Role of Alcohol Misuse in the Onset and Progression of Alzheimer’s Disease and Its Related Dementias
(A joint NIA and NIAAA Workshop)

AGENDA
(All times listed are eastern daylight time)

**DAY 1: July 26, 2023**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>10:00 AM</td>
<td><strong>Welcome Remarks</strong></td>
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<td>Amy Kelley, M.D., Deputy Director, NIA</td>
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<td>George Koob, Ph.D. Director, NIAAA</td>
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<td>10:10 AM</td>
<td><strong>Workshop Objectives</strong></td>
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<td></td>
<td>Lisa Opanashuk, Ph.D., Division of Neuroscience, NIA</td>
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<td>Changhai Cui, Ph.D., Division of Neuroscience and Behavior, NIAAA</td>
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<td>10:20 AM</td>
<td><strong>Keynotes</strong></td>
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<td>Neuroimaging signatures of alcohol misuse in the aging brain: implications for dementia</td>
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<td>Edith Sullivan, Ph.D., Stanford University</td>
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<td>10:50 AM</td>
<td><strong>Break – 5 min</strong></td>
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<td>10:55 AM</td>
<td><strong>Session I: Impact of life course alcohol exposure on cognitive decline and dementia</strong></td>
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<td>Session Chair: Lisa Opanashuk, Ph.D., NIA</td>
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<td>Is Prenatal Alcohol Exposure a Possible Risk Factor for the Early Onset of Alzheimer’s Disease? <em>(Virtual Presentation)</em></td>
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<td>Hermes Yeh, Ph.D., Geisel School of Medicine at Dartmouth</td>
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<td>Impact of prenatal alcohol on cognitive impairment in a vascular dementia model and a transgenic AD model</td>
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<td>Farida Sohrabji, Ph.D., Texas A&amp;M University</td>
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<td>Age-related changes in alcohol expectancy and anxiety: the effects on problem drinking and neural correlates <em>(Virtual Presentation)</em></td>
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<td>Chiang-Shan Ray Li, M.D., Ph.D., Yale University</td>
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<td>Probing early indicators of age-related vulnerability to alcohol</td>
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<td>Sara Jo Nixon, Ph.D., University of Florida</td>
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<td>11:55 AM</td>
<td><strong>Q&amp;A / Moderated Discussion</strong></td>
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<td>Moderator: Sara Jo Nixon, Ph.D., University of Florida and Rajesh Miranda, Ph.D., Texas A&amp;M University</td>
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12:25 PM    Lunch Break – 30 min

12:55 PM    **Session II: Neuroinflammation in Alzheimer’s Disease and Alcohol Misuse**
Session Chair: Lisa Opanashuk, Ph.D., NIA

- Neuroinflammation in Alzheimer’s disease
  M. Kerry O’Banion, M.D., Ph.D., University of Rochester

- Alcohol Promotion of Alzheimer’s Pathology through Immuno-Metabolic Crosstalk
  Leon Coleman, M.D., Ph.D., University of North Carolina at Chapel Hill

  Adolescent binge alcohol exposure enhances Alzheimer’s disease-associated neuropathology in the basal forebrain of adult 5xFAD mice: Reversal through blockade of HMGB1
  Ryan Vetreno, Ph.D., University of North Carolina at Chapel Hill

- NLRP3 inflammasome in the crossroads of alcohol misuse and Alzheimer’s disease
  Gyongyi Szabo, M.D., Ph.D., Harvard Medical School

1:55 PM    Q&A / Moderated Discussion
Moderator: Gyongyi Szabo, M.D., Ph.D., Harvard Medical School

2:25 PM    Break – 10 min

2:35 PM    **Session III: Brain functional dysregulations in Alcohol Misuse and AD**
Session Chair: Antonio Noronha, Ph.D., NIAAA

- Disentangling the relationship between alcohol consumption, structural brain measures, and genetics
  Laura Bierut, M.D., Washington University, St. Louis

