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AAIC Advancements: APOE will feature the latest research and clinical trial findings on the role of APOE in neurodegenerative diseases such as Alzheimer's and other dementias.

Sessions are listed in Central Standard Time (North America). Schedule is current at the time of posting. Content is listed as submitted.

POSTER PRESENTATIONS

Beginning March 6, explore posters from across the world and leave comments for authors around the clock. Poster topics address research themes such as APOE and Glial lipid metabolism, inflammation, protein misfolding, vascular regulation, genetics of APOE and more.

MONDAY, MARCH 6

7:30 a.m.-5 p.m.  **Registration**

8-8:25 a.m.  **Breakfast**

8:25-8:30 a.m. **Welcome to AAIC Advancements: APOE**
 Claire Sexton, Alzheimer's Association®
 David Holtzman, Co-Chair

8:30-10 a.m. **Session 1: APOE Genetics**
Moderators: Alison Goate and Julia TCW
Presenters:
Role of APOE genotype in Alzheimer's disease risk
 Alison Goate
The R136S (Chistchurch) Mutation Protects against APOE4-driven Tau Pathology, Neurodegeneration, and Neuroinflammation
 Yadong Huang
Ancestry and APOE
 Elizabeth Blue
Genetics of Alzheimer's disease across APOE and sex
 Michael Belloy
Local ancestry around APOE and global ancestry modulate Alzheimer's neuropathology and cognitive outcomes in an admixed sample of Brazilians
 Michel Naslavsky
Understanding the role of APOE non-synonymous variants in Alzheimer's disease genetic risk
 Yann Le Guen
A novel EIF2B3 variant as an APOE-dependent disease risk modifier in Alzheimer's disease
 Francesca Garretti

10-10:30 a.m.  **Break**

10:30 a.m.-Noon

Session 2: APOE Structure

Moderators: Gregory Bowman and Ana-Caroline Raulin

Presenters:

Phospholipid export by ABCA1: Implications for the role of APOE in Alzheimer's disease

Jay Heinecke

Apolipoprotein E has extensive conformational heterogeneity in lipid free and bound forms

Andrea Soranno

Impact of rare single amino acid substitutions on the biochemical properties of APOE

Ana-Caroline Raulin

Investigating the Structure of Lipidated APOE using CryoEM

Michael Strickland

Structural heterogeneity in ApoE3 Christchurch and implications for Alzheimer's therapeutics

Justin Miller

Apolipoprotein E glycosylation is associated with amyloid plaques and APOE genotype.

Paige Lawler

Structural Insight Into Risk-Modifying, Alzheimer's Disease-Associated APOE Variants by Comparison Of Common And Rare APOE Isoforms

Ryan Tuckey

Noon-12:15 p.m.

Introduction to ISTAART

Courtney Kloske, Alzheimer's Association

Jaya Bagaria, ISTAART Ambassador

12:15-1:30 p.m.



Lunch and Poster Viewing

1:30-3 p.m.

Session 3: APOE and Inflammation

Moderators: Celeste Karch and Guojun Bu

Presenters:

APOE and the immune system in tauopathy and tau-mediated neurodegeneration

David Holtzman

APOE in microglial functions and Alzheimer's disease

Chia-Chen Liu

BHLHE40 and 41 regulate APOE-mediated macrophage responses associated with Alzheimer's disease and other disorders of lipid-rich tissues

Eduardo Marcora

APOE modulates microglial immunometabolism across aging and AD

Lance Johnson

Microglia-mediated T cell Infiltration Drives Neurodegeneration in Tauopathy

Xiaoying Chen

Peripheral and central immunomodulatory effects of Apolipoprotein E4 in Alzheimer's disease

Abhirami Ramakrishnan

ApoE4 drives maladaptive heterogeneity and immunometabolic responses of astrocytes

Josh Morganti

3-3:30 p.m.



Break



Agenda items with this symbol indicate the event is on site only.

3:30-5 p.m.

Session 4: APOE and Protein Misfolding

Moderators: Charlotte Teunissen and Marlies Oosthoek

Presenters:

Insights and potential for therapeutic intervention based on ApoE
Brad Hyman

APOE and Its Receptor in Alpha-Synuclein Pathogenesis
Na Zhao

Emerging role of APOE in synucleinopathy
Albert (Gus) Davis

TREM2-independent microgliosis promotes tau-mediated neurodegeneration in the presence of ApoE4
Jason Ulrich

The phospho-Tau interactome across APOE genotypes in sporadic Alzheimer's disease
Manon Thierry

APOE isoforms differentially regulate neuronal membrane proteasomes to shift the threshold for pathological aggregation of endogenous Tau
Kapil Ramachandran

The relationship between APOE isoforms and lipid dysregulation in glia of the PS19 mouse model of tauopathy
Alexandra Litvinchuk

5-7 p.m.



