



| Date  | Time             | Track                      | Presentation Title                                                                         | Speaker                                                                           |
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| 6-Aug | 08:30 - 10:00 AM | Lab Policy Workshop        | Be 'System'atic: Creating Lab Culture and Training Environment Through Lab Policies        | Jennifer M. Heemstra, PhD<br>Associate Professor of Chemistry, Emory University   |
| 6-Aug | 10:00 - 11:30 AM | Beckman Briefings Workshop | Part I: Scientific Storytelling                                                            | Bri McWhorter, MFA<br>Founder & CEO of Activate of Captivate                      |
| 6-Aug | 10:00 - 11:00 AM | Beckman Briefings Workshop | Part II: Extracting Photochemical Design Principles from Biological Systems in vivo        | Marco Allodi, PhD<br>Arnold O. Beckman Postdoctoral Fellow, University of Chicago |
| 6-Aug | 10:00 - 11:30 AM | Beckman Briefings Workshop | Part III: Exploring the inhibition of Alk2 kinase and dimerization of EGFR kinase          | Kumar Ashtekar, PhD<br>Postdoctoral Fellow, Yale School of Medicine               |
| 6-Aug | 10:00 - 11:30 AM | Beckman Briefings Workshop | Part IV: SPARC - A method to genetically manipulate precise proportions of cells           | Jesse Isaacman-Beck, PhD<br>Postdoctoral Fellow, Stanford University              |
| 6-Aug | 10:00 - 11:30 AM | Beckman Briefings Workshop | Part V: Mechanisms for perceptual organization in the rodent visual cortex                 | Francisco Luongo, PhD<br>Postdoctoral Fellow, California Institute of Technology  |
| 6-Aug | 10:00 - 11:30 AM | Beckman Briefings Workshop | Part VI: Dissecting Cell Signaling Networks That Regulate Adult Neural Stem Cell Functions | Kira Mosher, PhD<br>Postdoctoral Fellow, University of California, Berkeley       |

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| 6-Aug | 10:00<br>-<br>11:30<br>AM | Beckman<br>Briefings<br>Workshop     | Part VII: From biochemical nanosensors to imaging to informatics to COVID-19 convalescent plasma - developing diagnostics and therapies for clinical medicine | Freddy Nguyen, MD, PhD<br>Pathology Resident, Mount Sinai Hospital, Research Fellow, Massachusetts Institute of Technology, Co-Director of MIT COVID-19 Challenge, Massachusetts Institute of Technology |
| 6-Aug | 10:00<br>-<br>11:30<br>AM | Beckman<br>Briefings<br>Workshop     | Part VIII: The "Real" Nuclear Physics: Tracking Genome Dynamics in Time and Space                                                                             | Massa Shoura, PhD<br>Postdoctoral Fellow, Stanford University                                                                                                                                            |
| 6-Aug | 10:00<br>-<br>11:30<br>AM | Beckman<br>Briefings<br>Workshop     | Part IX: Unraveling the interplay between transcription and RNA folding                                                                                       | Eric Strobel, PhD<br>Postdoctoral Fellow, Northwestern University                                                                                                                                        |
| 6-Aug | 11:30<br>-<br>01:00<br>PM | Communicating<br>Science<br>Workshop | Part I: How To Promote Your Science And Talk To Reporters Like A Pro                                                                                          | Carmen Drahl, PhD<br>Freelance Science Journalist                                                                                                                                                        |
| 6-Aug | 11:30<br>-<br>01:00<br>PM | Communicating<br>Science<br>Workshop | Part II: How to Create the Ultimate Scientific Poster with User Experience Design                                                                             | Mike Morrison<br>User Experience Designer, Graduate Student, Michigan State University                                                                                                                   |
| 6-Aug | 12:00<br>-<br>12:05<br>AM | Bio-Chem                             | A novel superconducting family by design: how can we make superconductivity and magnetism coexist in one material?                                            | Weiwei Xie, PhD<br>Professor of Chemistry, Louisiana State University/Rutgers University                                                                                                                 |
| 6-Aug | 12:00<br>-<br>12:05<br>AM | BYI Final<br>Presentation            | An optical brain-machine interface through the development of protein, microscope, and deep learning tools                                                    | Yiyang Gong, PhD<br>Assistant Professor, Departments of Biomedical Engineering, Electrical & Computer Engineering, and Neurobiology, Duke University                                                     |
| 6-Aug | 12:00<br>-<br>12:05<br>AM | Bio-Chem                             | Carbon dioxide utilization in plastic production: Development of a nickel catalyst                                                                            | Vennela Mannava<br>Undergraduate Student, University of Chicago                                                                                                                                          |
| 6-Aug | 12:00<br>-<br>12:05<br>AM | BYI Final<br>Presentation            | Causes and consequences of rapid cancer cell adaptation to therapeutic drugs                                                                                  | Sabrina Spencer, PhD<br>Assistant Professor of Biochemistry, University of Colorado, Boulder                                                                                                             |
| 6-Aug | 12:00<br>-<br>12:05<br>AM | Bio-Chem                             | Copper Hydride Catalysis for the Synthesis of Axially Chiral Allenes                                                                                          | Liela Romero, PhD<br>Assistant Professor of Chemistry, Baylor University                                                                                                                                 |