- Alcohol interactions with the serotonin system in the early stages of Alzheimer’s disease *Virtual Presentation*
  Catherine Marcinkiewcz, Ph.D., University of Iowa

- The Impact of Chronic Alcohol Consumption on Cognitive Flexibility in the 5xFAD Mouse Model of Alzheimer’s Disease
  Jun Wang, M.D., Ph.D., Texas A&M University

3:20 PM    Q&A / Moderated Discussion
Moderator: Laura Bierut, M.D., Washington University, St. Louis

3:50 PM    **ADJOURN DAY ONE**
DAY 2: July 27, 2023

10:00 AM  Welcome to Day Two

10:05 AM  Session IV: Diverse pathways mediating impacts of alcohol misuse on AD pathophysiology
Session Chair: Changhai Cui, Ph.D., NIAAA

Moderate and chronic alcohol exposure alters low-density lipoprotein cholesterol-mediated proinflammatory cytokines, apolipoprotein E, and cognitive function in a sex-dependent manner in APP/PS1 transgenic mice
Doo-Sup Choi, Ph.D., Mayo Clinic

Alcohol, mitochondrial oxidant stress, and Alzheimer’s-related pathology
Steven Graves, Ph.D., University of Minnesota

Chronic Intermittent Ethanol Alters Cognition and Hippocampal Protein Pathways Associated with Alzheimer’s Disease: Insights from Adolescent- and Aged-Exposed Animals
Doug Matthews, Ph.D., University of Wisconsin Eau Claire

Alcohol, Aging, and Oligodendrocytes
Heather Richardson, Ph.D., University of Massachusetts

11:05 AM  Q&A / Moderated Discussion
Moderator: Doo-Sup Choi, Ph.D., Mayo Clinic and Doug Matthews, Ph.D., University of Wisconsin Eau Claire

11:35 AM  Break – 10 min

11:45 AM  Session V: Cellular Mechanisms of Alzheimer’s disease and alcohol misuse
Session Chair: Changhai Cui, Ph.D., NIAAA

The SEA-AD consortium: Identifying cellular vulnerabilities and disease trajectories in Alzheimer’s disease (Virtual Presentation)
Ed Lein, Ph.D., Allen Institute

Aβ burden in the brains of those with alcohol-use disorders
Rajesh Narendran, M.D., University of Pittsburgh

Alcohol, motivation, and tauopathy
Zoe McElligott, Ph.D., University of North Carolina at Chapel Hill

Imaging Neuroimmune and Neurovascular Alterations During Alzheimer’s Disease Progression
Abbas Yaseen, Ph.D., Northeastern University
12:45 PM  Q&A / Moderated Discussion
Moderator: Pietro Sanna, M.D., Scripps Research Institute

1:15 PM  Lunch Break - 30 min

1:45 PM  Session VI: Central and peripheral interactions in Alzheimer’s disease and alcohol misuse
Session Chair: Peter Gao, M.D., NIAAA

Epigenetic aging associated with alcohol use disorder
Falk Lohoff, M.D., NIAAA (Virtual Presentation)

Network meta-analysis on the molecular mechanisms underlying exposure to alcohol leading to Alzheimer’s disease
Sulie L. Chang, Ph.D., Seton Hall University

Alcohol-induced aldehyde toxicity, ALDH2 deficiency and Alzheimer’s disease
Che-Hong Chen, Ph.D., Stanford University

Modulation of the liver-brain axis by alcohol and its impact on Alzheimer’s disease pathology
Derick Han, Ph.D., Keck Graduate Institute

2:45 PM  Q&A / Moderated Discussion
Moderator: Greg Sutherland, Ph.D., University of Sydney

3:05 PM  Break - 10 min

3:15 PM  Synthesis by Moderators

3:45 PM  Final discussion
Lisa Opanashuk, Ph.D., NIA and Changhai Cui, Ph.D., NIAAA

3:55 PM  Closing remarks
Eliezer Masliah, M.D., NIA

4:00 PM  MEETING ADJOURNS