



BiophysTO Lunchtime Seminar Series

Date

Thursday, October 5, 2017
12:00 – 1:00

Location

Kaneff Centre L1220
University of Toronto Mississauga

Streaming

Seminar live streamed to
MP606 @ St. George

**Pizza & refreshments
provided**

Ken Dill

Laufer Center for Physical & Quantitative
Biology, Stony Brook University

How cellular decisions are encoded in its proteome's physical chemistry



Some cell behaviors can be explained by the physics of the cell proteome, the full complement of the cell's proteins. For example, we believe that heating kills cells by denaturing their proteins. Salt slows cell growth by overcrowding the proteins. Oxidative damage in aged cells may involve electrostatic unfolding. We explore these properties using physical chemical models. We also explore proteostasis, the machinery that keeps the cell's proteins folded and disaggregated, particularly under stress. We find many ways in which evolution has encoded 'cleverness' into proteostasis decision-making.

Host: Dr. Josh Milstein



**Seminar
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