

This issue features photos of summer on the UW–Madison campus. (Photos by Jeff Miller / UW–Madison)



Wisconsin Alzheimer's
Disease Research Center

UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

Headlines

SUMMER 2021

WELCOME

Chin named Clinical Core co-leader

Nathaniel Chin, MD, was named co-leader of the Wisconsin Alzheimer's Disease Research Center (ADRC) Clinical Core. In this role,



Chin

Chin will help manage the Clinical Core longitudinal study, a group of more than 1,000 research participants who visit the center regularly for health and memory testing and participation in biomarker studies. The data collected from Clinical Core research participants informs dozens of Alzheimer's disease research studies each year.

Chin joins Clinical Core Leader Cynthia Carlsson, MD, MS, and Clinical Core Co-Leader Sanjay Asthana, MD.

A Watertown, Wisconsin, native and graduate of the UW School of Medicine and Public Health, Chin joined the Wisconsin ADRC in 2017. He serves as medical director for the center as well as the Wisconsin Registry for Alzheimer's Prevention (WRAP). He hosts the Wisconsin ADRC's podcast, *Dementia Matters*. ♦

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DIRECTOR'S MESSAGE

Pandemic underscores connection between research and patient care

Each year, the Alzheimer's Association International Conference (AAIC) welcomes thousands of researchers to the world's largest gathering dedicated to advancing dementia science. This year's event, held in July in Denver, Colorado, was AAIC's first hybrid conference, attracting nearly 1,200 in-person and more than 10,000 virtual attendees.

While the COVID-19 pandemic changed the way people attended AAIC, it did not stall scientific progress. Researchers from UW–Madison were authors or co-authors on more than 80 presentations. (You can read about the UW at AAIC on our website at adrc.wisc.edu/news.) And researchers from around the world shared new ideas and new discoveries.

A prominent theme at the event was research suggesting COVID-19 is associated with long-term cognitive dysfunction and acceleration of Alzheimer's disease pathology and symptoms. This line of research underscores the con-

nection between research and patient care, and the importance of continued research on how the virus affects health, including brain health.

At the Wisconsin ADRC, our dedication to patient care is equally as important as our research mission. Many of our investigators see patients throughout the UW Health system. In fact, our geriatricians hold daily memory clinics, and the care they provide is influenced and informed by Wisconsin ADRC-supported research.

More than a year ago, we started asking our research participants about their experiences with COVID-19. This data will result in studies into the virus's effect on brain health. And eventually, the results of those studies will make it into our clinics, guiding our geriatricians and memory care professionals in diagnosis and treatment plans.

Your dedication to our program has effects far beyond research. It helps inform patient care for your family, friends, and neighbors. Thank you! ♦

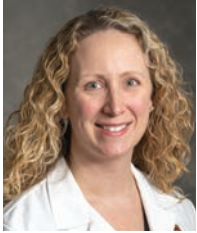


Sanjay Asthana, MD
Associate Dean for Gerontology
Director, Wisconsin ADRC & Madison VA GRECC
Professor, UW School of Medicine and Public Health

NEWS BRIEFS

Wisconsin ADRC funds three studies targeting new ideas in Alzheimer’s disease research

Three Wisconsin ADRC investigators will lead the new UW Center for Health Disparities Research at



Kind

the University of Wisconsin School of Medicine and Public Health. The new center seeks to examine how a person’s environment and social conditions impact their health down to the molecular level.



Bendlin

Amy Kind, MD, PhD, professor of medicine (geriatrics), is the center’s founding director. Joining Kind are two deputy directors — **Barbara Bendlin, PhD**,

professor of medicine (geriatrics), and **Andrea Gilmore-Bykovskiy, PhD, RN**, assistant professor in the UW School of Nursing.

Leonardo Rivera-Rivera, PhD, assistant scientist in the Sterling Johnson Imaging Lab, was named a junior fellow by the International Society of Magnetic Resonance in Medicine. He is also the recipient of a 3-year research grant and fellowship from the Alzheimer’s



Rivera-Rivera

Association to investigate the development of Alzheimer’s disease through vascular imaging research.

The Wisconsin Alzheimer’s Disease Research Center (ADRC) recently announced funding for three Developmental Project Awards targeting Alzheimer’s disease and related dementias (ADRD) research. The two-year awards are available to researchers within the University of Wisconsin, with priority given to junior researchers and postdoctoral trainees. Developmental projects explore new hypotheses and align with the aims of the National Alzheimer’s Project Act, a strategic plan to address the Alzheimer’s disease crisis in the United States.

