enzyme action i) on insoluble substrates (biomass, biodegradable polymers, polymer modifications), ii) in multi-phase systems (e.g. water-in-oil emulsions), or iii) at surfaces (e.g. biofilms, textile-based, bioremediation). Modelling of enzyme kinetics experimental data in the aforementioned systems to derive mechanistic insight into the catalytic machinery, the contribution of modularity to function and rate limiting steps is inherent to the activities in this position. Altogether, the aim is to generate improved fundamental knowledge and directly applicable insight into multi-modular and multi-functional enzymes, as well as harnessing the growing sequence diversity, tapping into metagenomes, and translating it into biotechnology-centric catalysis.

The professor is also expected to collaborate with other section faculty to make a significant contribution to further developments of our engineering education within Biochemistry and Protein Science via the integration and reflection of the new research activities into the curriculum in the existing and planned study programs at the BSc, MSc, and PhD levels.

Research activities are expected to link to other relevant engineering areas in the department.

The new professor in the section will be expected to participate in collaborative projects with groups from the department and relevant DTU departments (DTU Chemistry, DTU Chemical Engineering, DTU Biosustain, DTU Bioinformatics, DTU Food, and DTU Nanotech). The aim will be to complement existing competences and thereby create synergies with state-of-the-art methodologies in protein structure/design, protein chemistry and/or proteomics to advance existing research agendas and create new ones.

The successful candidate is expected to take a lead position in teaching at the BSc, MSc, and PhD levels.

Qualifications

Candidates should have obtained well-documented international recognition within one or more of the above-mentioned research themes, raised grants, and mentored young researchers.

The successful candidate should also be able to document teaching experience at all university levels (BSc, MSc, and PhD) in one or more areas of protein science and technology described above and take a lead in ensuring the reflection of Protein Science research in existing or new courses and study programs run by the department. The aim is to secure visibility of this major research area in the department's course portfolio and to educate Bioengineers with solid competences in Protein Science.

Assessment

In the assessment of the candidates, 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

Salary and appointment terms

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

Further information

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

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

Application procedure:

Please submit your online application no later than **X June 2017**.

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)

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