**Agenda**

| **DAY 1** | **NOVEMBER 18, 2013** |  |
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| 8:30 am | **Jim Anderson**  **Director**  *Division of Program Coordination, Planning*  *and Strategic Initiatives (DPCPSI)*  *Office of the Director*  *National Institutes of Health* | **Welcome Remarks**  **Announcement of 2013 Awardees** |
|  | **SESSION 1** |  |
| 8:45 am | **Charles Lieber**  *Harvard University*  *Pioneer Awardee* | **Nanoelectronics Meets Biology** |
| 9:05 am | **Teri Odom**  *Northwestern University*  *Pioneer Awardee* | **Designing Plasmonic Lenses and Nanostructures for Bioimaging** |
| 9:25 am | **Aydogan Ozcan**  *University of California, Los Angeles*  *New Innovator Awardee* | **Giga-pixel Nanoscopy on a Chip: A Computational Wide-field Look at the Nano-scale Without the Use of Lenses** |
| 9:45 am | **Hongkun Park**  *Harvard University*  *Pioneer Awardee* | **Nano-Bio Interfacing and Single-Cell Profiling: New Tools for Immunology and Neurobiology** |
| **10:05 am** | **BREAK** |  |
|  | **SESSION 2** |  |
| 10:25 am | **Florian Engert**  *Harvard University*  *Pioneer Awardee* | **Neural Circuits underlying Operant Learning in Larval Zebrafish** |
| 10:45 am | **Aravinthan Samuel**  *Harvard University*  *Pioneer Awardee* | **Complete Circuits for Understanding Complex Behavior: The Drosophila Larva** |
| 11:05 am | **Jin Hyung Lee**  *Stanford University*  *New Innovator Awardee* | **Direct in Vivo Assessment of Human Stem Cell Graft-Host Neural Circuits** |

| **DAY 1** | **NOVEMBER 18, 2013** |  |
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| 11:25 am | **Partha Mitra**  *Cold Spring Harbor Laboratory*  *Transformative Research Awardee* | **How the Mouse Brain is Wired: Connectivity Mapping in the Whole Mouse Brain** |
| 11:45 am | **Xiaowei Zhuang**  *Harvard University*  *Transformative Research Awardee*  *(With Sunney Xie, Harvard University)* | **Novel Neuronal Structures Revealed by Super-Resolution Fluorescence Imaging** |
| **12:05 pm** | **LUNCH** |  |
|  | **SESSION 3** |  |
| 1:15 pm | **Lara Mahal**  *New York University*  *New Innovator Awardee* | **Sweet Patterns: Revelations from Systems-Based Glycan Analysis** |
| 1:35 pm | **Aviv Regev**  *Massachusetts Institute of Technology*  *Broad Institute, HHMI*  *Pioneer Awardee* | **Reconstructing Regulatory Circuits: Lessons From Immune Cells** |
| 1:55 pm | **Joshua M. Epstein**  *Johns Hopkins University*  *Pioneer Awardee* | **Agent\_Zero: Toward Neurocognitive Foundations for Generative Social Science** |
| 2:15 pm | **Saeed Tavazoie**  *Columbia University*  *Pioneer Awardee* | **A Cognitive Framework for Understanding Cellular Behavior** |
| 2:35 pm | **Markus Covert**  *Stanford University*  *Pioneer Awardee* | **Accelerated Discovery via a Whole-Cell Model** |
| 2:55 pm | **Zemer Gitai**  *Princeton University*  *New Innovator Awardee* | **Feel the (Tiny) Force: Mechanical Regulation of Bacterial Pathogenesis** |
| **3:15 pm** | **POSTER SESSIONS** |  |
| **5:30 pm** | **ADJOURN DAY 1** |  |

| **DAY 2** | **NOVEMBER 19, 2013** |  |
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|  | **SESSION 4** |  |
| 8:30 am | **Gábor Balázsi**  *The University of Texas*  *MD Anderson Cancer Center*  *New Innovator Awardee* | **Mammalian Synthetic Gene Circuits: New Research Tools in Cancer Biology** |
| 8:50 am | **Conor Evans**  *Wellman Center for Photomedicine*  *Harvard Medical School*  *Massachusetts General Hospital*  *New Innovator Awardee* | **Visualizing Oxygen Tension on the Microscale in 3D in vitro Models of Cancer** |
| 9:10 am | **Sunil Singhal**  *University of Pennsylvania*  *Transformative Research Awardee*  *(With Shuming Nie, Emory University)* | **Contrast-Enhanced and Image-Guided Surgery of Lung Cancer** |
| 9:30 am | **Julie Dunning Hotopp**  *University of Maryland, Baltimore*  *New Innovator Awardee* | **Bacteria-Human Somatic Cell Lateral Gene Transfer Is Enriched in Cancer Samples** |
| **9:50 am** | **BREAK** |  |
|  | **SESSION 5** |  |
| 10:20 am | **Zev Bryant**  *Stanford University*  *New Innovator Awardee* | **Remote Control of Biomolecular Motors using Light-Activated Gearshifting** |
| 10:40 am | **Richard Honkanen**  *University of South Alabama*  *Transformative Research Awardee* | **Enabling Cholesterol Catabolism in Human Cells** |
| 11:00 am | **James Eberwine**  *University of Pennsylvania*  *Pioneer Awardee* | **RNA, Memory, Cellular Phenotype and the Microenvironment** |
| 11:20 am | **Charles Gersbach**  *Duke University*  *New Innovator Awardee* | **Custom Redesign of the Human Genome with Engineered DNA-Binding Proteins** |

