



Dr Xiling Shen
Associate Professor
Dept of Biomedical
Engineering,
Duke University, USA

Spatiotemporal regulation of cancer, stem and neuronal cells in the gut

Tissue progression and disease development is a dynamic process that happens over space and time, but this perspective is often overlooked. The first part of the talk will describe in vivo models to recapitulate colon cancer metastasis and cancer interaction with immune cells. The models reveal how cancer cells undergo transformations during metastasis, and how new therapeutic strategies can be developed to target them. The second part of the talk will discuss how non-coding RNA can regulate normal stem cells to behave differently under stress (such as inflammatory) conditions, and how such mechanisms evolve in cancer stem cells. The last part of the talk will describe new technology we are developing to understand the enteric nervous system and its interaction with the microbiota.

Biography

Dr. Shen received his BS, MS, and PhD degrees from Stanford University. He was an assistant professor at Cornell University from 2009 to 2015 before joining the Biomedical Engineering Department and Center for Genomics and Computational Biology at Duke University as an associate professor. The Shen lab uses systems biology to study spatiotemporal controls of multicellular systems in the gut, and how their subversion lead to diseases. Ongoing projects include colon cancer metastasis, normal and cancer stem cells, non-coding RNA, metabolic reprogramming, and the enteric nervous system.

29 March 2017 | 3.30 pm to 4.30 pm

CeLS Seminar Room 1,

28 Medical Drive, Centre for Life Sciences, Singapore 117456

<http://syncti.org/>

Chaired by A/P Poh Chueh Loo