Cerebrovascular health and Alzheimer’s disease

In her project “Eliciting the Role of Vascular Wall Dysfunction in Alzheimer’s,” Laura Eisenmenger, MD, assistant professor in the Department of Radiology, will study the connection between cerebrovascular disease and Alzheimer’s disease. Cerebrovascular disease is a name given to a group of conditions that affect blood flow in the brain. Eisenmenger will use non-invasive brain imaging to examine cerebrovascular health. More specifically, she will use MRI (magnetic resonance imaging) to measure blood-brain barrier permeability and blood vessel wall stiffening. Ultimately, this research will lead to a better understanding of brain health in people with Alzheimer’s disease.

The amyloid plaque cellular microenvironment in Alzheimer’s disease

Alzheimer’s disease drives chemical changes in the brain that can alter cognition in patients, but the mechanisms behind these changes are not well understood. In their project “Label free quantitative imaging of the amyloid plaque cellular microenvironment

in Alzheimer’s,” Kevin Eliceiri, PhD, associate professor in the Department of Medical Physics, and Tyler Ulland, PhD, assistant professor in the Department of Pathology and Laboratory Medicine, will study the microglia-associated metabolism and fibrosis in the amyloid beta plaque-adjacent microenvironment. Microglia are the immune cells of the brain, and fibrosis is the development of fibrous connective tissue to aid in the repair of damaged tissues. This work aims to determine the changes that plaque-adjacent microglia undergo in Alzheimer’s disease and the extent to which amyloid beta plaques trigger a wound healing response in microglia. The researchers hope to better understand the role of wound healing in Alzheimer’s disease progression and how microglia influence Alzheimer’s disease progression, and possibly reveal new targets for treatment.

Smoking cessation in older adults

Smoking can influence a person’s risk of developing Alzheimer’s disease and related dementias (ADRD). For example, people who quit smoking have a lower risk of dementia onset. Nonetheless, older smokers are less likely than younger smokers to attempt to quit smoking and to receive evidence-based smoking treatments such as nicotine replacement therapy. In her research project “ADRD Prevention Messaging to Increase Smoking Cessation Attempts in Older Adults,” Adrienne Johnson, PhD, assistant scientist in the UW Center for Tobacco Research and Intervention, aims to develop a program to encourage older adults to quit smoking. This intervention, if successful, will help older adults quit smoking and will possibly prevent or delay the onset of Alzheimer’s disease and related dementias.

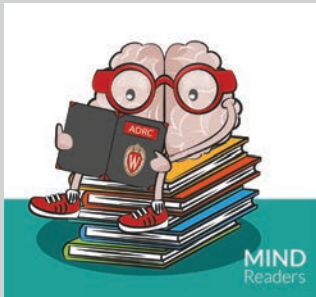


UPCOMING EVENTS

MIND Readers Book Club with Dr. Michelle Braun

September 22, 6-7 p.m.
Live on Zoom

A good book is a great way to start an engaging conversation. The Wisconsin Alzheimer's Disease



Research Center invites you to join the Mind Readers book club for a discussion with Michelle Braun, PhD, author of "High-Octane Brain: 5 Science-Based Steps to Sharpen Your Memory and Reduce Your Risk of Alzheimer's." Mind Readers is free and everyone is welcome to join. Register for upcoming events and find more details at adrc.wisc.edu/bookclub.

Memories Matter Livestream: Supporting Research, Health Equity, and Patient Care

October 20, 7-8:30 p.m.
Live online

Join the UW Initiative to End Alzheimer's for an online panel discussion about its mission to end Alzheimer's disease through research, health equity, and patient care. Speakers will include Sanjay Asthana, MD, Cynthia Carlson, MD, MS, Nathaniel Chin, MD, Carey Gleason, PhD, MS, Gina Green-Harris, MBA, and Sterling Johnson, PhD. Panelists will highlight the latest advancements happening at UW-Madison to help protect memories and ultimately find a cure for Alzhei-

mer's disease. This special program will be hosted by sportscaster Matt Lepay, the radio voice for the Wisconsin Badgers and a member of the UW Initiative to End Alzheimer's Board of Visitors. Ask questions during the live chat, and learn how you can support the important work happening in Alzheimer's disease programs at the UW. Register online at go.wisc.edu/fw974m.

Solomon Carter Fuller Virtual Brain Health Celebration

October 22, 6 p.m.
October 23, 8:30 a.m.
Live on Zoom

Join us for the two-day Solomon Carter Fuller Virtual Brain Health Celebration, held annually to build awareness of Alzheimer's disease in the African American community. The event includes an Ecumenical Candlelight Service of Remembrance to honor people who have passed away and those who are coping daily with the challenges of living with dementia or Alzheimer's disease, as well as an educational event featuring keynote speaker Peggys Dilworth-Anderson, PhD, who will speak about the caregiver's journey. Free and open to the public, the event is sponsored by the Wisconsin ADRC and the Alzheimer's & Dementia Alliance of Wisconsin. Learn more about the event and register online at alz.wisc.org/scf2021.