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| 6-Aug | 12:00<br>-<br>12:05<br>AM | Bio-Chem               | Engineering electroautotrophy                                                                                                                       | Michaela TerAvest, PhD<br>Assistant Professor of Biochemistry & Molecular Biology,<br>Michigan State University                                                                                                |
| 6-Aug | 12:00<br>-<br>12:05<br>AM | Bio-Chem               | From biochemical nanosensors to imaging to informatics to COVID-19 convalescent plasma - developing diagnostics and therapies for clinical medicine | Freddy Nguyen, MD, PhD<br>Pathology Resident, Mount Sinai Hospital, Research Fellow,<br>Massachusetts Institute of Technology, Co-Director of MIT<br>COVID-19 Challenge, Massachusetts Institute of Technology |
| 6-Aug | 12:00<br>-<br>12:05<br>AM | BYI Final Presentation | Heterogeneous ultrafast relaxation in photosynthetic light-harvesting proteins                                                                      | Gabriela Schlau-Cohen, PhD<br>Associate Professor of Chemistry, Massachusetts Institution of Technology                                                                                                        |
| 6-Aug | 12:00<br>-<br>12:05<br>AM | CubeSat                | Irvine CubeSat STEM Program                                                                                                                         | Jonathon Bower<br>Student                                                                                                                                                                                      |
| 6-Aug | 12:00<br>-<br>12:05<br>AM | CubeSat                | Irvine CubeSat STEM Program                                                                                                                         | Eric Ho<br>Student                                                                                                                                                                                             |
| 6-Aug | 12:00<br>-<br>12:05<br>AM | CubeSat                | Irvine CubeSat STEM Program                                                                                                                         | Kaylee Kim<br>Student                                                                                                                                                                                          |
| 6-Aug | 12:00<br>-<br>12:05<br>AM | CubeSat                | Irvine CubeSat STEM Program                                                                                                                         | Sarina Doshi<br>Student                                                                                                                                                                                        |
| 6-Aug | 12:00<br>-<br>12:05<br>AM | Bio-Chem               | Liquid phase Peak Force Infrared Microscopy: Super-resolution Infrared Microscopy in the Aqueous Phase                                              | Xiaoji Xu, PhD<br>Assistant Professor of Chemistry, Lehigh University                                                                                                                                          |
| 6-Aug | 12:00<br>-<br>12:05<br>AM | BYI Final Presentation | Mechanistic basis for the evolution of eukaryotic specialized metabolism                                                                            | Jing-Ke Weng, PhD<br>Associate Professor of Biology, Massachusetts Institute of Technology                                                                                                                     |
| 6-Aug | 12:00<br>-<br>12:05<br>AM | Bio-Chem               | More Exquisitely Adapted Species Have Higher Structural Disorder in Vertebrate Protein Domains                                                      | Catherine Weibel<br>Undergraduate Student, University of Arizona                                                                                                                                               |

