Job Description & Key Responsibilities

Postdoctoral Fellow Position in Microfluidic Technologies

We are seeking a highly motivated **Postdoctoral Fellow** to join our interdisciplinary team dedicated to advancing **microfluidic technologies** for **biomedical diagnostics**. The successful candidate will lead research in the design, fabrication, and application of microfluidic platforms for detecting disease-specific biomarkers such as diseased cells, **cell-free DNA, proteins and exosomes**.

This position offers an exciting opportunity to contribute to the development of next-generation lab-on-a-chip systems for **rapid, sensitive, and point-of-care disease detection**.

Key Responsibilities:

- Conduct independent research in **microfluidic device design and fabrication**.
- Develop and optimize microfluidic systems for sample handling, biomarker enrichment, and detection.
- Integrate microfluidics with other electrochemical or optical sensing components.
- Design experiments, collect and analyze data using appropriate software and methods.
- Collaborate with interdisciplinary teams in bioengineering, chemistry, and clinical science.
- Prepare scientific publications, technical reports, and presentations.
- Stay current with developments in microfluidics, diagnostics, and related fields.

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

Requirements

Qualifications:

- Ph.D. in Biomedical Engineering, Mechanical Engineering, Chemical Engineering, or a related field.
- Strong background in microfluidic system design, soft lithography, and microfabrication techniques.
- Experience with biomarker detection assays or point-of-care devices.
- Excellent problem-solving skills, attention to detail, and ability to work independently.
- Strong communication skills and collaborative mindset.

Preferred Skills:

- Familiarity with integrating sensors (e.g., electrochemical, optical) into microfluidic systems.
- Experience with fluid dynamics modeling or simulation tools (e.g., COMSOL).
- Knowledge of biological sample processing (e.g., blood, plasma) on-chip.
- 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 ctlim@nus.edu.sg. Only shortlisted candidates will be contacted.