Dilworth-Anderson

EDUCATIONAL SERIES

Healthy Living with MCI

Mild Cognitive Impairment (MCI) is an early stage of memory loss. People with MCI have more memory problems than other people their age, but their symptoms are not as severe as those associated with dementia due to Alzheimer's disease.

MCI may progress to Alzheimer's disease, however, some patients regain normal memory and cognition. Signs of MCI include:

- Having more trouble coming up with words or names of familiar people than others of the same age
- Forgetting recent conversations, events, or appointments
- Losing things often

Educational Series

The Wisconsin ADRC's quarterly educational series Healthy Living with MCI offers patients and families support, guidance, and science-backed strategies for living with a diagnosis of mild cognitive impairment. Registration is free and open to everyone. Healthy Living with MCI is co-sponsored by the Alzheimer's Association Wisconsin Chapter.

Mark your calendar for these upcoming events. Register and learn more at adrc.wisc.edu/mci.

- September 17, 9:30-11:30 a.m., "Exercise Your Way to a Better Brain" with Max Gaitán, MEd, and Sarah Lose, MS
- December 10, 9:30-11:30 a.m., "Medication Supplements and Vitamins" with Holly Altenberger, PharmD

SELECTED OPEN STUDIES

Dementia Care Research Core Recruitment Registry

The Dementia Care Research Core Recruitment Registry is a new opportunity for both people with memory issues and their caregivers. Care research focuses on understanding how to improve the quality of life for people with Alzheimer's disease and their families by looking at the care they receive at home or within the healthcare system. By enrolling in the registry, you and your caregiver agree to be contacted in the future about new research studies for which you may be eligible. You also agree to be contacted for a baseline survey phone call and annual survey phone calls. Contact the study team at caregivercore@medicine.wisc.edu to learn how you can join the registry.

Lingual Strengthening in Patients with Memory Loss

The Swallowing and Salivary Bioscience Lab is recruiting participants who have a memory impairment and may be experiencing difficulty swallowing and their caregivers for a study. The study is trying to figure out which treatments for swallowing problems are best for people who have trouble swallowing and memory issues. Contact the study team at swallowlab@medicine.wisc.edu for more information.

Longitudinal Impact of Fitness and Exercise (LIFE) Study

The LIFE study is investigating the effects of aerobic fitness and physical activity to better understand how those factors might help to promote healthy brain aging and delay the onset of clinical symptoms of Alzheimer's disease in the future. Participation involves two visits that include: vitals, two blood draws, exercise treadmill test, MRI, two PET scans, (optional) lumbar puncture, two questionnaires, and wearing an accelerometer. We are currently recruiting cognitively healthy individuals age 45 and older. Contact Alyssa at aapandos@medicine.wisc.edu or (608) 265-6339 for more details.

Wisconsin ADRC Recruitment Registry

New studies start frequently at the Wisconsin Alzheimer's Disease Research Center (ADRC), and we're looking for volunteers. The Recruitment Registry includes names and eligibility information of potential research volunteers. When new studies become available, we use the Recruitment Registry to identify persons who may qualify for new opportunities. Just about anyone over the age of 18 can join. Visit go.wisc.edu/z4kk8f to fill out the online enrollment form, or call Bonnie at (608) 265-0407.

A full list of recruiting studies is on our website at adrc.wisc.edu/open-studies.



REMINDER!



Wisconsin Brain Donor Program
Wisconsin Alzheimer's Disease Research Center
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

All participants of the Wisconsin ADRC Clinical Core Study and their biological parents are invited to join the Wisconsin Brain Donor Program.

For more information, to update your registration, or to become a future brain donor, please contact us.

Office phone: (608) 265-4000

NEWS

Learn how to reduce your risk for Alzheimer's disease

Tune in or set your DVR to see Nathaniel Chin, MD, and his presentation "6 Ways to Reduce Your Risk for Alzheimer's Disease" on PBS Wisconsin. Incorporating physical activity into your life and getting together with friends are just two of the science-backed lifestyle changes Chin recommends to viewers to help improve brain health.



Chin is assistant professor of medicine at the University of Wisconsin School of Medicine and Public Health. He treats patients with memory disorders at UW Health memory clinics and is medical director at the Wisconsin ADRC and Wisconsin Registry for Alzheimer's Prevention (WRAP).

Watch "6 Ways to Reduce Your Risk for Alzheimer's Disease" online anytime, or watch the program on your local PBS Wisconsin station – find the video and upcoming air times at go.wisc.edu/795z4j. ◇

