

Department of Neurology

Eighth Annual Research Celebration
May 24, 2023, from 5 to 8 p.m.

Program

5:00 Welcome message from **AM Barrett, MD**, Chair, Department of Neurology UMass Chan Medical School and UMass Memorial Medical Center; Chief, Central Western Massachusetts VA Healthcare System.

5:10 Introduction of Keynote Speaker - **Raphael Carandang MD**

“Finding New Research Horizons in Intracerebral Hemorrhage: Navigating Uncharted Territories”, **Michel Torbey, MD**, Chair, Department of Neurology, University of New Mexico

Platform Presentations

5:40 Introduction of Basic Science Presenter - **Daryl Bosco, PhD, and Rigel Chan, PhD**

Treatment of Diffuse Intrinsic Pontine Glioma using Allele-specific siRNA targeting H3.3 K27M mutant histone, **Simon Wentworth**, Rita Batista, PhD, Julia Alterman, Anastasia Khvorova, Miguel Sena-Estevés, PhD

5:55 Introduction of Clinical Research Presenter- **Christopher Hemond, MD and Kara Smith, MD**

Is Catheter Ablation Associated with Favorable Cognitive Function Over Time? An Analysis From the SAGE-AF Observational Cohort Study, **Bahadar Srichawla, DO**, Alexander Hamel, BS, Philip Cook, DO, Rozaleen Aleyadeh, MD, Darleen Lessard, MS, Edith Otabil, BA, Jordy Mehawej, MD, Jane Saczynski, PhD, Majaz Moonis, MD, David McManus, MD

6:10 – 7:30 **Poster Presentations**

7:30 Group Photo, Certificates and Closing Remarks: Daryl Bosco, PhD; Raphael Carandang, MD; Rigel Chan, PhD; Christopher Hemond, MD; Kara Smith, MD

Poster Presentations

1 *Sarm1 ablation improves functional outcomes and TDP-43 pathology in mouse traumatic brain injury*
Elif Dogan, MD, James Bouley, BA, Daryl Bosco, PhD, Nils Henninger, MD, PhD

2 *Repetitive traumatic brain injury triggers ALS associated neuropathology and behavioral deficits in C9BAC mice*
Elif Dogan, MD, Aydan Kahriman, MD, James Bouley, BA, Idil Tuncali, MS, Mariana Pereira, PhD, Thuyvan Luu, BS, Daryl Bosco, PhD, Samer Jaber, DVM, Owen Peters, PhD, Robert Brown, MD, PhD, Phil, Nils Henninger, MD, PhD

3 *Postpartum women with CVST have higher symptom burden but equal functional and mortality outcomes compared to women of childbearing age*
Ton Fang, MBBS, Liqi Shu, Marwa Elnazeir, Adeel Zubair, Sami Al Kasab, Mirjam Heldner, Shadi Yaghi, Nils Henninger, MD, PhD, for ACTION-CVT study

4 *Clinical and genetic characteristics associated with ALS diagnostic timeline: a population-based study*
Ton Fang, MBBS, Peter Pacut, MD, Yuyao Sun, Jeff Gao, Brooke McNeilly, DO, Shравan Sivakumar, MBBS, Eduardo Inacio Nascimento Andrade, MD, Abigail Bose, MD, Bianca Trombetta, Mehdi Ghasemi, MD

5 *Investigating stress-induced RNA regulation by TDP-43*
Megan Fowler-Magaw, Daryl Bosco, PhD

6 *Stroke Nurse Navigator Utilization to Reduce Unplanned 30-day Readmissions following Thrombolysis in Ischemic Stroke*
Eliza Grigoriuc, MD, Nils Henninger, MD, PhD, Akanksha Gulati, MD, Brian Silver, MD, Kimi Kobayashi, MD, Rakhee Lalla, DO, Adalia Jun-O’Connell, MD

