SYMPOSIUM

DEMENTIA UNLOCKED
COLLABORATIVE SOLUTIONS FOR BRAIN HEALTH

Thursday, January 29th
Elizabeth D. Rockwell Pavilion
M.D. Anderson Library, 2nd Floor
University of Houston

AGENDA OVERVIEW

8.30	Registration/Breakfast
9.10	Symposium Opening and Introductory Remarks
9.20	Short Talks (1-4)
10.40	Coffee break
11.00	Short Talks (5-8)
12.30	Lunch and Learn - Alzheimer's Association Presentation
1.15	Keynote Presentation
2.00	Lightning Six 3-Minute Presentations
2.20	Panel discussion 1: Mechanisms and models.
3.10	Coffee break
3.20	Panel discussion 2: Neuromodulation and neurotechnologies.
4.10	Poster Session
5.00	Social hour

[Symposium Website](#)

Sponsored by

UNIVERSITY OF HOUSTON

DIVISION OF RESEARCH

DEPARTMENT OF BIOLOGY AND BIOCHEMISRTY

MULTIDISCIPLINARY INSTITUTE FOR NEUROSCIENCE AND DEMENTIA

ALZHEIMER"S ASSOCIATION HOUSTON AND SOUTHEAST TEXAS CHAPTER

Contact email: mind@uh.edu

Short talks – 9.20 AM

Greg Cuny, PhD — 9.20am

University of Houston

Pharmacological and Pharmaceutical Sciences
Shipman Buckley Endowed Professor of Drug Discovery

Blood-Brain Barrier Considerations for Dementia Drug Discovery.

Jingyi Luan, PhD — 9.40am

University of Houston

Mechanical and Aerospace Engineering
Multidisciplinary Institute for Neuroscience and Dementia

Designing nanophotonic platform for dementia biomarker detection and discovery.

Lok Chung, PhD — 10.00am

Houston Methodist and Weill Cornell Medical College

Neurology

Role of Sphingolipid Signaling in Neurodegeneration.

Cristian Lasagna Reeves, PhD — 10.20am

Baylor College of Medicine

Neurology

Therapeutic Modulation of Presynaptic Bassoon in Neurodegenerative Tauopathies.

Coffee/Tea Break – 10.40 AM

Agenor Limon, PhD — 11.00am

UT Medical Branch

Neurology
Mitchell Center for Neurodegenerative Disorders
Moody Brain Health Institute

Synaptic function in Alzheimer's disease: what human receptors tell us when we give them a second life.

Karrien De Souza, PhD — 11.20am

Texas A&M University

Neuroscience and Experimental Therapeutics
Naresh K. Vashisht College of Medicine

Circadian regulation at the intersection of acceleration of cognitive aging.

Anna Fracassi, PhD — 11.40am

UT Medical Branch

Neurology
Mitchell Center for Neurodegenerative Disorders

The Brain Strikes Back: Microglia and Resilience in Alzheimer's Disease

Christopher P. Fagundes, PhD — 12.00pm

Rice University

Psychological Sciences
Institute of Health Resilience and Innovation

Elevated Dementia Risk in AD/ADRD Spousal Caregivers: Biobehavioral Mechanisms of Vulnerability and Resilience

Lunch and Learn - 12.30 PM

Alzheimer's Association Funding & Other Convening Opportunities.

Oihane Uriarte Huarte, Ph.D.
Director, Alzheimer's Disease Strategic Fund
Medical & Scientific Relations I Alzheimer's Association

Keynote Presentation – 1.15 PM

Leveraging preclinical models to develop resilience-promoting strategies for Alzheimer's disease.

