Postdoctoral Positions on Cellular Information Processing

Applications are invited for two immediate openings at the new Systems Biology and Bioengineering Group with Professor Savas Tay, at the Institute for Molecular Engineering, **University of Chicago** (see http://ime.uchicago.edu/savas_tay/ and www.microfluidics.ethz.ch)

We want to understand how immune networks (like NF-kappaB) process dynamical signaling inputs and how they interact with biological noise, at the single-cell level. The following papers describe the current direction of our research program:

- Noise facilitates transcriptional control under dynamic inputs. Kellogg & Tay, **Cell** 160, 381 (2015)
- Digital signaling decouples activation probability and population heterogeneity. Kellogg, Tian, Lipniacki, Quake, Tay. **eLife** 4:e08931 (2015)
- Single-cell NF-kB dynamics reveal digital activation and analogue information processing. Tay, et al. **Nature** 466, 267 (2010)
- High-throughput microfluidic single-cell analysis pipeline for studies of signaling dynamics. Kellogg, Gómez-Sjöberg, Leyrat, Tay. **Nature Protocols**, 9(7): 1713 (2014)

Applications from a range of backgrounds including Biology, Physics, Chemistry, Engineering and Computer Science are invited. Required skills include cell culture, basic biochemistry, microscopy, image processing, and programming in MATLAB. Experience with microfluidics, cloning, signaling pathways and stochastic modeling are a plus. Using sophisticated computer controlled experimental setups will be necessary.

Our new laboratory is located at the Knapp Center at the University of Chicago, and we are affiliated with the Institute for Molecular Engineering (www.ime.uchicago.edu) and Institute for Genomics and Systems Biology (http://www.igsb.anl.gov/).

Highly motivated candidates with a strong track record of publications should send an application package with research interests, full CV with experimental and computational skills listed in detail, names and contact information of 3 references to Savas Tay (savas.tay AT gmail.com).