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TEMASEK LIFESCIENCES LABORATORY

28 September 2021 (Tuesday), 3.30pm
Hosted by: Dr Ong Chin Tong

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Meeting ID: 814 7878 6282 | Passcode: 564227

Binary specification of cell division patterns by the balance of PAR-type polarity regulators

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Coordination between cell differentiation and proliferation requires the balance between asymmetric and symmetric modes of cell division. Here we show evidence in C. elegans that changes in the balance between two antagonizing PAR proteins can be sufficient to re-program the division modes from symmetric to asymmetric and vice versa. We propose that the balance between PAR proteins represents an intrinsic self-organizing cue for the specification of the two division modes during development.

Prof. Fumio Motegi completed his doctoral degree at the University of Tokyo. He did his postdoctoral work at RIKEN and Johns Hopkins University. He joined TLL and MBI as a Principal Investigator in 2012 and holds a joint appointment as an Assistant Professor at DBS, NUS. He was appointed as a Professor at Institute for Genetic Medicine, Hokkaido University in Oct 2020.

Recent Publications:

1. Lim YW, Wen F, Shankar P, Shibata T, **Motegi F** (2021) **Cell Reports.** 36: 109326 .

2. Zhao P, Teng X, Tantirimudalige SN, Nishikawa M, Wohland T, Toyama Y, **Motegi F** (2019) **Developmental Cell.** 48: 631-645

3. Ramanujam R, Han Z, Zhang Z, Kanchanawong P, **Motegi F** (2018) **Nature Chemical Biology** 14: 917-927

4. Wang SC, Yu T, Nishimura Y, Gole L, Yu W, **Motegi F** (2017) **Nature Cell Biology**. 19: 988-995