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| 6-Aug | 12:00<br>-<br>12:05<br>AM | BYI Final<br>Presentation                      | Nanomaterials Engineering to Probe and Control Living<br>Systems                                       | Markita Landry, PhD<br>Assistant Professor of Chemical and Biomolecular Engineering,<br>University of California, Berkeley                                                                                                |
| 6-Aug | 12:00<br>-<br>12:05<br>AM | Bio-Chem                                       | Neuromechanics of Locomotor Transitions on Energy<br>Landscapes of Complex Terrain                     | Chen Li, PhD<br>Assistant Professor of Mechanical Engineering, Johns Hopkins<br>University                                                                                                                                |
| 6-Aug | 12:00<br>-<br>12:05<br>AM | Bio-Chem                                       | Prevalence and reactivity of fused-rubredoxin AlkBs                                                    | Shoshana Williams<br>Graduate Student, Stanford University                                                                                                                                                                |
| 6-Aug | 12:00<br>-<br>12:05<br>AM | BYI Final<br>Presentation                      | Probing (intracellular) physicochemical environments<br>at the nanometer scale, one molecule at a time | Ke Xu, PhD<br>Assistant Professor of Chemistry, University of California,<br>Berkeley                                                                                                                                     |
| 6-Aug | 12:00<br>-<br>12:05<br>AM | Bio-Chem                                       | ShadowAuxin: Optimization of Quenching FRET Pairs<br>for a Fluorescent Auxin Biosensor                 | Silas Miller<br>Undergraduate Research Assistant, Whitman College                                                                                                                                                         |
| 6-Aug | 12:00<br>-<br>12:05<br>AM | Bio-Chem                                       | SPARC - A method to genetically manipulate precise<br>proportions of cells                             | Jesse Isaacman-Beck, PhD<br>Postdoctoral Fellow, Stanford University                                                                                                                                                      |
| 6-Aug | 12:00<br>-<br>12:05<br>AM | BYI Final<br>Presentation                      | Systematic, organism-wide gene regulation drives<br>individual lifespan in C. elegans                  | Zachary Pincus, PhD<br>Assistant Professor, Departments of Biology and Genetics,<br>Washington University School of Medicine                                                                                              |
| 6-Aug | 12:00<br>-<br>12:05<br>AM | Bio-Chem                                       | Tracking Genome Dynamics in Time and Space                                                             | Massa Shoura, PhD<br>Postdoctoral Fellow, Stanford University                                                                                                                                                             |
| 7-Aug | 09:00<br>-<br>10:15<br>AM | Profiles in<br>Science:<br>Academia<br>Careers | Part I: The Team, the Generalist, and Seeing Through<br>Blind Spots                                    | Jeffrey S. Moore, PhD<br>Beckman Institute Director, University of Illinois, Urbana-<br>Champaign, Stanley O. Ikenberry Endowed Chair, Professor of<br>Chemistry and Materials Science and Engineering, HHMI<br>Professor |

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| 7-Aug | 09:00<br>-<br>10:15<br>AM | Profiles in<br>Science:<br>Academia<br>Careers | Part II: Adventures in Molecular Recognition                                                 | Ming Chen Hammond, PhD<br>Associate Professor of Chemistry, University of Utah                                                                                                                        |
| 7-Aug | 10:30<br>-<br>11:45<br>AM | Profiles in<br>Science:<br>Industry<br>Careers | Part I: Adventures in Chemical Biology and Drug<br>Discovery                                 | Christopher am Ende, PhD<br>Associate Research Fellow, Pfizer, Inc.                                                                                                                                   |
| 7-Aug | 10:30<br>-<br>11:45<br>AM | Profiles in<br>Science:<br>Industry<br>Careers | Part II: From the Ivory Tower to the Newsroom: Careers<br>in Science Communication           | Carmen Drahl, PhD<br>Freelance Science Journalist                                                                                                                                                     |
| 7-Aug | 12:00<br>-<br>02:30<br>PM | Profiles in<br>Science:<br>Medicine<br>Careers | Part I: Dual Degrees and Dual Careers -- The Interface<br>between Neurology and Neuroscience | Terrance T. Kummer, MD, PhD<br>Director of Neurotrauma ICU, Barnes Jewish Hospital, Assistant<br>Professor of Neurology, Washington University School of<br>Medicine                                  |
| 7-Aug | 12:00<br>-<br>12:30<br>PM | Profiles in<br>Science:<br>Medicine<br>Careers | Part II: From Oil Refineries to Cataract Surgeries: My<br>Life through Process Flow Diagrams | Shameema Sikder, MD<br>Director of the Center of Excellence for Ophthalmic Surgical<br>Education and Training, Johns Hopkins Hospital Associate<br>Professor of Ophthalmology, Johns Hopkins Medicine |
| 7-Aug | 12:00<br>-<br>12:30<br>PM | Profiles in<br>Science:<br>Medicine<br>Careers | Part III: The physician scientist track: long trajectory<br>and worth it                     | Kirk Wangenstein, MD, PhD<br>Physician, Penn Medicine, Assistant Professor of Medicine and<br>Assistant Professor of Medicine in Genetics, University of<br>Pennsylvania                              |
| 7-Aug | 12:00<br>-<br>12:30<br>PM | Profiles in<br>Science:<br>Medicine<br>Careers | Part IV: How to be a sane clinician scientist - a<br>timeline                                | Lois Smith, MD, PhD<br>Clinician Scientist Ophthalmology, Harvard Medical School,<br>Boston Children's Hospital Professor of Ophthalmology, Harvard<br>Medical School                                 |
| 8-Aug | 09:30<br>-<br>11:00<br>AM | Mental Health<br>in the Sciences               | Self-care is Not the Enemy of Performance                                                    | Jennifer M. Heemstra, PhD<br>Associate Professor of Chemistry, Emory University                                                                                                                       |
| 8-Aug | 11:00<br>-<br>12:00<br>PM | Closing<br>Remarks                             | Appreciation Award Presentation and Closing Remarks                                          | Anne Hultgren, PhD<br>Executive Director, Arnold and Mabel Beckman Foundation<br>William H. May<br>Chairman of the Board of Directors, Arnold and Mabel Beckman<br>Foundation                         |