NIA-AA Symposium:
Enabling Precision Medicine for Alzheimer’s Disease Through Open Science

Prerecorded Presentations Available:
July 27, 2020 at 12:01 a.m. CDT (North America)

Live Symposium Discussion:
July 31, 2020 at 8:30 – 9:30 a.m. CDT

Meeting Objectives:
This symposium will feature an array of translational research programs that integrate computational and experimental approaches to:

1) Discover novel, disease-relevant targets and biomarkers.
2) Develop next-generation animal models and target enabling tools.
3) Support the development of new candidate therapeutics for a diverse portfolio of targets.
4) Advance data-driven drug repositioning and combination therapy development.

The featured programs will include:
- Accelerating Medicines Partnership for Alzheimer’s Disease (AMP-AD) Target Discovery Program and Affiliated Consortia
- Alzheimer’s Gut Microbiome Project
- MODEL-AD Consortium
- TREAT-AD Consortium
- Translational Bioinformatics Program for Drug Repositioning and Combination Therapy Development
- Alzheimer’s Drug Development Program (ADDP)
- Alzheimer’s Clinical Trials Consortium (ACTC)

Intended Audience: Academic, biotech and pharmaceutical industry researchers with interest in target and biomarker discovery, preclinical and clinical drug development; computational biologists; data scientists; and open science advocates.
PRERECORDED SYMPOSIUM AGENDA

20 minutes  Introduction: Enabling Precision Medicine for Alzheimer’s Through Open Science
Suzana Petanceska, National Institute on Aging

160 minutes  Session One
AMP-AD and Affiliated Consortia: Precision Medicine Approach to Novel Target and Biomarker Discovery

New Data and Analytical Resources for Reproducible Systems Biology Research in AD: AMP-AD and Affiliated Consortia
Anna Greenwood (Sage Bionetworks) and Vilas Menon (Columbia University)

Integrative Multi-omics for Therapeutic Target Discovery in AD
Mariet Allen, Mayo Clinic

A Proteomics Network Approach for Target and Biomarker Discovery in AD
Nick Seyfried, Emory University

Integrative Metabolomics: A Tool for Precision Medicine in Alzheimer’s Disease
Matthias Arnold, Duke University/Helmholtz University

Systems Modeling of White Matter Microstructural Abnormalities in Alzheimer’s Disease
Emrin Horgusluoglu-Moloch, Icahn Institute at Mount Sinai School of Medicine

Systems Genetic Analysis of Resilience to Alzheimer’s disease
Catherine Kaczorowski, Jackson Labs

Identifying Molecular Networks of Virus Resilience in Alzheimer’s Disease: Implications for Target and Biomarker Discovery
Ben Readhead, Arizona State University

Alzheimer’s Gut Microbiome Project: A Team Science Approach to Understanding the Role of the Microbiome in Neurodegeneration
Sarkis Mazmanian, Caltech

120 minutes  Session Two
MODEL-AD Consortium, a Precision Medicine Approach to the Development of Transgenic Models of Late Onset AD and Preclinical Efficacy Testing

MODEL-AD: Pathway to Translatable Models for LOAD
Andrea Tenner (UCI) and Bruce Lamb (Indiana University)

Creating and Characterizing Translational Mouse Models of Late-Onset Alzheimer’s Disease
Greg Carter and Michael Sasner, Jackson Labs
Generating and Deep Phenotyping Diverse Mouse Models of Late Onset AD  
Ali Mortazavi, UCI and Kim Green, UCI

Improving Preclinical to Clinical Translation in Alzheimer’s Disease: MODEL-AD  
Preclinical Testing Pipeline  
Stacey Rizzo, University of Pittsburgh and Paul Territo, Indiana University

From Mice to Medicine: Improving the Predictive Value of Preclinical Research  
Lorenzo Refolo, National Institute on Aging

90 minutes  
Session Three  
TREAT-AD Consortium: Accelerating Drug Discovery for Novel Targets Through Open Science

TREAT-AD Mission and Goals  
Lara Mangravite (Sage Bionetworks) and Alan Palkowitz (Indiana University)

Emory-Sage-SGC TREAT-AD Center: Diversifying the AD Target Pipeline  
Lara Mangravite, Ben Logsdon, Anna Greenwood, (Sage Bionetworks) and Opher Gileadi, (SGC-Oxford University)

IUSM-Purdue TREAT-AD Center: Advancing Immune Targets for AD Treatment and Prevention  
Alan Palkowitz and Timothy Richardson, Indiana University

75 minutes  
Session Four  
Translational Bioinformatics for Drug Repositioning and Combination Therapy Development

Leveraging the Human Non-Coding Transcriptome to Identify Therapeutics for Healthy Aging and Alzheimer’s Disease  
Claes Wahlestedt, University of Miami

ApoE-Directed Drug Repositioning and Combination Therapy Development for Alzheimer’s Disease  
Marina Sirota, UCSF

Systematic Alzheimer’s Disease Drug Repositioning (SMART) Based on Bioninformatics-Guided Phenotype Screening and Image-Omics  
Stephen Wong, Houston Methodist Weill Cornell Medical College

A Knowledge Map to Find Alzheimer’s Disease Drugs  
Olivier Lichtarge, Baylor College of Medicine
An Integrated Reverse Engineering Approach Toward Rapid Drug Repositioning for Alzheimer’s Disease
*Rong Xu, Case Western Reserve University*

105 minutes  
**Session Five**  
**Alzheimer’s Clinical Trials Infrastructure and Next Generation Candidate Therapeutics**

Introduction to NIA’s Alzheimer’s Clinical Trials Infrastructure and Preclinical to Clinical Drug Development Pipeline  
*Laurie Ryan, National Institute on Aging*

Novel Small Molecule AD Therapeutic Candidates that Modulate Cytokine-Mediated Neuroinflammation and Attenuate Cognitive Dysfunction  
*Linda Van Eldik, Sanders-Brown Center on Aging, University of Kentucky*

Small Molecule Modulation of the p75 Neurotrophin Receptor to Inhibit Tau Pathology and Synaptic Failure  
*Frank Longo, Stanford University*

How Partnerships between NIH, Small Biotech and Large Pharma are Creating an Innovative Pipeline of Novel Therapeutics for Alzheimer’s Disease  
*Mark Gurney, Tetra Therapeutics*

Neuron Regenerative Therapy, NNI-362, Aiming to Reverse Deficits in Alzheimer’s and Down Syndrome  
*Judith Kelleher-Andersson, Neuronascent Inc.*

Allopregnanolone as a Regenerative Therapeutic for the Alzheimer's Brain: Proof of Concept and Future Direction  
*Roberta Diaz Brinton, University of Arizona*

Enabling Biomarker-Driven Drug Development of CT1812: A Novel Approach to Alzheimer’s Disease Modification  
*Susan Catalano, Cognition Therapeutics*