

ALZHEIMER'S DISEASE

FROM RESEARCH TO CARE: A COLLABORATIVE
SEARCH FOR NEW DISCOVERIES



UNIVERSITY of
ROCHESTER
MEDICAL CENTER



THE FIGHT AGAINST ALZHEIMER'S DISEASE

If you have experienced a loved one dealing with Alzheimer's, you know firsthand how devastating and heartbreaking the disease is. It transforms a once-vibrant spouse, parent, grandparent, or friend to a frightened, confused stranger. And you may feel helpless, overwhelmed, and anxious about your future together.

Alzheimer's disease cannot be cured or prevented. No new treatments have effectively stopped the progression of the disease. By 2050, it is projected to be the leading cause of death nationally, eclipsing cancer and heart disease.

While the news is alarming, there is hope. Using a team approach, scientists at the University of Rochester Medical Center (URMC) are deciphering how Alzheimer's forms and developing new ways to diagnose and prevent it. Novel

neuroimaging techniques are allowing our physicians and scientists to track the progression of the disease more closely, with the promise of earlier diagnosis and more effective treatments. Engineers, chemists, biologists, physicians, and neuroscientists are working together in our Del Monte Institute for Neuroscience to unravel complex, devastating diseases of the brain. And, we are conducting clinical trials to test whether new Alzheimer's treatments are safe and effective for patients.

Because patients with Alzheimer's experience a range of symptoms, we are also using a collaborative approach to research and care. Neurologists, psychiatrists, psychologists, geriatric specialists, nurses, and social workers are combining their expertise to help maintain the optimum health of our patients and their families.

“This rapidly escalating crisis requires collaboration from many different specialties and perspectives in medicine and nursing. The University of Rochester Medical Center has that expertise. We are well positioned to make incredible discoveries with our strengths in basic research, clinical research, and patient care. With your help, we will continue our quest to impact people's lives in Rochester and around the world.”



Robert G. Holloway, MD, MPH
Chair, Department of Neurology
Edward A. and Alma Vollertsen
Rykenboer Chair in Neurophysiology



Hochang Benjamin Lee, MD
Chair, Department of Psychiatry
John Romano Professor of Psychiatry

A LOOK AT UPMC'S PROJECTS: TRANSLATING RESEARCH INTO CARE



Research indicates the brain's immune system could potentially be harnessed to **help clear the brain of amyloid plaques**, structures which scientists believe play a major role in Alzheimer's.



Computer-based brain fitness activities may help **protect cognitive function and slow decline in older adults** with mild mental impairment, a precursor to Alzheimer's disease.



Alzheimer's can arise when the **brain's waste removal system breaks down**, causing toxic proteins to accumulate in the brain.



A high dose of a common antidepressant drug (citalopram) **significantly reduced agitation in Alzheimer's disease** patients, helping alleviate caregiver distress.



Researchers are **exploring how insomnia and poor quality of sleep** result in the fusion of amyloid proteins, to form Alzheimer's plaques.



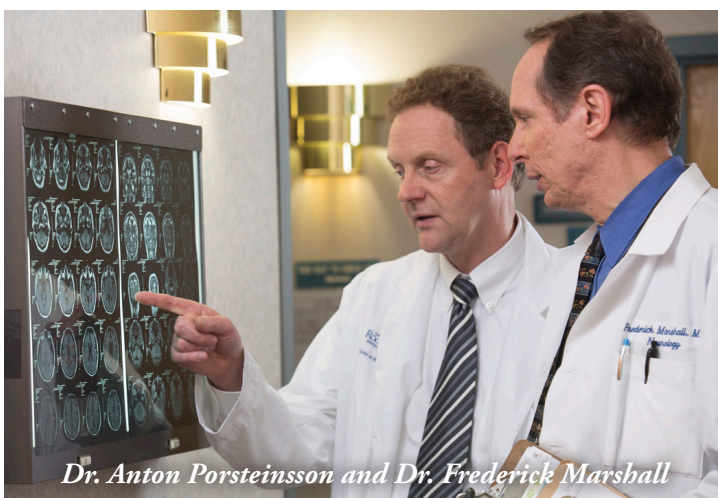
A pair of studies at UPMC is exploring ways to help caregivers manage stress and improve their own health to **more effectively provide care for their loved ones**.



The first study of its kind found that older people with excellent memories have **more efficient connections between specific areas of the brain**. This could provide leads to the prevention of dementia and cognitive decline.



A simple, computer-based tool can help detect early signs of Alzheimer's or other forms of dementia. The **inexpensive 10-minute, non-invasive examination** can detect subtle lapses in the brain's perceptual ability that may signal dementia's early stages of mental decline.



