

Spring 2022

E-Newsletter

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The Mary S. Easton Center for Alzheimer's Disease Research at UCLA has very active teams working on basic research, drug discovery, biomarkers for early diagnosis and clinical activity including clinical trials, cognitive testing, and patient care.

Anti-Tau Therapies



By: [Maryam Beigi, MD](#)

Alzheimer's Disease is leading cause of dementia worldwide, and its prevalence is expected to double in the next 20 years. Clinical presentations include loss of memory, language or visual processing abilities, as well as neuropsychiatric symptoms such as apathy, depression, anxiety, agitation, and psychosis.

At autopsy, the brains of patients who lived with Alzheimer's disease contain amyloid-beta plaques outside of cells and tau neurofibrillary tangles (NFT) inside of cells, along with extensive loss of neuronal synapses.

Scientists have postulated that these two proteins (amyloid-beta and tau), either alone or in combination cause disease initiation and progression. In our last newsletter I described the formation of amyloid-beta from the amyloid precursor protein (APP). The process of amyloid beta deposition in the brain starts 15-20 years before a person becomes symptomatic. Once symptoms of Alzheimer's begin, the tau protein begins to aggregate at an accelerated pace.

Tau is a protein that binds to the highways within neurons for transportation of molecules. These highways can extend over a thousand times the size of the cell body. Tau supports the skeleton that holds these highways together inside neurons. Excess chemical modifications of tau (i.e. phosphorylation) are thought to cause the breakdown and collapse of the cellular skeleton,

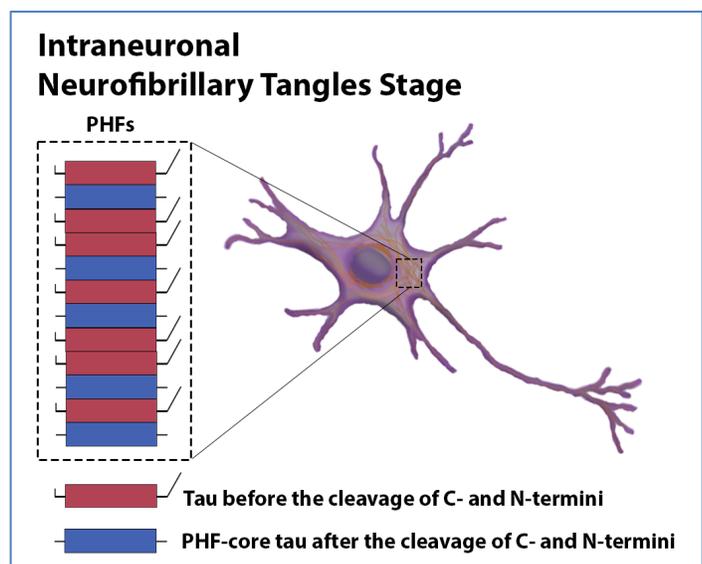


Figure 1. Neurofibrillary tangles are composed of tau proteins that aggregate into paired helical filaments (PHFs). Figure adapted from Šimic et al. *Biomolecules*. 2016 Jan 6;6(1):6.

impairment of transportation of molecules, and ultimately loss of synapses and neurons and progression clinically to dementia (Fig. 1).

Recently, the focus of treatment discovery has shifted to tau, and many therapeutic interventions are currently undergoing research and development. Some of these therapies include tau vaccines, monoclonal antibodies against tau, and small pieces of DNA that can lower tau expression. Most of these therapeutics are in phase 2 trials and have shown to be safe, pending their efficacy in preventing or slowing progression of cognitive decline.

At UCLA we are starting a new trial with a monoclonal anti-tau antibody called the Autonomy study, which is sponsored by Janssen Research & Development, LLC. This is a double-blind, placebo-controlled phase 2 study for two years that includes monthly infusions. Participants should be in prodromal (Mild Cognitive Impairment) or early stages of Alzheimer's disease.

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Alzheimer's Association Facts and Figures 2022: Special Report on Mild Cognitive Impairment



By: [Monica Moore, MSG](#)

Every year the Alzheimer's Association releases an annual report on the state of Alzheimer's disease and other related dementias. The report discusses prevalence, mortality and morbidity, as well as caregiving, the professional workforce, health care and long-term care relating to Alzheimer's. The purpose of this report is to raise awareness of Alzheimer's disease and the societal impact of dementia. The 2022 report was released in March and included a special report on Mild Cognitive Impairment (MCI).

