

CHARLES F. AND JOANNE KNIGHT ALZHEIMER'S DISEASE RESEARCH CENTER

HORIZONS

Newsletter, Volume 17(1), Spring/Summer 2010
Knight ADRC and the Memory & Aging Project

World Renowned Alzheimer's Disease Research Center Named for Charles F. and Joanne Knight

Washington University has recognized Charles F. and Joanne Knight by naming its world renowned Alzheimer's Disease Research Center in their honor. The Knights have long been generous supporters of the School of Medicine and leaders in providing funding for Alzheimer's disease research. They have committed more than \$15 million to advance Alzheimer's research at Washington University School of Medicine.

"This magnificent gift from Chuck and Joanne Knight will enable significant progress in the fight against Alzheimer's, benefiting future generations enormously," says Chancellor Mark S. Wrighton. "I personally am convinced that Alzheimer's disease is one of the most serious problems of the 21st century. This gift is another reflection of the extraordinary generosity of the Knights to Washington University and the community."

This gift will serve as a catalyst for exploring opportunities at the forefront of Alzheimer's disease research. The funds will be used to support research efforts and to recruit and retain the most talented physicians and scientists, helping the Charles F. and



Joanne Knight Alzheimer's Disease Research Center initiate and conduct projects that otherwise would not be possible.

Joanne Knight became familiar with Alzheimer's when her mother contracted the disease in the 1980s. "We saw firsthand how this disease affects patients and their families," she recalls. "We also saw that Washington University is at the forefront of Alzheimer's disease research, and their work offers hope that one day there will be truly effective therapies for treatment." "The School of Medicine is a leader in Alzheimer's research," Charles F. Knight says. "Researchers here are pursuing treatments that could one day dramatically improve the lives of millions of individuals worldwide. We want to do our part to fulfill that goal."

The Alzheimer's Disease Research Center was founded in 1985 by Leonard Berg, M.D., a pioneer in Alzheimer's disease research who passed away in January of 2007. Research at the Center seeks to distinguish between normal effects of aging on memory and the earliest symptoms of Alzheimer's disease and establishes that the causes of Alzheimer's disease begin damaging the brain

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Volunteers Needed for Knight ADRC Studies

Do you know of someone who might consider volunteering for a research project on cognitive aging?

The primary project of the Knight ADRC is in need of new volunteers:

The **Memory & Aging Project** of the Knight ADRC enrolls persons aged 65+, both those with mild memory problems and those who are cognitively healthy.

If you know of a potential volunteer, please ask that person to call the ADRC at 314-286-2683. Thank you!

Save the Date!

5th Annual Norman R. Seay Lecture

with guest lecturer

Lisa Barnes, Ph.D.

Associate Professor of
Neurological Sciences and
Behavioral Sciences, Rush
Alzheimer's Disease Center



October 5, 2010

4:00 - 5:00 pm

with reception to follow

Washington University School
of Medicine

Memory Walk 2010

Memory Walk is the Alzheimer's Association's signature event to help those battling Alzheimer's disease. Memory Walk proceeds support programs, services and research.

Come out and support the Memory & Aging Project team at this year's St. Louis walk

September 11 - Busch Stadium

For more information and to register, go to:
www.alz.org/stl



Alzheimer's Breakthrough Ride

This summer, the Alzheimer's Association is hosting a cross-country relay bike ride in support of the Breakthrough Act, a piece of legislation designed to increase federal funding for AD research. The Knight ADRC has organized a team of riders that will cover segments from Wichita, KS to St. Louis, MO on August 21st – 27th, 2010. Our team, the MoKan Throwdown, is composed of researchers from Washington University, C2N Diagnostics, Missouri State, and Kansas University Medical Center.

If you would like to donate to our team fundraising efforts, please visit: <http://tinyurl.com/MoKanThrowdown>. For more information on the Alzheimer's Breakthrough Ride, visit: <http://www.alz.org/breakthroughride>.

The ADRC wishes to congratulate James E. Galvin, MD, MPH, on his new position at the New York University School of Medicine as full Professor of Neurology and Psychiatry, Director of Clinical Operations at NYU's Center of Excellence on Brain Aging and Dementia, Director of the Pearl Barlow Memory Evaluation and Treatment Center, and Associate Director of the Alzheimer's Disease Center. Dr. Galvin filled many important roles at the ADRC since coming here in July 2000,



and while we are saddened that he is gone, we know that he will succeed in this incredible opportunity that he has accepted.

We are currently enrolling for two Alzheimer's disease (AD) clinical trials
All study procedures are for research only and are at no cost to participants

Name of investigational agent:

Bristol-Myers Squibb

Secretase Inhibitor for prodromal Alzheimer's disease
(HRPO #09-0833)
Oral medication may decrease amyloid production and slow down disease progression

Inclusion criteria:

45-90 years old
Very mild Alzheimer's disease (Mini Mental Score of 24-30).
Women must be postmenopausal or surgically sterile
In good general health

Exclusionary criteria:

History of : stroke, peptic ulcer, GI bleeding or inflammatory bowel disease, HIV, kidney disease, syphilis and/or insulin dependent diabetes
History of significant drug allergy.