7 *Factors Impacting Outcomes in Brainstem Hemorrhage: A Single-center Experience Investigating the Functional Outcome*
Muhammed Enes Gunduz, MD, Victoria Fleming, Shравan Sivakumar, MBBS, Zakir Shaikh, MBBS, Raphael A. Carandang, MD

8 *Major Adverse Cardiovascular Events after Cervical Artery Dissection: Exploring the Association with Cerebral Small Vessel Disease Score*
Muhammed Enes Gunduz, MD, Jayachandra Muppa, MBBS, Rozaleen Aleyadeh, MD, Shadi Yaghi, MD, Liqi Shu, MD, Nils Henninger, MD, PhD

9 *Modeling FSHD2 using patient-derived iPSCs*
Dongsheng Guo, PhD, Katelyn Daman, PhD, Jing Yan, Zdenka Matijasevic, PhD, Oliver King, PhD, Lawrence Hayward, MD, PhD, Charles Emerson Jr., PhD

10 *Translating trisomy silencing to a DS mouse model: prospects for delivery of XIST transgenes*
Khushali Gupta, Jun Jiang, PhD, Yuanchun Jing, Yeonsoo Yoon, PhD, Jaime Rivera, PhD, Jeanne Lawrence, PhD

11 *Comparison of trisomic/disomic organoids detects AD-related but not neurodevelopmental phenotype: Will silencing trisomy 21 in organoids reveal more?*
Eric Larsen, BS, Jan Czerminski, Oliver King, PhD, and Jeanne Lawrence, PhD

12 Shared Decision Making and Family Meetings in Neurocritical Care – a Systematic Qualitative Review

Shazeb Meraj, BS, Shravan Sivakumar, MBBS, Susanne Muehlschlegel, MD, MPH

13 AAV gene therapy for GNAO1 disorders

Tyler Mola, Hannah Villeneuve, Simon Wentworth, Dasha Khvorova-Wolfson, Rita Daci, Pamela St. Louis, Ana Rita Batista, PhD, Miguel Sena-Esteves, PhD

14 Rescue Effect of Acyclovir in HSV-1 Infection-associated Alzheimer's Disease Markers

Liam Murray, Samantha Chigas, Pepper Dawes, Adrian Orszulak, Meagan Olson, Khanh Tran, Nathaniel Barton, Rigel Chan, PhD, Elaine Lim, PhD

15 Confirming Unbiased Antigen Screening of MS Patient CSF Using Cerebral Organoid Models

Meagan Olson, Nathaniel Barton, Khanh Tran, Samantha Chigas, Pepper Dawes, Liam Murray, Adrian Orszulak, Carolina Ionete, MD, Christopher Hemond, MD, Elaine Lim, PhD, Rigel Chan, PhD

16 Asymptomatic isolated superior ophthalmic venous thrombosis after 2 days down, a case report

Yanhan Ren, MD, Sean Teebagy, BS, Lauren Colwell, MD, Raphael Carandang, MD, Misha Faustina, MD

17 Post-traumatic ophthalmic artery pseudoaneurysms from blunt orbital trauma

Yanhan Ren, MD, Lauren Colwell, MD, Benjamin Botsford, MD, Francesco Massari, MD, PhD, Raphael Carandang, MD, Misha Faustina, MD

18 AAV gene therapy for CSA-linked Cockayne syndrome

Aine Scholand, Miguel Sena-Esteves, PhD, Ana Rita Batista, PhD

19 Amyloid Precursor Protein (APP) significance in Down syndrome neurodevelopment and differentiation

Lucas Sosa, MD, PhD, Melvys Valledor, PhD, Jeanne Lawrence, PhD

20 Actuators for neuro-ophthalmic disorders of the efferent visual system: A concise review

Manarshhjet Singh, PhD, SaiVarun Bethina, MBBS, Kevin Houston, OD, MSc

21 Eye-Tracking to Optimize a Digital Goals-of-Care Decision Aid for Patients with Severe Acute Brain Injury

Shravan Sivakumar, MBBS, Shazeb Meraj, BS, Doaa Alrefae, MS, Lidan Zhang, MS, Camarlin Franco, BS, Connie Ge, MS, Bengisu Tulu, PhD, Soussan Djamasbi, PhD, Susanne Muehlschlegel, MD, MPH

