

22nd Annual UC & Western Neurotrauma Symposium

Monday September 11, 2023

12:00pm. Lunch & 12:45pm Welcome

1:00-2:15 SESSION 1 **BRAIN NUTRITION & REHAB**

Chair: Natalie Gavi & Madison Harris (UCLA)

Allison Cogan (USC) Association of Functional Recovery with Therapy Time and Content after

Acquired Brain Injury: An EHR Study.

Chelsea Ortega Physical Therapy Considerations in the Management of Concussion

Sam Walton (VCU Health) Exercise and Nutrition Promote Brain Health after Mild TBI

2:30-3:20 SESSION 2. **GLYMPHATICS**

Chair: Jeff Illiff

Jeff Illiff (UW) Ten years of glymphatic biology: Implications for understanding TBI and its chronic sequelae

Elaine Peskind, (Puget Sound) Evidence for glymphatic impairment in Veterans with blast TBI: Implications for long-term outcomes

Molly Braun (UW) Impairment of glymphatic function following TBI: Evidence from preclinical experimental models

Break & POSTER SESSION

3:45-5:00 SESSION 3. **SPREADING DEPRESSION**

Chair: Russell Morton (UNM)

Laura Ngwenya (U Cincinnati), Spreading Depolarizations – From the Bedside to the Bench

Britta Lindquist (UNM)– “Protective effects of metabolic signaling in the wake of spreading depolarization”

Yama Akbari (UC Irvine) Cortical spreading depolarizations lead to remote hemodynamic and cardiac events that affect outcome

Natalie Pinkowski (UNM) The Role of Spreading Depolarizations in Mouse Behavior Associated with Mild TBI

Tuesday September 12, 2023

7:30am Continental Breakfast

8:00-9:15 SESSION 4

FEAR CONDITIONING

Chairs: Annie Hoffman & Kevin Bickhart (UCLA)

Noah Silverberg (UBC) Fear avoidance as a risk factor for persistent post-concussion symptoms and behavioral therapy target

Annie Hoffman (UCLA) Studying the defensive behavior system to understand anxiety, fear, and pain after TBI

Kevin Bickart (UCLA) Frontoamygdala circuitry in fear avoidance and persistent post-concussion symptoms in humans

Break

9:30-11:00 SESSION 5

CEREBELLAR & COGNITIVE

Chairs: Janel Le Belle & Neil Harris (UCLA)

Sabrina Abram (UC Berkeley) Current Perspectives on the Cerebellum: From Movement to Cognition

Paul Mathews (UCLA/Lunquist Institute) Cerebellar function in preclinical models of disease

Cole Vonder Haar (Ohio State) Addressing insensitivity to consequences after TBI in an animal model of cognitive rehabilitation.

11-12 Break out Collaborations

Break & POSTER SESSION

12-1:30 **“Data Blitz” & LUNCH**

Chair: Fernando Gomez-Pinilla (UCLA)

3:00 Scavenger Hunt (UCLA botanical gardens & The Hammer Museum)

5:00 drinks

COCKTAILS The Broxton Brewery

Monday 6:00 Reception/ Dinner/Speaker: Nate Boyer

The Army Green Beret – who deployed to both Iraq & Afghanistan over his 10-year military career - is also a philanthropist, humanitarian, and former football player for the University of Texas Longhorns despite never playing a down of organized football prior to his time in the Special Forces.



Wednesday September 13, 2023

7:30am Continental Breakfast

8:00-9:15am SESSION 7

PEDIATRICS

Chair: Jonathan Lifshitz (ASU)

Katie Giordano (ASU) Domain antibody phage display to discover antigen binding domains unique to rod microglia in the diffuse injured brain

Kylie McQueen (ASU) Vascular Imaging and Sleep Disturbance in Cumulative Brain Injury

Diana Monge (ASU) CDK5: A Key Mediator of Rotational Force-Induced Brain Injury

Break

9:30-10:45 SESSION 8

CLINICAL

Chair: Manuel Blanco(UCLA)

Manny Blanco (UCLA) Physiologic optimization challenges after TBI: ground for intensive care research

Jeremiah Johnson (UCLA) Chronic Subdural Hematoma: The Silent Sequela of Head Trauma in the Older Population

Carlin Senter (UCSF) A View from the Team Doctor: How We Evaluate and Treat Sports Concussion in 2023

11:00-12:15 SESSION 9

ENGINEERING-RELATED

Chair: Pirouz Kavepour (UCLA)

Kaveh Laksari (UC Riverside) Hyper-acute effects of blunt head impacts on brain function and hemodynamics

Nick Kuenning (UCLA) Infrared laser absorption spectroscopy for non-invasive ketone monitoring via exhaled breath

Parnian Hemmati (UCLA) Bridging the gap between Mechanical Impact and mTBI Pathology: Potential Role of Cerebrospinal Fluid Dynamics

12:15-12:30 CLOSING REMARKS

Mayumi Prins (UCLA)

Sept 11-13, 2023

UCLA Los Angeles, California