Poster Reception

TUESDAY, MARCH 7

7:30 a.m.-4 p.m.



Registration

8:15-8:45 a.m.



Breakfast Panel Discussion: Incorporating Biomarkers

Panelists: Charlotte Teunissen, Suzanne Schindler and Henrietta Nielsen

9-10:40 a.m.

Session 5: APOE, the Blood-Brain Barrier and Vascular Regulation

Moderators: Brad Hyman and Priyanka Narayan

Presenters:

Apolipoproteins and Alzheimer's Disease
Cheryl Wellington

ApoE effects on cerebrovasculature and Blood Brain Barrier
Guojun Bu

Key role of border associated macrophages in ApoE4 neurovascular dysfunction and white matter damage
Costantino Iadecola

APOE and vascular mural cells in Alzheimer's disease
Takahisa Kanekiyo

Impacts of vascular apoE expression in cerebrovascular function and amyloid pathogenesis
Francis Shue

Visit-to-visit blood pressure variability and cognitive decline in apolipoprotein e4 carriers
Isabel Sible

10:40-11 a.m.



Break



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11 a.m.-12:30 p.m.

Session 6: APOE and Glial Lipid Metabolism

Moderators: Rik van der Kant and David Holtzman

Presenters:

Microglial lipid dysregulation in AD and potential therapeutics

Gil Di Paolo

APOE ϵ 4 disrupts lipid trafficking and clearance in human astrocytes

Julia TCW

The role of ApoE4 on lipid metabolism and the pathophysiology of Alzheimer's disease

Li-Huei Tsai

APOE4, glial lipid metabolism and neuroinflammation

Hussein Yassine

Opposing effects of apoE2 and apoE4 on microglial activation and lipid metabolism in response to demyelination

Na Wang

Multi-omic profiling of isogenic ApoE-variant iPSC-derived glia uncovers lipid dependent dysregulation of ApoE4 immunometabolism

Sascha Koppes

Mid-life APOE4 to APOE2 'Switching' Alters the Cerebral Transcriptome and Lipidome in a Novel Transgenic Mouse Model

Lesley Golden

12:30-1 p.m.

Panel Discussion: Utilizing Different Models to Study APOE

Panelists: David Holtzman, Guojun Bu, Lance Johnson and Adrian Oblak

1-2 p.m.



Lunch and Poster Viewing

2-3:45 p.m.

Session 7: Therapeutic Strategies

Moderators: Stacie Weninger and Aiko Robert

Presenters:

RNAi-modulation of ApoE: a novel approach for AD?

Anastasis Khvorova

Correction of endolysosomal dysfunction mediated by ApoE4

Joachim Herz

Therapeutic Targeting of Microglial Pathways Downstream of APOE/TREM2 Signaling

Bruce Lamb

Novel therapeutic interventions for Alzheimer's disease targeting ApoE-heparan sulfate proteoglycan interactions

Claudia Marino

APOE-Targeted Epigenome Therapy for late onset Alzheimer's Disease

Ornit Chiba-Falek

A Phase 1, Open-Label, 52-Week, Multicenter Study to Evaluate the Safety and Biochemical Efficacy of AAV Gene Therapy (LX1001) in Patients with APOE4 Homozygote Alzheimer's Disease – Interim Data

Nilomi Shah

Hormone Replacement Therapy is associated with improved cognition and larger brain volumes in at risk APOE4 women: results from the European Prevention of Alzheimer's Disease (EPAD) cohort

Rasha Saleh

Counteracting the pathological effects of apoE4 in vivo, by activation of the lipidating protein ABCA1

Daniel Michaelson



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3:45-4 p.m.

Poster Awards and Closing

Moderators: Maria Carrillo, Alzheimer's Association and Guojun Bu, Co-Chair

Certificates of attendance can be found in "Resources" on the virtual platform.

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Join the Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment (ISTAART) during AAIC Advancements: APOE to save on your membership and access the virtual platform for an additional 30 days. ISTAART members also receive exclusive member benefits, including no-cost online attendance and significant discounts for in-person attendance for the Alzheimer's Association International Conference®, July 16-20, 2023, in Amsterdam, Netherlands, and online.



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