

Job Description & Key Responsibilities

Postdoctoral Fellow Position in Cell Mechanics and Mechanobiology

We are seeking a highly motivated and qualified Postdoctoral Fellow to join our research team in the area of cell mechanics and mechanobiology. The successful candidate will work on interdisciplinary projects aimed at understanding how mechanical cues influence cellular behavior in health and disease, with applications in areas such as cancer, development, and tissue regeneration.

This position offers an excellent opportunity to contribute to cutting-edge research at the interface of biomechanics, cell biology, and biomedical engineering.

Key Responsibilities:

- Conduct independent and collaborative research in cellular biomechanics and mechanotransduction.
- Design and perform experiments using techniques such as traction force microscopy, atomic force microscopy, microfabricated substrates, and live-cell imaging.
- Analyze experimental data and interpret mechanobiological responses at the cellular and tissue levels.
- Collaborate with interdisciplinary teams across biology, engineering, and clinical sciences.
- Prepare high-quality manuscripts, reports, and presentations for publication and dissemination.
- Stay current with recent developments in the fields of mechanobiology and bioengineering.

Successful candidate will be offered a full time (contract) as a member of the laboratory.

Requirements

Qualifications:

- Ph.D. in Biomedical Engineering, Mechanical Engineering, Cell Biology, Biophysics, or a related field.
- Strong background in cell mechanics, mechanobiology, or related experimental techniques.
- Experience with imaging, cell culture, microfabrication, or biomechanical measurements is highly desirable.
- Proficiency in data analysis tools (e.g., MATLAB, Python, or ImageJ, machine learning).
- Excellent written and verbal communication skills.
- Ability to work independently and collaboratively in a multidisciplinary **environment**.

Preferred Skills:

- Familiarity with quantitative image analysis and mechanical modeling.
- Prior experience with live-cell imaging, atomic force microscopy, microenvironment engineering, or cytoskeletal studies.
- Knowledge of AI tools or computational methods for data interpretation is an advantage.
- Experience in system integration.

To apply, please send your cover letter, CV and names of 3 references (name, institution, email) to Prof Lim Chwee Teck at clim@nus.edu.sg. Only shortlisted candidates will be contacted.