

The second annual workshop of the Koret-Berkeley-Tel Aviv Initiative in Computational Biology and Bioinformatics

July 28 – 29, 2019, the Steinhardt Museum of Natural History, Tel Aviv University

Click on the titles of talks for abstract

Sunday, July 28th, 2019

09:30 – 09:45 *Gathering and coffee*

09:45-10:00 *Opening*

Chair: Adi Stern, TAU

10:00 – 10:25 **Noam Shomron, TAU:** [Genomics of breast cancer](#)

10:25 – 10:50 **Steven Brenner, UCB:** [Evaluating the potential of screening exome sequencing for newborn screening](#)

10:50 – 11:15 **Irit Gat-Viks, TAU:** [Quantifying metabolic syndrome: beyond standard computational methods](#)

11:15 – 11:45 *Coffee break*

Chair: Martin Kupiec, TAU

11:45 – 12:10 **David Burstein, TAU:** [Using metagenomics to expand the CRISPR-Cas toolkit](#)

12:10 – 12:35 **Uri Gophna, TAU:** [Prolonged antibiotic treatment generates an antibiotic-resistant microbiome and collateral multi-drug resistance](#)

12:35 – 13:00 **Elhanan Borenstein, TAU:** [Model-based integration of multi-omic microbiome data](#)

13:00 – 14:30 *Lunch*

Chair: Steven Brenner, UCB

14:30 – 14:55 **Zoe Vernon, UCB:** [Leveraging molecular data in drug discovery using count statistics](#)

14:55 – 15:20 **Haim Wolfson, TAU:** [Integrative modelling of the 3D structures of large multimolecular assemblies](#)

15:20 – 15:45 **Joseph Lewnard, UCB:** [Modeling antibiotic use avertible by vaccines against rotavirus and *Streptococcus pneumoniae*](#)

15:45 – 16:10 **Asaf Madi, TAU:** [T cell repertoire: Nothing but net](#)

16:10 – 16:40 *Coffee break*

Chair: Haim Wolfson, TAU

16:40 – 17:05 **Nir Yosef, UCB:** [Single cell analysis of thymocyte development via joint modeling of RNA and proteins](#)

17:05 – 17:30 **Omri Wurtzel, TAU:** [A FoxF regulatory program specifies muscle formation revealed by single cell analysis](#)

19:30 – *Dinner (Herods Hotel, 155 HaYarkon St, TLV)*

Monday, July 29th, 2019

09:30 – 10:00 *Gathering and coffee*

Chair: John Huelsenbeck, UCB

10:00 – 10:25 **Eli Eisenberg, TAU:** [Transcriptome plasticity and genome rigidity in cephalopods](#)

10:25 – 10:50 **Martin Kupiec, TAU:** [Telomere length: Nature vs. Nurture](#)

10:50 – 11:15 **Judith Berman, TAU:** [Beyond resistance: insights into subpopulation responses to antifungals](#)

11:15 – 11:45 *Coffee break*

Chair: Irit Gat-Viks, TAU

11:45 – 12:10 **Tamar Geiger, TAU:** [Unraveling breast cancer heterogeneity through MS-based microproteomics, from whole tumor analysis to single cell proteomics](#)

12:10 – 12:35 **Eytan Ruppin, NIH, (TAU Emeritus):** [Harnessing genetic interactions to advance whole exome precision cancer treatment](#)

12:35 – 13:00 **Ron Shamir, TAU:** [Personalized prioritization of cancer driver genes](#)

13:00 – 14:30 *Lunch*

Chair: Nir Yosef, UCB

14:30 – 14:55 **Tsung-Han Hsieh, UCB:** [Resolving the 3D landscape of transcription-linked mammalian chromatin folding](#)

14:55 – 15:20 **Itay Mayrose, TAU:** [A phylogenetic framework for the detection of trait-dependent shifts in patterns of sequence evolution](#)

15:20 – 15:45 **Adi Stern, TAU:** [A Bayesian framework for inferring the influence of sequence context on mutation rates](#)

15:45 – 16:15 *Coffee break*

Chair: Ron Shamir, TAU

16:15 – 16:40 **Andres Cardenas, UCB:** [Environmental health in the epigenetic era](#)

16:40 – 17:05 **Ran Elkon, TAU:** [Enhancing functional interpretation of noncoding genetic variants](#)

17:05 - *Closing remarks*