

Post-doctoral position available at Collective Cell Dynamics lab in Mechanobiology Institute, National University of Singapore

We are seeking to recruit a highly motivated and self-initiated applicant to join us as a postdoctoral research fellow in the Collective Cell Dynamics in Mammalian Development and Reproduction lab at the Mechanobiology Institute, NUS. Our group is interested in how collective cell behavior emerges and links with biological functions in development and reproduction. We focus on cellular mechano-chemical coupling regulations in mammalian tissues and explore design principles of multicellular dynamical systems. I am looking for a candidate who is interested in applying interdisciplinary approaches to study about interplay between sperm and somatic cells in the male reproductive tracts.

The origin and roles of sperm cell dynamics in the reproductive tracts remain less understood despite their physiological importance (2022, Semin Cell Dev Biol). To better understand, we have utilized intravital microscopy for studying murine reproductive tracts, enabling us to observe the cellular and molecular activities in living mouse tissues. In this project, we will combine live cell imaging, microfluidic devices, and mathematical modelling to further explore the fundamental mechanisms of how collective sperm dynamics emerge and link to reproductive functions and aging. The successful applicant should possess strong leadership qualities, a passion for conducting research, and a creative approach to problem-solving. The selected candidate should also be able to work both independently and as part of a diverse team.

Requirements:

- A PhD in life sciences or related fields
- Fundamental knowledge and skills in molecular biology, cell and tissue culture, and microscopy
- Excellent communication skills and a team player
- Experience in mouse handling, omics analysis, and/or bioinformatics analysis would be an advantage

Application:

Interested and highly motivated candidates should apply by submitting 1) a cover letter stating why they are interested in this position, 2) a full CV with a list of publications, and 3) two academic references (with address, phone number and email) in a single pdf file to Tsuyoshi Hirashima ([thira\[at\]nus.edu.sg](mailto:thira[at]nus.edu.sg)) with the subject label "Postdoc CCD-MBI-2023".

Lab Homepage: <https://sites.google.com/view/hirashima-group/home>