The number of people in America with Alzheimer's disease is climbing and is currently at 6.5 million. This number is projected to increase as the US population over the age of 65 continues to grow, mostly due to the aging of the baby boom population. Age is the greatest risk factor for developing dementia, and the report states that 5.0% of people age 65 to 74, 13.1% of people age 75 to 84, and 33.2% of people age 85 and older have dementia due to Alzheimer's disease. While the development of Alzheimer's disease is typically associated with those over the age of 65, it is estimated that about 200,000 Americans under the age of 65 have what is known as younger-onset dementia. These numbers show the societal health crisis that is looming due to Alzheimer's disease.

Mild Cognitive Impairment

The progression into Alzheimer's disease is gradual. The changes in the brain that cause dementia-type symptoms often begin 20-30 years before diagnosis and occur while people are working, raising families, and going about their day. Yet, as the pathological changes occur in the brain, individuals may begin to experience problems with their thinking, remembering, reasoning, etc. This stage of cognitive loss is called Mild Cognitive Impairment (MCI). The cognitive changes are noticeable to the person with MCI as well as close relations, but may not be noticeable by others. These changes may be small and may not necessarily affect one's ability to carry out daily activities and can sometimes be thought of as a normal part of aging. Yet, MCI is not normal and can be caused by a number of factors, one of them being



Alzheimer's disease. The varying causes of MCI, lack of accessible biomarker testing, and an underreporting of symptoms of MCI, makes diagnosis of MCI challenging.

More than **80%** of Americans know little or are not familiar with **mild cognitive impairment (MCI)**, which can be an early stage of Alzheimer's.

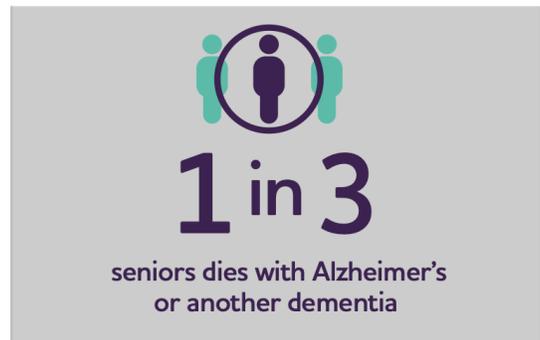
MCI is more common than most people believe, as it is estimated that 1 in 7 Americans over the age of 60 can be classified as having MCI, but not all of them will develop Alzheimer's disease. The report states that an estimated 10-15% of people with MCI will go on to develop dementia each year, most of which will be dementia of the Alzheimer's type, yet some patients never experience further cognitive decline and others revert to normal cognition. As with dementia, one's greatest risk factor for MCI is age, yet medication interactions, depression, sleep apnea, and a number of other conditions and lifestyle habits can be also be factors. Advancements in biomarker research, physician access to biomarker tests, and physician training can provide further insight into who will not progress into dementia, who will, and how interventions can prevent progression.

While MCI may be a familiar term at the Easton Center, the report states that only 18% (less than 1 in 5) Americans are familiar with this term and understand its meaning. Awareness and understanding of MCI was low across all racial and ethnic groups surveyed for this report. More than half of the survey participants believed that the cognitive loss associated with MCI is a normal part of aging. This lack of awareness prevents early evaluation and early intervention. Adding to the struggles for proper diagnosis, the report states that one third of primary care physicians (PCPs) were not comfortable diagnosing MCI and even more so for MCI due Alzheimer's disease (50%). The PCPs believe that it is important to assess for MCI and to diagnose it but did not feel comfortable because of the lack of specialists and because limited treatment options exist.

Currently an FDA approved medication for MCI does not exist, but lifestyle modifications and medication interventions could reduce the chance of MCI developing into dementia. Accurate diagnosis of MCI due to Alzheimer's disease can provide patients with the opportunity to participate in clinical trials aimed at intervention which could lead to an FDA approved treatment.

In order to properly care for those with MCI due to Alzheimer's disease we need a stronger medical workforce properly trained in Alzheimer's and dementia diagnosis and care. The 2022 Facts and Figures Report had an interesting section, on just this, entitled: **Workforce**.

As mentioned previously, the rates of Alzheimer’s disease are increasing and therefore an unprecedented demand will be placed upon our medical system to provide care for this population. Yet, neurologists, geriatricians, psychiatrists, nurses, and other medical professionals trained in dementia care are in short supply. According to the 2022 report, the United States will have to nearly triple the number of specialists who were practicing in 2021 to effectively care for the approximately 10% of those 65 and older who are projected to have Alzheimer's dementia in 2050. This shortage is a direct barrier to early diagnosis, care, treatment and support services.



