Abiotic-Biotic Interfaces for Ophthalmology Symposium, Day 1: January 21, 2021

7:00 - 8:20 AM: Symposium Opening Ceremony & Session 1: Photopolymers and Drug Delivery
7:00 - 7:05: Mark Humayun, MD, PhD, welcome and introductions
7:05 - 7:10: USC President Carol L. Folt, PhD, remarks
7:10 - 7:15: Dr. Allen and Charlotte Ginsburg, welcome message
7:15 - 7:50: Dan Schwartz, MD, Session 1 Plenary: “The Role of Physician Innovators”
7:50 - 8:20: Session 1: Panel discussion
  - Session 1 Panelists and Pre-Recorded Presentations
    - Dan Schwartz, MD, UCSF & Caltech, Session 1 Plenary: “The Role of Physician Innovators”
    - Justin Hanes, PhD, Johns Hopkins: “Polymeric Drug Delivery to the Eye: Concept to Clinical Success Stories”
    - Nicos Petasis, PhD, USC: “Ophthalmic Molecular Therapeutics”
    - Erin Lavik, MS, ScD, UMBC: “Nanotechnology for Ocular Drug Delivery”
    - Stan Louie, PharmD, USC: “Development of Ocular Therapeutics and ‘Omics’”
    - Andrew Urazaki, Business Development Director and Intellectual Property Specialist, Replenish, Inc
    - Del White, President, Leap Biomed Innovators, LLC

8:20 - 8:30 AM: Break

8:30 - 10:10 AM: Session 2: Bioelectronic Implants
8:30 - 8:40: Mark Humayun, MD, PhD, welcome and introductions
9:15 - 9:20: Dr. Allen and Charlotte Ginsburg, Vision Research Prize Message
9:20 - 9:25: Presentation of the Ginsburg Vision Research Prize to Yu-Chong Tai
9:25 - 10:10: Session 2: Panel Discussion
  - Session 2 Panelists and Pre-Recorded Presentations
    - Yu-Chong Tai, PhD, Caltech, Keynote Lecture: “bio-MEMS for Ophthalmology”
    - Manuel Monge, MS, PhD, USC: “Data Transfer for Implants and Wearables”
    - James Weiland, PhD, UMich: “Retinal Responses to Electrical Stimulation”
    - Lan Yue, PhD, USC: “Bioelectronic Color Vision”
    - Marco Zarbin, MD, PhD, Rutgers: “Treating Blindness at the Nanoscale: Nanotechnologies as Treatments for Retinal Blindness”
    - Brooke Basinger, PhD, Chief of Staff and Head of Program Management for Devices, Verily
    - Christian Gutierrez, PhD, Hardware Engineer, Verily

10:10 - 10:20 AM: Break and transition to Poster Session

10:20 - 11:30 AM: Poster Session and Adjourn Day 1. Poster presenters give brief poster overviews
Abiotic-Biotic Interfaces for Ophthalmology Symposium, Day 2: January 22, 2021

7:00 - 8:20 AM: Symposium Opening Ceremony & Session 3: Wearable Electronics and Data Analysis
7:00 - 7:05: Mark Humayun, MD, PhD, welcome and introductions
7:05 - 7:10: Charles F. Zukoski, PhD, USC Provost and Senior Vice President for Academic Affairs, remarks
7:10 - 7:45: Bodour Salhia, PhD, Session 3 Plenary: “Epigenetic Changes in Retina in Response to Electrical Stimulation”
7:45 - 8:20: Session 3: Panel Discussion
- Session 3 Panelists and Pre-Recorded Presentations
  - Bodour Salhia, PhD, USC, Session 3 Plenary: “Epigenetic Changes in Retina in Response to Electrical Stimulation”
  - Gianluca Lazzi, PhD, MBA, USC: “Electromagnetic Fields at the Retina from Implantable and Wearable Electronics”
  - Shrikanth Narayanan, MS, PhD, USC: “Human-Centered Multimodal Artificial Intelligence: Clinical Application Possibilities for Multimodal Sensor Data”
  - Qifa Zhou, PhD, USC: “Therapeutic Ultrasound for the Eye”
  - Mikhail Shapiro, PhD, Caltech: “Ultrasound Technologies for Non-Invasive Imaging and Control of Neural Activity”
  - Cyrus Shahabi, MS, PhD, USC: “Wearable Data Acquisition and Analysis for Health Applications”
  - Kyle Morrison, President, Sonic Concepts
  - Brooke Basinger, PhD, Chief of Staff and Head of Program Management for Devices, Verily
  - Christian Gutierrez, PhD, Hardware Engineer, Verily

8:20 - 8:30 AM: Break

8:30 - 10:10 AM: Session 4: Bioengineered Scaffolds
8:30 - 8:40: Mark Humayun, MD, PhD, welcome and introductions
8:40 - 9:10: Dennis O. Clegg, PhD, Session 4 Plenary: “Development of Instructive Scaffolds for Implantation of Stem Cells”
9:10 - 9:40: Panel Discussion
- Session 4 Panelists and Pre-Recorded Presentations
  - Dennis O. Clegg, PhD, UC Santa Barbara, Session 4 Plenary: “Development of Instructive Scaffolds for Implantation of Stem Cells”
  - Kapil Bharti, PhD, NIH, National Eye Institute: “Autologous iPS Cell-Based Therapy for Macular Degeneration: From BENCH-TO-BENCHSIDE”
  - Amir H. Kashani, MD, PhD, Johns Hopkins: “Clinical Implementation of an Ultrathin Stem-Cell Derived RPE Monolayer in Phase 1/2a Clinical Trial for Geographic Atrophy”
  - Raymond Iezzi, Jr., MD, Mayo Clinic: “Autologous Photoreceptor Sheet Transplantation using Femtosecond Laser Assisted RetinalMileusis (FLAIR)”
  - Jane Lebkowski, PhD, President, Regenerative Patch Technologies
  - Del White, President, Leap Biomed Innovators, LLC

9:40 - 9:50 AM: Break and transition to Poster Session

9:50 - 10:00 AM: Best Poster Award Presentation
10:00 - 10:10 AM: Best Poster Awardee Remarks
10:10 - 10:15 AM: Dr. Allen and Charlotte Ginsburg, Best Poster Award Message

10:15 - 11:30 AM: Poster Session and Symposium Adjournment: Poster presenters give brief poster overviews

11:30 AM - 12:30 PM: Closed Session with Agency Representatives