NANYANG TECHNOLOGICAL UNIVERSITY

A great global university founded on science and technology
Nurturing creative and entrepreneurial leaders through
a broad education in diverse disciplines

The Biological & Biomimetic Materials Laboratory in the School of Materials Science and Engineering (http://www.mse.ntu.edu.sg/) at NTU is looking **for 2 research fellows (RFs) with strong expertise in:**

(1) Transmission electron microscopy (TEM), ideally in the area of biological samples (Cryo TEM, liquid-phase TEM, etc).

(2) Protein biochemistry, protein engineering, protein biophysics.

The candidates will be working on an exciting interdisciplinary project in the area of "Liquid-Liquid Phase Separation (LLPS) involving research teams in the Schools of Materials Science and Engineering (MSE) and Biological Sciences (SBS) at NTU that have a strong international recognition in the areas of molecular biomimetics, cell biologists, biophysics, and plant biochemistry.

The first RF must have strong expertise in Transmission Electron Microscopy (TEM) of biological samples, ideally with previous skills in liquid phase TEM and/or Cryo TEM. The RF will be in charge of investigating the mechanisms and dynamics of protein droplet formation in a variety of model systems exhibiting LLPS, including extra-cellular proteins, actin self-assembly or in the carbon fixation enzyme Rubisco. Additional expertise in Life Sciences techniques such as protein expression and purification and other biophysical characterization or imaging (such as Atomic Force Microscopy) will be favourably considered.

The second RF must have a strong expertise in protein biochemistry, protein engineering, peptide synthesis and must be proficient with bioinformatic and modern bioimaging tools, and/or biophysical characterization techniques (Circular Dichroism (CD), and Infrared Spectroscopy, FACS, etc…). The candidate will be conducting research in the area of protein biochemistry of extra-cellular proteins exhibiting LLPS, with the goal to unveil the molecular mechanisms responsible for LLPS of such extra-cellular proteins.

Both RFs will be part of a dynamic interdisciplinary research team that is broadly tackling LLPS. They will closely collaborate with cell biologists, biochemists, structure biologists and materials scientists within the frame of a large research program devoted to LLPS. The first candidate will be expected to manage TEM activities of the program between the different research groups and to mentor PhD students in this area. The second candidate will be mentoring PhD students in the area of protein engineering, biophysical characterization, and will also be interacting with other team members seeking to exploit LLPS for translational applications.

Job qualifications

a. PhD in Materials Science, Biology, or Chemistry.
b. Specialization in TEM characterization, with a solid knowledge and technical expertise in latest developments of liquid-phase TEM and CryoTEM.
c. Knowledge of protein expression and purification methods will be favorably considered.
d. Exposure to inter-disciplinary research programs combining Physical and Life Sciences.

Salary are internationally competitive at the post-doctoral level, and commensurate with experience. The program will have access to top-notch research infrastructures and the research atmosphere at NTU and Singapore in general is diverse, vibrant, and well-funded. The School of MSE at NTU is consistently ranked in the top 5 worldwide. The research will involve a substantial level of international collaborations with world-leading academic institutions.

Suitably qualified applicants are invited to send in their application with detailed resume and sample research publications by email to:

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