Jeannie Chin, Ph.D.
Baylor College of Medicine
Department of Neuroscience

Professional Interests
• Mechanisms of cognitive dysfunction in Alzheimer's disease, epilepsy, and other neurological disorders
• Activity-dependent epigenetic regulation of gene expression
• Neural stem cell dynamics
• Corticothalamic network (dys)function in neurological disease

Alzheimer's disease (AD) is a devastating neurodegenerative disease that can begin decades before cognitive deficits are obvious, making it difficult to identify and treat individuals effectively. It is therefore critical to identify early alterations that manifest in preclinical stages of disease, and understand how they contribute to disease progression. Such insight may enable the identification of individuals at risk for developing AD and allow them to initiate treatment early in disease course to maximize efficacy. Our studies in transgenic mouse models of AD neuropathology have focused on spontaneous subclinical epileptiform activity and on sleep deficits, both of which begin in preclinical stages in both AD patients and mouse models. I will discuss how they contribute to cognitive deficits and disease progression, and our recent efforts to develop effective measures to mitigate them to slow or prevent disease progression. Notably, a small proportion of individuals and mice with AD neuropathology remain cognitively intact and are "resilient" to AD. I will also discuss how we can take advantage of this phenomenon to develop novel strategies to enhance resilience or reduce susceptibility to AD, which may pave the way for personalized medicine approaches. [Learn more at www.jeanniechinlab.com]

Lightning Talks – 2- 2.20 PM

3-minute one slide lightning presentations by junior faculty, postdoctoral fellows, and students.

Nathan Stiehl University of Houston The University of Texas Health Science Center at Houston	Effects of Medications on Brain Health in Alzheimer's Disease: A Multimodal Imaging Approach
Mathew Lopez, PhD University of Houston Biology and Biochemistry	Dietary Time Restriction Remodels Immune Function During Aging in Drosophila
Jyotsna Godavarthi, PhD The University of Texas Health Science Center at Houston	Protective Role of Type 2 Innate Lymphoid cells (ILC2s) in Alzheimer's Pathogenesis.
Alexis McAlister Texas A&M University Neuroscience and Experimental Therapeutics	Sex Differences in Neuroimmune Alterations in the 5xFAD Mouse Model of Alzheimer's Disease
Thai T. Nguyen University of Texas Medical Branch, Neurology, Moddy Brain Health Institute	Non-Toxic Tau Oligomer Polymorphs Isolated from Non-Demented Individuals with Alzheimer's Neuropathology
Ran An, PhD University of Houston Biomedical Engineering	A Perfusable Human Brain Slice–on–Chip Platform for Neurovascular Dysfunction in Dementia

Expert Panels - 2.20 – 4.10 PM

Panel 1 - Mechanisms and Models – 2.20 PM

MODERATOR ———— **PANELISTS** ————

[Dr. Arne Lekven, PhD](#)
University of Houston
Biology and Biochemistry
Multidisciplinary Institute
for Neuroscience and
Dementia

[Dr. Krešimir Josić](#)
University of Houston
Mathematics

[Balaji Krishnan, PhD](#)
University of Texas
Medical Branch
Neurology, Mitchell Center
for Neurodegenerative
Diseases

[Amy Sater, PhD](#)
University of Houston
Biology and Biochemistry
Multidisciplinary Institute
for Neuroscience and
Dementia

[Jeffrey Min-In Yau, Ph.D.](#)
Baylor College of Medicine
Neuroscience

Coffee/Tea Break – 3.10 PM

Panel 2 – Neurotechnologies and Neuromodulation - 3.20-pm

MODERATOR ———— **PANELISTS** ————

[Jokūbas Žiburkus, PhD](#)
University of Houston
Biology and Biochemistry
Multidisciplinary Institute
for Neuroscience and
Dementia

[Jessica Bernard, PhD](#)
Texas A&M University
Psychological and Brain
Sciences

[Luca Pollonini, PhD](#)
University of Houston
Computer Engineering
Technology and
Computational Health
Informatics

[Maria-Adelaide Micci, PhD](#)
University of Texas
Medical Branch
Anesthesiology
Moody Brain Health
Institute

[Dorina Papageorgiou, Ph.D](#)
Baylor College of Medicine
Psychiatry & Behavioral
Sciences

Poster Session – 4.10 PM
The final list of accepted abstracts is included in the digital program and available in printed form at the symposium.

Social Hour – 5 PM
Mix and mingle with your colleagues with refreshments and light bites.