| **DAY 2** | **NOVEMBER 19, 2013** | |  | |
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| **11:40 am** | **INTRODUCTION AND KEY NOTE ADDRESS** | |  | |
|  | ***Dr. Arathi Prabhakar, Director***  *Defense Advanced Projects Research Agency (DARPA)*  *(includes Question and Answer Session)* | |  | |
| **12:30 pm** | | **LUNCH** | |  |
|  | | **SESSION 6** | |  |
| 1:40 pm | | **Andrea Kasko**  *University of California Los Angeles*  *New Innovator Awardee* | | **Phototunable Biomaterials to Engineer Complex 3D Cell Microenvironments** |
| 2:00 pm | | **Tony Huang**  *Pennsylvania State University*  *New Innovator Awardee* | | **Acoustic Tweezers: Manipulating Particles, Cells, and Organisms using Standing Surface Acoustic Waves (SSAW)** |
| 2:20 pm | | **Natalie Wisniewski**  *PROFUSA, Inc.*  *Transformative Research Awardee*  *(With Mike McShane, Texas A&M University)* | | **Implantable Multi-Analyte Sensors for the Continuous Monitoring of Body Chemistries** |
| 2:40 pm | | **Peng Yin**  *Harvard University Medical School*  *New Innovator, Transformative*  *Research Awardee* | | **Programming Nucleic Acids Self-Assembly** |
| 3:00 pm | | **Timothy Cardozo**  *New York University School of Medicine*  *New Innovator Awardee* | | **Chemistry-Based Molecular Signature for Central Nervous Sub-System Activity Underlying the Atypia of Clozapine** |
| **3:20 pm** | | **POSTER SESSIONS** | |  |
| **5:30 pm** | | **ADJOURN DAY 2** | |  |

| **DAY 3** | **NOVEMBER 20, 2013** |  |
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| 8:30 am | **Francis Collins**  **Director**  **National Institutes of Health** | **Remarks** |
|  | **SESSION 7** |  |
| 8:45 am | **Kim Lewis**  *Northeastern University*  *Transformative Research Awardee* | **Eradicating Chronic Infections** |
| 9:05 am | **David Weiner**  *University of Pennsylvania*  *Transformative Research Awardee* | **Protective Immunity to Diverse Influenza Viruses elicited by Synthetic DNA Vaccines Targeting the Globular Head** |
| 9:25 am | **Michael Fischbach**  *University of California, San Francisco*  *New Innovator Awardee* | **Production of Drug-Like Molecules by Human-Associated Bacteria** |
| **9:45 am** | **BREAK** |  |
|  | **SESSION 8** |  |
| 10:20 am | **Mark Zylka**  *University of North Carolina Chapel Hill*  *Transformative Research, Pioneer Awardee* | **Gene Length Matters in Autism** |
| 10:40 am | **Tom Maniatis**  *Columbia University*  *Pioneer Awardee* | **A Systems Approach to Identifying ALS Disease Mechanisms** |
| 11:00 am | **Anna Penn**  *Children’s Research Institute at*  *Children’s National Medical Center*  *New Innovator Awardee* | **Fetal Brain Damage: A Placental Disorder** |
| 11:20 am | **Chun-Li Zhang**  *University of Texas*  *Southwestern Medical Center*  *New Innovator Awardee* | **In Vivo Reprogramming of Astrocytes to Neuronal Precursors and Functional Neurons in the Adult Brain** |

| **DAY 3** | **NOVEMBER 20, 2013** | |  | |
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| **11:40 pm** | | **LUNCH** | |  |
|  | | **SESSION 9** | |  |
| 1:00 pm | | **Miguel Ramalho-Santos**  *University of California San Francisco*  *New Innovator Awardee* | | **Regulation of Open Chromatin in Stem Cells and Development: the Case of Vitamin C in DNA Demethylation** |
| 1:20 pm | | **Pinchas Cohen**  *University of Southern California*  *Transformative Research Awardee* | | **Novel Mitochondrially derived Peptides and Their Role in Health and Disease** |
| 1:40 pm | | **Brenda Bass**  *University of Utah*  *Pioneer Awardee* | | **Defining RNA Ligands that Activate PKR during Metabolic Stress** |
| 2:00 pm | | **Maria Barna**  *Stanford University*  *New Innovator Awardee* | | **Specialized Ribosomes: A New Frontier in Gene Expression and Organismal Biology** |
| 2:20 pm | | **Alexander Dunn**  *Stanford University*  *New Innovator Awardee* | | **Cellular Mechanotransduction at the Molecular Level** |
| 2:40 pm | |  | | **Concluding Remarks** |
| **2:45 pm** | | **ADJOURN DAY 3** | |  |