The UCLA Easton Center is setting up a program to train primary care physicians to recognize early stages of dementia through a dementia screening toolkit, available in Spanish and English. We will also work together with the Alzheimer’s Association through programs such as Project ECHO (Extension for Community Healthcare Outcomes) to help alleviate the stress on medical specialists.

The report also discusses the important and often neglected role of the caregiver, the effect that health care coverage has on patients and their families, and the role COVID-19 played on dementia care and mortality. To read the complete report please visit <https://www.alz.org/media/Documents/alzheimers-facts-and-figures.pdf>

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New Additions to the Easton Center

Please join us in welcoming new staff members to the Easton Center.



Photo: [Stephanie Jones, BA](#), Executive Assistant to the Director, Mary S. Easton Center for Alzheimer’s Disease Research at UCLA

Stephanie Jones received her Bachelor of Arts Degree in Film and Television Business from Azusa Pacific University in 2016. During her undergraduate studies, she worked at a post-production studio in Culver City where she began working full time after graduating as the front desk manager. Before joining the Easton team, Stephanie was the Executive Assistant to the CEO and COO of UrgentPoint Wellness, a multi-specialty medical group focused on providing psychiatric services to patients in need.



Photo: [Thao Rodriguez, NP](#), Clinical Nurse Practitioner, Kagan Clinical Trials Program

Thao Rodriguez earned a bachelor of science in biology at UC Davis, followed by a bachelor of science and master of science in nursing from Johns Hopkins University School of Nursing (JHUSON). While studying at JHUSON, she worked as a registered nurse on a surgical floor, taking care of urology, thoracic surgery, and general surgery patients.

Her first position as a nurse practitioner was at Medstar Washington Hospital Center in Washington D.C., working as an interventional cardiology nurse practitioner for over a year before working with Yale New Haven Hospital – Northeast Medical Group, where she was a geriatric nurse practitioner and provided care for patients at their home, the geriatric assessment center, or the primary care clinic. More recently, Thao

worked as a research nurse practitioner at the USC Clinical and Translational Science Institute and was responsible for all aspect of patient and research-related care, including acting as a sub-investigator and/or research nurse for multiple research studies including studies related to pre-clinical stages of dementia, mild cognitive impairment, and other medical conditions.



Photo: [Maya Farchi, MA](#), Clinical Research Coordinator, Kagan Clinical Trials Program

Maya Farchi received her Bachelor of Arts in Psychology from the University of California, Los Angeles (UCLA) in 2019. After graduation she interned at Tel Aviv University where she assisted in the research and publishing of a research study in the Social and Cognitive Neuroscience Lab. After that she began working as a Clinical Research Coordinator at a Sleep Disorder Research Center, while also interning at a private Neuropsychology clinic. This is where she discovered her passion for the field of Neuropsychology. She is currently completing her Master's in Clinical Psychology at California State University, Northridge (CSUN) with plans of pursuing a PhD in the future. Maya is excited to be joining the UCLA Easton Center as a clinical research coordinator on a variety of Alzheimer's studies.



Photo: [Gema Ortiz, BA](#), Clinical Research Coordinator, Vossel Lab

Gema Ortiz graduated from UCLA in 2020 with a major in Psychology. As an undergraduate, she volunteered for The Human Connectome Project Aging under the mentorship of Dr. Mirella Diaz-Santos and worked as a clinic coordinator at the Center for Pediatric Neuropsychology under the mentorship of Dr. Vindia Fernandez. After graduation, she started working as a staff research associate for The Human Connectome Project Development under the mentorship of Dr. Susan Bookheimer. When the grant ended, she was hired as a research coordinator for the Department of Veterans Affairs in San Diego, and worked at an Alzheimer's lab studying diabetes and its impact on aging and cognition. Some of her past research experience includes working on behavioral-variant frontotemporal dementia data, social cognition, MRI functional connectivity, plasma biomarkers and dementia with Lewy bodies. Gema is excited to work at the Easton Center and collaborate on projects in Alzheimer's and related dementias and the Latinx community.