Dr. Anton Porsteinsson and Dr. Frederick Marshall

ALZHEIMER'S DISEASE CARE, RESEARCH, AND EDUCATION PROGRAM

The Alzheimer's Disease Care, Research, and Education Program (AD-CARE) is one of the leading Alzheimer's clinical research programs in the nation. AD-CARE physicians and their patients have taken part in virtually every pivotal study of potential Alzheimer's treatments, including several landmark trials. Many of the current drugs were developed and tested here in clinical trials. Our studies often incorporate advanced imaging techniques that can detect and track brain changes decades before the onset of cognitive problems. AD-CARE focuses on

preventing Alzheimer's in high risk individuals, treating early memory problems or cognitive impairment, improving and validating Alzheimer's diagnostic tools, and treating behavioral disturbances in persons with dementia.

“There is so much more we can do for patients today than we could 20 or 30 years ago. It is our hope to continue treating Alzheimer's disease more and more effectively and to someday prevent the disease outright.” — Anton Porsteinsson, MD, Director, AD-CARE, William B. and Sheila Konar Professor of Psychiatry



“If you ask older people what their major health concern is, almost 95 percent will say, ‘I want my mind to stay sharp.’ We all expect to get frail and for our bodies to give up on us, but we don’t want our minds to give up on us. Our minds and memories are fundamental to who we are.”

John Foxe, PhD

*Kilian J. and Caroline F. Schmitt Chair in Neuroscience,
Director, Del Monte Institute for Neuroscience*



CARE FOR PATIENTS AND CAREGIVERS

Our innovative Memory Care Program was created to meet a vital unmet community need. It provides a comprehensive and integrated approach to diagnose Alzheimer’s and offers long-term treatment and support for patients and their caregivers that evolves as the disease progresses. The program brings together all of the necessary clinical resources and services under one roof, allowing the team easier collaboration. Individuals and families receive services from a multi-disciplinary team of clinicians including specialists in neurology, psychiatry, neuropsychology, social work, and marriage and family

therapy. Our services include comprehensive evaluations, guidance on medications and coping strategies, educating patients and families on community resources and support, and informing individuals about opportunities to participate in research studies.

“We have an aging population and this is an epidemic. This is going to require that we develop better ways of providing care.” — Yeates Conwell, MD, Director, Office for Aging Research and Health Services



MAKING AN IMPACT

WILLIAM AND SHEILA KONAR. William “Bill” Konar and his family knew something wasn’t right when he became confused with directions when driving and experienced difficulty with simple math. Bill was diagnosed with Alzheimer’s in 2000 and the disease changed everything in his life. His wife, Sheila, became a caregiver, and they became philanthropists to help other families facing the disease. This included creating an endowed professorship to support research for the treatment and prevention of diseases like Alzheimer’s. Bill passed away in 2015, but Sheila remains committed to fighting the disease.



WENDY AND DAVID DWORKIN. Growing up, Wendy Dworkin’s mom, Barbara, did it all. She took care of her family, helped with her husband’s business, held fundraising events, and was known for having a mind like a steel trap. In 2008, she began forgetting things. Her personality and behavior changed and she was eventually diagnosed with Alzheimer’s. Today, thanks to an assessment and adjustment of her medications by Dr. Anton Porsteinsson, her symptoms have lessened and her relationships with family and friends have improved. Grateful to Dr. Porsteinsson, Wendy and her husband, David, have become advocates for URM’s AD-CARE program.

To find their stories, and others, please visit everbetter.rochester.edu/alzheimers

“We still know where this road will end—because Alzheimer’s disease currently has no cure—but we now have more time to plan and be together. For that, I am eternally grateful to the team at URM and the generous donors who support their work.” — Wendy Dworkin

5.5 million Americans live with Alzheimer’s disease. By **2050**, it will affect **13.8 million** and cost the U.S. **\$1.1 trillion**.





YOU CAN HELP US PROVIDE HOPE FOR PATIENTS AND FAMILIES

There is an urgent need to ease the burden on millions of men and women suffering from Alzheimer's disease. This complex and debilitating disease also has a major impact on caregivers and health care costs. If you have a loved one struggling with this disease, a cure cannot come fast enough. The University of Rochester Medical Center is at the forefront of Alzheimer's disease research and care. You can provide support in two ways:

CREATE A LEGACY

You can create a permanent legacy that funds the work of current and future scientists, clinicians, or educators by establishing an endowment, a fund that is invested and managed by the University in perpetuity. You can endow:

- Professorships and directorships
- A range of positions for our research or clinical faculty, residents, fellows, or graduate students
- Best-in-class research, clinical, or education projects and programs

MAKE AN IMMEDIATE IMPACT

Your support can help us attract the brightest faculty and trainees, and give them the freedom **now** to seize opportunities and pursue creative ideas in research, care, or education that will change the way we can help people around the world. You can support:

- Faculty recruitment
- Pilot projects/seed funds
- Multidisciplinary care
- Resident education

For more information about how your gift to Alzheimer's disease care and research can make an impact, please contact:
James O'Brien at (585) 276.6877 | james.obrien@rochester.edu



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