



September 19<sup>th</sup> and 20<sup>th</sup>, 2016

## Meeting Highlights

### September 19, 2016 Natcher Conference Center

#### Session I - DATA CHALLENGES FACING LARGE PROJECTS: 8-10am

This session will present perspectives from multiple high-profile scientists involved in large projects on handling accessibility, utility of the data generated within those programs. Dr. Singer will present on the new Cancer Moonshot project, and Dr. Ma'ayan (BD2K Center) will summarize the activities focused on FAIR principles of data access within BD2K. The other two speakers, Drs. Subramaniam and Finkbeiner will address the challenges faced by integrating multiple types of data.

- |         |  |
|---------|--|
| 8:15 am | Dr. Dinah Singer: The Cancer Moonshot Project Recommendations of the Blue Ribbon Panel<br>Director of Division of Cancer Biology, NCI              |
| 8:45 am | Dr. Shankar Subramaniam: Integrative Omics and Macrophage Biology<br>Chair of Bioengineering Department, UC San Diego                              |
| 9:15 am | Dr. Avi Ma'ayan: On the ground within the NIH BD2K Program<br>Director of Mount Sinai Center for Bioinformatics,<br>Mount Sinai School of Medicine |
| 9:45 am | Dr. Steve Finkbeiner: Efforts to integrate cell-based imaging and OMICs: challenges and opportunities<br>Professor of Neurology, UC San Francisco  |

#### Session II - INTRODUCTION TO LINCS: 10:30am-12pm & 1pm-2pm

Presentations from [LINCS Centers](#) (six data generation centers and the data coordination center) introducing some of the biology that has been uncovered within their centers.

#### Session III - OUTREACH TO NIH EXTRAMURAL STAFF: 2pm-5pm

This session will have lightning talks to preview some of the posters. Posters are focused on outreach to NIH extramural staff at NCATS, NCI, NCCIH, NHGRI, NHLBI, NIA, NIAAA, NIAMS, NIBIB, NIDDK, NIEHS, NIGMS, NIMH, NINDS as well as FDA. The aim is to provide specific examples of how LINCS data can be used by researchers in different areas of biology. One highlight will be a poster from Dr. Reilly of NIAAA who has used LINCS data to help his grantees identify potentially new therapeutic agents for Alcoholism.

- |         |   |
|---------|---|
| 2:15 pm | LINCS Poster Lightning Talks                  |
| 2:45 pm | LINCS <a href="#">Poster Session</a> (Atrium) |

#### Session IV - MCF10A BIOLOGY - AN EXEMPLAR FOR DATA INTEGRATION AND REPRODUCIBILITY: 5:30pm

[Kirschstein Auditorium]

This session will highlight how LINCS is using MCF10A cells to address difficult data integration challenges as well as challenges of replicating results. You will hear presentations from non-LINCS prominent researchers on MCF10A biology that will cover what is known and what is still unknown. This will be followed by presentations of hot-off-the-press preliminary results from LINCS centers bringing LINCS-type perturbation approaches to MCF10A cells. The discussions will also set the stage for moving to more complicated cell types including iPS and differentiated cells.

- |         |  |
|---------|--|
| 5:30 pm | Dr. Joan Brugge: Lessons learned from modeling morphogenesis, oncogenesis, and drug sensitivity using MCF10A cells<br>Director of the Ludwig Center, Harvard Medical School                                |
| 6:00 pm | Dr. Sourav Bandyopadhyay: Chemical genetic interaction maps for linking tumor mutations to therapeutics in breast cancer<br>Assistant Professor of Bioengineering & Therapeutic Sciences, UC San Francisco |

### September 20, 2016 Natcher Conference Center

#### MCF10A BIOLOGY AN EXEMPLAR FOR DATA INTEGRATION AND REPRODUCIBILITY: 8am-12:30pm - continued

- |  |   |
|--|---|
| 8:00 am                                    | Dr. Gordon Mills: MCF10A as a sensor for drivers, neomorphs and passengers<br>Chair of Department of Systems Biology, University of Texas MD Anderson Cancer Center |
| 9:30 am                                    | LINCS MCF10A Common Project - Beyond Dose Response  |
| 11:30 am                                   | LINCS DCIC and Dr. Emek Demir, OHSU: Integrating MCF10A Data  |
| OUTREACH Poster Session continued: 1pm-3pm |   |
|  | LINCS <a href="#">Poster Session</a> - continued (Atrium)   |

LINCS aims to create a network-based understanding of biology by cataloging changes in gene expression and other cellular processes that occur when cells are exposed to a variety of perturbing agents.