Photo: [Marissa Thirion, BA](#), Clinical Research Coordinator, Hinman Lab

Marissa Thirion obtained her Bachelor's degree in Psychology with minors in Spanish and Cognitive Science from UCLA in 2022. As an undergraduate student, she volunteered as a Research Assistant in a lab investigating evidence-based child therapy practices. Marissa also gained experience in applied behavior analysis working as a Behavior Technician for children with autism spectrum disorder. She is passionate about brain-body interactions and how they can impact mental and physical health. Marissa is excited to contribute to the research in the Hinman Lab and the MarkVCID study (Vascular Contributions to Cognitive Impairment and Dementia).

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Clinical Research Opportunities

If you would like to advance Alzheimer's disease research, please consider being a study participant. Below are the current recruiting trials. For a complete list of enrolling studies, visit our website at www.eastonad.ucla.edu.

OBSERVATIONAL STUDIES:

- [Alzheimer's Disease Neuroimaging Initiative 3 \(ADNI3\) Protocol](#)
- [Alzheimer's Disease Research Center - Biomarkers in Neurodegenerative Disease \(ADRC-BIND\)](#)
- [NIA-AD-FBS \(National Institute on Aging Alzheimer's Disease Family Based Study\)](#)
- [Vascular Contributions to Cognitive Impairment and Dementia \(MarkVCID\)](#)
- [ALLFTD \(ARTFL-LEFFTDS Longitudinal Frontotemporal Lobar Degeneration\)](#)

INTERVENTIONAL STUDY:

- [Autonomy Study](#)

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For more information on our upcoming lectures and events, please visit the Easton Center [Community Calendar](#).

Beyond Alzheimer's: The Different Types of Dementia

Date: Thursday, May 19, 2022

Time: 3:00 PM – 4:30 PM (PDT)

Virtual Forum

Speakers: Kevin Bickart, MD, PhD, Behavioral Neurologist, Assistant Professor of Neurology, David Geffen School of Medicine at UCLA, and Sarah Kremen, MD, Behavioral Neurologist and the Director of the Neurobehavior Program, Cedar-Sinai Medical Center

While Alzheimer's Disease is the most common form of dementia, it is not the only kind. This presentation will discuss other forms of dementia, such as Vascular Dementia, Dementia with Lewy Bodies, and Frontotemporal Dementia, and how they differ from Alzheimer's in progression, treatment, and diagnosis.

To register, please visit: <https://uclahs.zoom.us/meeting/register/tJUtcO6hqD4jGtUYUgOhyG-plRUM1WROZgch>

Flyer: https://eastonad.ucla.edu/images/events/flyer-beyond-alzheimers-the-other-types-of-dementias-5-19-2022-south_bay_dementia_education_consortium.pdf

Driving Safety

Date: Thursday, May 26, 2022

Time: 10:00 AM - 11:30 AM (PDT)

Virtual Forum

Speaker: Tressa Thompson, DMV Safety Division

To RSVP, please send an email to Monica Moore, MSG at mrmoore@mednet.ucla.edu

Early Memory Loss Conference

Date: Saturday, June 4, 2022

Time: 9:30 AM - 12:00 PM (PDT)

Virtual Forum

In partnership with Alzheimer's Los Angeles, the Easton Center is excited to present a FREE Virtual Early Memory Loss Conference to offer support and education to anyone experiencing early memory loss, a diagnosis of mild cognitive impairment, or early-stage Alzheimer's disease. The conference also welcomes partners or family members of the person living with the diagnosis. Dr. Timothy Chang, UCLA neurology will present at this important event.

To register, please visit: www.AlzheimersLA.org/EMLC

World Elder Abuse Awareness Day: Together for Empowerment, Knowledge, & Support

Date: Wednesday, June 8, 2022

Time: 10:00 AM – 12:00 PM (PDT)

Virtual Forum

Speaker: Bet Tzedek Legal Services

To RSVP, please visit: <https://www.bettzedek.org/weaad22>

Self-Care-Why It's Important to You

Date: Saturday, June 18, 2022

Time: 11:00 AM – 1:00 PM (PDT)

Virtual Forum

This event is co-sponsored by the Mary S. Easton Center for Alzheimer's Disease Research at UCLA; Alzheimer's Los Angeles, and ACTS- Actively Caring Through Sharing, Inc.

Caring for yourself, while caring for someone else, may seem like an impossible task. Yet, it is a skill that can help reduce stress and improve general health and wellbeing. A program for African American family caregivers.

RSVP is required for access information. Please RSVP to Monica Moore at mrmoore@mednet.ucla.edu

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