Exclusionary medications:

Cannot be taking memantine (Namenda®), ginkgo.
There are many medications participants cannot be taking at screening and during the study.
Coordinators will review medications at screening.

Study design:

13 visits over 52 weeks. The first 24 weeks after screening is the treatment phase (active drug or placebo). The following 24 weeks is observational follow-up. The study includes: 3 lumbar punctures, 10 ECGs, 4 MRIs of the brain and Memory and thinking tests and/or interviews at every visit.

Study Coordinators:

Christy Tomlinson, RN, MSN, GCS
314-286-2364

Pamela Jackson RN, MA
314-286-2409

Name of investigational agent:

Wyeth Vaccine
(HRPO #07-0852)

Vaccine trial to assess the safety, tolerability and effectiveness of ACC-001. ACC-001 may prevent amyloid from depositing in the brain.

Inclusion criteria:

50-85 years old
Mild to moderate Alzheimer's (Mini Mental score of 16-26 at screening)
Stable on Alzheimer's medications for 120 days

Exclusionary criteria:

Unable to have an MRI.
History of stroke, encephalitis, seizures, auto immune disease, recent heart attack, uncontrolled blood pressure, alcohol or tobacco abuse, multiple allergies, cancer in the last 5 years.

Exclusionary medications:

Prior exposure to an Alzheimer's disease immunotherapeutic or vaccine

Study design:

24 visits with 5 injections over 2 years. This includes 6 brain MRI's, 6 ECG's (heart tracings), and 2 lumbar punctures (spinal taps). Blood draws and paper-pencil tests may also be done at study visits.

Study Coordinator

Pamela Millsap MSN, RN-GNP
314-286-2363

Our Strong International Presence

Investigators from the Knight ADRC had a strong presence at this year's International Conference on Alzheimer's Disease (ICAD) in Honolulu, HI. Twenty-five of our investigators presented the following:

- ♦ 20 posters
- ♦ 2 plenary presentations
- ♦ 7 oral presentations

In addition, one faculty member served as the Genetics Session chairperson.

The ICAD is a 5-day international conference specifically devoted to the field of Alzheimer's disease research. It is a forum for thousands of researchers across the globe to share their cutting-edge research in the mission to someday beat AD.

HELP US GO GREEN

In order to save paper and printing costs, the Knight ADRC has created a Horizons newsletter e-mail list. You can sign up for this e-mail list and opt out of receiving a paper copy of our newsletter by contacting Ron Hawley (hawleyr@abraxas.wustl.edu or 314-286-2468). Include your name and the e-mail address where you'd like the newsletter sent.

E-mail addresses will not be shared with any other parties and will be used only to send you our Knight ADRC Horizons newsletter.



ADRC Renaming...Continued

decades prior to the first appearance of clinical symptoms.

“The Knight Alzheimer’s Disease Research Center is making great advances in understanding Alzheimer’s, as physicians and researchers home in on early detection as well as potential treatments to halt the progress of this terrible illness,” says Larry J. Shapiro, M.D., executive vice chancellor and dean of the School of Medicine. “The unwavering loyalty and generosity of Chuck and Joanne Knight will allow us to make even greater advances.”

"This extraordinary gift as well as those from others will help us keep the Knight ADRC at the forefront of worldwide efforts to improve our ability to diagnose, treat and one day prevent Alzheimer's disease," states John C. Morris, M.D., the Harvey A. and Dorismae Hacker Friedman Distinguished Professor of Neurology and director of the Charles F. and Joanne Knight ADRC.

“The acceleration in research and development that the Knights’ generous support helps enable is coming at a crucial time,” says David Holtzman, M.D., the Andrew B. and Gretchen P. Jones Professor and chair of the Department of Neurology at the School of Medicine and neurologist-in-chief at Barnes-Jewish Hospital. “The age groups at highest

risk for Alzheimer’s disease are increasing in number faster than they ever have before, and to prevent the potentially enormous economic and human costs of the epidemic of Alzheimer’s that will result, we must find new solutions for diagnosis and treatment.”

The Knights’ other gifts to the School of Medicine – including the Joanne Knight Breast Health Center and Breast Cancer Program at the Alvin J. Siteman Cancer Center and the Charles F. and Joanne Knight Distinguished Professorship in Orthopaedic Surgery – reflect their support for improving community health and wellness. In addition, the Knights have made many significant gifts to the John M. Olin School of Business.

Charles F. Knight is chairman emeritus of Emerson and former member of Washington University’s Board of Trustees. He chaired Barnes Hospital from 1991 to 1995, when he helped engineer the formation of BJC Healthcare, and served as its chairman from 1993 to 1998. The hospital’s Knight Emergency and Trauma Center was named for him in 2002. Both Charles F. and Joanne Knight have been awarded honorary doctorate degrees from Washington University.