22 Targeting the cytoskeleton to help reduce C9orf72 mutant phenotypes in patient iPSC derived neurons

Aparna Sreeram, MS, Victoria Doocy, BS, Desiree Baron, PhD, John Landers, PhD

23 AAV Gene Therapy for TNNT1 Nematode Myopathy

Hannah Villeneuve, Erin Hall, Jillian Gallagher, Toloo Taghian, Abigail McElroy, Hector Ribeiro Benatti, Stephanie Bertrand, Ana Rita Batista, PhD, Laura Poskitt, Kevin Strauss, Miguel Sena-Esteves, PhD, Heather Gray-Edwards

24 The Systemic Delivery of AAV-PHP.eB-miRHTt as a Treatment for Huntington's Disease

McKenna Watson, Kennedy O'Hara, Ana Rita Batista, PhD, Miguel Sena-Esteves, PhD

25 DUX4 Toxicity Genes for FSHD Pathology

Kristen Woods, BS, Wellstone Program

26 Investigating the neuronal response to brain trauma in a TDP-43 model of ALS/FTD

Jianjun Zhong, MD, PhD, Megan Fowler, Elenore Wiggin, Karly Stallworth, Debra Cameron, Raheel Sarwar, Dorothy Schafer, PhD, Myriam Heiman, PhD, Nils Henninger, MD, PhD, Daryl Bosco, PhD

Acknowledgements

AM Barrett, MD, Chair for Department of Neurology,
Brian Silver, MD, Vice-Chair for Department of Neurology
Daryl Bosco, PhD; Raphael Carandang, MD; Rigel Chan, PhD;
Christopher Hemond, MD; Kara Smith, MD for organizing this event!
Susan Jacobs, Naomi Northrop, Beth Laperle, Sharon Velazquez for their administrative support services!
Neurology Faculty for the constant research support and guidance provided to the residents, fellows, post-docs, and students

Introducing Our Guest Speaker:



Michel T. Torbey MD, MPH is Professor and Chair of the Department of Neurology at the University of New Mexico in Albuquerque NM. He is the Director of the Comprehensive Stroke Center and the Cerebral Angioma Center for Excellence at UNM. He obtained his bachelor's and Medical Degrees from the American University of Beirut in Lebanon and his MPH from the University of Massachusetts in Amherst. He is a distinguished alumnus and was Chief Resident of our Neurology Residency Program here at UMass Chan Medical School in Worcester MA and following that completed his Neurocritical Care Fellowship at Johns Hopkins University School of Medicine in Baltimore MD. He assumed a faculty position at Johns Hopkins before moving to the Medical College of Wisconsin in Milwaukee WI and then eventually to the Ohio State University in Columbus OH as a Tenured Professor in Neurology, Neurosurgery and Neurosciences until he was recruited to be the Chair at the University of New Mexico. He has been the Director of the Stroke and Neurocritical Care Units and Divisions, Stroke and Neurocritical Care Fellowship Programs and Section Head of Neurocritical Care at Medical College of Wisconsin and Ohio State University as well as Vice Chair of Hospital Affairs at OSU. He has been on the board of directors of the Neurocritical Care Society and was the Chair of the Critical Care and Emergency Section of the American Academy of Neurology and was the President of the Neurocritical Care Society. He is a fellow of the American Heart Association, American Neurological Association, American College of Critical Care Medicine, Neurocritical Care Society and the AAN. He has published over 116 peer-reviewed journal articles, numerous book chapters and 4 books. He is an NINDS funded clinical researcher and is and has been the PI, Site PI or Co-Investigator on Multiple NINDS and Industry funded Clinical Trials in Ischemic and Hemorrhagic Stroke and Traumatic Brain Injury.

