

Neuroscience Convergence
Ritz-Carlton, Orlando FL
June 2 – 5, 2022

Thursday, June 2, 2022
(HYBRID-Capri Room and Zoom Livestream)
Moderator: Leonard Petrucelli, Ph.D.

7:15 a.m.	Registration, Continental Breakfast and Exhibits
8:00	Welcome-- W. David Freeman, M.D. Opening Remarks-- Leonard Petrucelli, PhD, Guojun Bu, Ph.D.
8:05	The National Academies Keynote: The Need for Multidisciplinary Team Science and Physician-Scientist Collaborations Victor Dzau, MD
8:45	Q&A
9:00	Alzheimer's and Vascular Overlap Rick Caselli, M.D.
9:30	Extracellular Vesicles for Diagnostic and Therapeutic Implications in Neurologic Diseases Tsuneya Ikezu, Ph.D.
10:00	AI-directed Drug Development Tom Caulfield, Ph.D.
10:30	Lymphatic Drainage at the Brain-meningeal Interface in Aging and Alzheimer's Disease Sandro Da Mesquita, Ph.D.
11:00	How Microglia Sense and Protect the brain: TDP-43 neurodegeneration LongJun Wu, Ph.D.
11:30	Q&A
11:45	Lunch (Exhibits Live and Virtual)
12:30	Keynote: NIH -National Institutes of Neurological Disorders and Stroke Update Walter Koroshetz, M.D
1:00	Q&A
1:15	AI Vessel Wall Imaging to Identify At Risk Atherosclerotic Plaque and Future Stroke Risk Young Erben, MD
1:45	Intersection of tau and amyloid- β brain pathology influences plasma phosphorylated tau levels Melissa Murray PhD
2:15	Cathepsins B Protease in Alzheimer's Disease and Traumatic Brain Injury Vivian Hook PhD Cathepsins (Virtual)
2:45	Standard Wu Tsai Neuroscience Institute Update: Injectable Photovoltaics for Wireless, Gliosis Free Neural-Stimulation Interface in Brain Injury Marion Buckhalter, MD, PhD
3:15	The Allen Institute: Neuroscience by 2030 Christof Koch, PhD
3:45	Q&A
4:00	Break & Exhibits
4:15	Abstract Presentations - Neuroscience Laboratory Team Science E-Presentations-General Session
4:30	Adjourn / Reception

Friday, June 3, 2022
Artificial Intelligence and Clinical Neurosciences
(Live / Livestream)

Moderators:
Rickey Carter, PhD, Hong Fang Liu, PhD, Arjun Arthreya, PhD

8:15 a.m.	Salon IV Foyer Continental Breakfast and Exhibits
8:55	Salon IV Introduction, Welcome and Speaker Introductions Rickey Carter
9:00	Machine Learning and AI-driven Spatial Analysis for Precision Medicine Tae Hun Hwang, PhD
9:30	Mayo-Google Speech Innovation Project Hugo Botha, MD
10:00	Recurrent Neural Network Wearable Seizure Detection Benjamin Brinkman, MD, PhD
10:30	Using AI Linked Physiologic data with brain FDG-PET imaging David Jones, MD
11:00	Q&A
11:15	Break and Exhibits
11:30	Neurology/Neuroscience AI Platform Leland Bernard, PhD
12:00 noon	Keynote: Future of AI in HealthCare and Parallels with Neuroscience Hong Fang Liu, PhD
12:30	Q&A
12:45	Break /Exhibits/ Lunch
1:30	Fully automated segmentation of head CT neuroanatomy using deep learning Alex Weston, PhD
2:00	AI and Bias: Lessons from Human Brain for future AI Systems Brad Erickson, MD, PhD
2:30	The Eye as a Window to the Brain: Machine Learning Retinal Optical Coherence Tomography Predicting MRI Brain White Matter Disease Burden. Michelle Lin, MD
3:00	Machine learning Prediction of Antidepressant function (Title might change) Arjun Athreya, M.S., Ph.D. and William Bobo, MD
3:30	Using Natural Language Processing AI for Precision Health David M. Kent, PhD
4:00	Q&A
4:15	Neuromodulation in 2025: How AI and the Connectome Interface Tim Denison, PhD
4:45	Brain Machine Interfacing Ian O'Hara
5:15	Q&A
5:30	Adjourn

Saturday June 4, 2022

Arts, Humanities and Future Management of Neurological Diseases by 2030
Moderators: Michael Pizzi, D.O., Ph.D., Kevin Barrett, M.D., Nicole Avalon, Ph.D.
and Amelia Mantione, RN
(Live / Livestream)

8:15 a.m.	Continental Breakfast and Exhibits
8:55	Introduction and Welcome Nicole Avalon, PA-C, Ph.D.
9:30	Art and the Brain Cederic Pimentel, MD
10:00	Music and the Brain Philip Tipton, MD
10:30	Limbic Capitalism and Mass Addiction in the Digital Era David Courtwright PhD
11:00	Break and Exhibits
11:15	Facial Recognition: What Does The Face Say about Human Emotional States ? Christian Lachner, MD
11:45	Advances in Multi-Gesture Electromyography Neuroprosthetic Control and Training for Pediatric Patients. Albert Manero, PhD
12:15	Q&A
12:30	Lunch
1:15	Headache and Migraine Management by 2030 Julianna VanderPluym, MD
1:45	Alzheimer's Disease by 2030 Ron Peterson, MD
2:15	Multiple Sclerosis by 2030 Mark Keegan, MD
2:45	Q&A
3:00	Adjourn