New Team Members

Jennifer Fisher Eastep - Psychometrician and Study Coordinator

Rachel Pizzie - Psychometrician

Leah Givens - Clinician

Sue Leon - Nurse Clinician

Ileana Culcea - Psychometrician

Maria Carroll - Nurse Clinician

Fond Farewells

James Galvin, MD, MPH - see page 2

Molly Aeschleman - Psychometrician - moved to Arizona to pursue a PhD in cognitive psychology

Carolyn Dufault - Psychometrician - recently received her PhD and has accepted a postdoctoral research position at Washington University

Mark Mintun, MD - Knight ADRC Imaging Core Co-Leader - pursuing a career in industry

Awards & Honors

On April 22, **Randy Bateman**, MD, received the Innovation Award presented by the St. Louis Academy of Science at their 16th Annual Outstanding St. Louis Scientists Awards Ceremony. The Academy of Science is dedicated to the advancement of science and the encouragement of public interest in and understanding of the sciences. Dr. Bateman received this award for his development of SILK (stable-isotope labeled kinetics), the first approach to measure the rate of production and clearance of amyloid beta (A-beta), a brain substance believed to play a key role in Alzheimer's disease.

John C. Morris, MD, has been selected to receive the 2010 Carl and Gerty Cori Faculty Achievement Award from Washington University. In addition, Dr. Morris' gubernatorial appointment to the State of Missouri Alzheimer State Plan Task Force was confirmed in April by the Missouri Senate.

Consuelo Wilkins, MD, was selected from among nearly 400 nominees as one of the 40 Under 40 honorees for 2010 by the *St. Louis Business Journal*. A special section of the *St. Louis Business Journal* featuring Dr. Wilkins and the other honorees was published in the January 15, 2010 edition of the newspaper.

Chengjie Xiong, PhD, was named Faculty Member of the Year in Biostatistics.

Wendy Overkamp, a psychometrician at the Memory Diagnostic Center, passed away on Tuesday, June 22, 2010. Wendy started at the ADRC as a psychometrician in the Memory and Aging Project in 1985, moving in 2000 to the Memory Diagnostic Center, where she tested almost all of the patients who crossed through the MDC doors (while continuing to support MAP/ADRC through testing of participants enrolled in our clinical trials). Wendy is survived by her husband David, her mother Elfriede, her brothers Tom and Rick Ziegelbauer, her sister Marti Cavender, and many brothers and sisters-in-law and other relatives. All of us who knew and interacted with Wendy are terribly saddened by her death. She will be missed very much.



A Question from Our 22nd Annual Participants Meeting:

Are there any foods that might help prevent Alzheimer's Disease? What about blueberries, blackberries, kale, and brussels sprouts?

A number of studies suggest that how we eat may be linked to our risk of developing—or not developing—AD. Some of these studies have examined foods that are rich in antioxidants and anti-inflammatory components to find out whether those foods affect age-related changes in the brain.

One study found that curcumin, the main ingredient of turmeric (a spice used in curry), can suppress the build-up of harmful beta-amyloid in the brains of rodents. Another study done with mice found that DHA, a type of omega-3 fatty acid found in some fish, reduced the presence of beta-amyloid and plaques. Other research has shown that older dogs perform better on learning tasks when they eat a diet rich in antioxidants and live in an “enriched” environment with many opportunities to play and interact with others (social engagement).

Other studies in rats and mice have shown that dietary supplementation with blueberries, strawberries, and cranberries can improve cognitive function, both in normal aging and in animals that have been bred to develop AD. Scientists are beginning to identify some of the chemicals responsible for these berries' beneficial effects and think that the chemicals may act by neutralizing free radicals. This may reduce inflammation or stimulate neurons to protect themselves better against some of the adversities of aging and AD.

Researchers also speculate that a diet rich in vegetables (especially green, leafy vegetables and cruciferous vegetables like broccoli) may reduce one's rate of cognitive decline, possibly because of their antioxidant and folate content.

In general, researchers believe that the same foods that are good for heart health are also good for brain health.

Modified from NIH Publication No. 09-5503, “Can Alzheimer's Disease Be Prevented?”

HORIZONS is the newsletter of the **Charles F. and Joanne Knight Alzheimer's Disease Research Center** (Knight ADRC) — a research program in the Department of Neurology, Washington University School of Medicine, funded by grants from the National Institute on Aging and private donations. The ADRC supports and promotes interdisciplinary research on Alzheimer's Disease. The Memory & Aging Project (MAP) — the clinical research office of the ADRC — provides expert clinical assessments of cognitive functioning in normal aging and dementia.

John C. Morris, MD, Director, ADRC; Director, MAP; Administration Core and Clinical Core Leader; Education Core/Rural Satellite Interim Leader

Eugene M. Johnson, PhD, Associate Director, ADRC

David M. Holtzman, MD, Associate Director, ADRC

Virginia Buckles, PhD, Executive Director, ADRC

Krista Moulder, PhD, Associate Executive Director, ADRC

Martha Storandt, PhD, Psychometric Leader

Nigel J. Cairns, PhD, FRCPath, Neuropathology Core Leader

Mark Mintun, MD, & Denise Head, PhD, Imaging Core Leader and Co-Leader

Chengjie Xiong, PhD, Data Management and Biostatistics Core Leader

Monique Williams, MD, African American Satellite Leader

Anne Fagan, PhD, Biomarker Core Leader