



The Faculty of Biotechnology and Food Engineering

Seminar

Dr. Shay Stern

Uncovering the basis of behavioral variation across developmental timescales

Biology, Technion

Abstract

Animals generate complex patterns of behavior across life that can be modified over days, months, or even years. Across these long timescales individuals within the same population may show stereotyped behaviors, but also unique behaviors that distinguish them from each other, a property called individuality. How are long-term patterns of behavior organized and regulated across development? And what are the underlying processes that establish individual-to-individual behavioral variation?

We examined the contributions of developmental programs and individual variation to behavior by developing a new multi-camera imaging system to monitor the behavior of multiple individual *C. elegans* animals across their developmental trajectories from egg hatching to adulthood, spanning a full generation time. By using this imaging system, we discovered that while *C. elegans* animals have reproducible patterns of long-term behaviors, individuals within isogenic populations show consistent behavioral biases that persist across development and distinguish them from one another. In current studies we further explore neuronal, molecular, and environmental sources of behavioral variation among different individuals within the population. These studies open a new window for studying how intra- and inter-individual behavioral patterns emerge across the lifespan of individuals.

Wednesday, 6/5/2020, 14:00 – 15:00, Via zoom

Meeting ID: 961 4467 8585

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