Layton Center and Prevention Research Center form the Oregon Healthy Brain Research Network

As the Centers’ for Disease Control (CDC) directs increasingly more attention to the treatment and prevention of chronic disease, the monetary and social costs caused by cognitive decline within the nation’s aging population are high on the list of important public health concerns of our time. Now, OHSU is among five institutions that make up The Healthy Brain Research Network (HBRN), a collaborative effort funded by the CDC. OHSU’s Prevention Research Center and the Layton Aging & Alzheimer’s Center will work together under this grant to promote healthy brain aging. The goals of the HBRN are to educate the public on cognitive health, advocate for policies and programs that support brain health, and develop culturally relevant ways to engage people in activities that promote cognitive health. Additional local partner organizations add strength to the network: PreSERVE Coalition, a local group that works to empower mid-life and older African Americans to maintain brain health and healthy lifestyles, The Alzheimer’s Association; State Health Division and Portland State University Institute on Aging.

At the Layton Center, two projects will add value to the overall goals of the Network:

First, Linda Boise, PhD, MPH, and Jeffrey Kaye, MD will work with

Continued next page
others on analysis of data from the Behavioral Risk Factor Surveillance System (BRFSS), a survey conducted in Oregon in 2012, 2013. Findings will help us better understand dementia burden and prevalence among Oregon’s aging population as well as the effects of care giving and health on well-being of family caregivers. The data will inform policy and programming in concert with the State Plan for Alzheimer’s Disease in Oregon. It will also help communities track public awareness and perceptions of cognitive impairment and the burden it imposes on families.

A second component of the Layton Center’s HBRN efforts is the SHARP pilot program, designed by Raina Croff, PhD and Hiroko Dodge, PhD. SHARP tests culturally relevant and engaging ways for Portland area African Americans aged 55 and older to initiate and sustain behaviors that can lead to healthier aging. This group walking program uses historical neighborhood images to prompt conversational reminiscence as participants walk. At home, participants engage in health education and memory modules via the internet. Motion sensors in participants’ homes measure activity levels for pre- and post-program comparison. During the pilot phase researchers gather participant input on ways to improve the program’s feasibility and relevance.

Dr. Boise, Croff, Dodge and Kaye will meet with other HBRN collaborators at the CDC in Atlanta, this March to coordinate programs and move the national initiative forward. Together, the combined efforts of OHSU’s Prevention Research Center, Layton Center along with local and national partners across the country will have a broad ranging impact on better cognitive health for aging Americans.

Alzheimer’s disease is a long journey marked by progressive loss of cognitive function. This journey is not taken alone. The burden of Alzheimer’s disease is borne in companionship with family and friends, doctors, nurses, social workers, support groups; all offer direction, support and advice.

In partnership with this community of care, researchers and research volunteers have an important role to play in advancing knowledge. Supported by the National Institute of Health, The Layton Center was founded to serve and partner with communities of the Pacific Northwest in the hope of transforming and just possibly ending Alzheimer’s disease. While our research contributes to the global effort to end Alzheimer’s disease, our mission is also a local one, intended especially to meet the needs of those living with dementia in the Pacific Northwest, a region with a long tradition of advancing social innovation. Working together, researchers and the communities they serve can strive to ease the suffering brought on by Alzheimer’s.

Through a new initiative named ACTNOW!, (Alzheimer’s Comprehensive Treatment Network of Oregon and Washington,) The Layton Center is developing a local community of patients, researchers, caregivers and anyone with an interest in Alzheimer’s research.

Stay tuned for more information on how to join ACTNOW! and become part of a network of citizens working to accelerate innovation in Alzheimer’s care and treatment through research. For information about how you can ACTNOW!, contact Bayard Lyons, lyonsb@ohsu.edu.
2015 Brain Institute Lecture Series

March 31
Nicolas Bazan, M.D., Ph.D.,
director, Neuroscience Center of Excellence,
Louisiana State University

Alzheimer’s Disease is a World Affair
Alzheimer’s tops the list as the most feared diagnosis for good reason: One in three people will die with Alzheimer’s or some form of dementia. But Nicolas Bazan, M.D., Ph.D. has created a message of exploration and hope: Although Alzheimer’s silences the mind, science can help solve the puzzle of the disease.

May 11
Patricia Churchland, B.Phil.,
professor and author, Department of Philosophy,
University of California San Diego

Touching a Nerve: The Self as Brain
Patricia Churchland, B. Phil., a ground-breaking philosophical neuroscientist, author, educator and MacArthur Award winner explores the impact of scientific developments on our understanding of awareness, the self, free will, decision making, ethics, learning and religion.

May 18
Robert Stern, Ph.D.,
professor of neurology and neurosurgery, anatomy and neurobiology, Boston University School of Medicine,
director BU CTE Center and BU Alzheimer’s Disease Center

Breaking the Brain: The Impact of Concussion at Any Age
Nearly 10 percent of athletes in contact sports suffer from concussions: about 135,000 each year for athletes between the ages of five and 18. Concussion may be a risk factor for mood swings, behavioral problems, motor dysfunction and even Alzheimer’s disease. Robert Stern, Ph.D., one of the world’s top researchers on the effects of trauma on the brain, discusses concussion at all ages.

June 1
Mariale Hardiman, Ed.D.,
vice dean, academic affairs, professor of education, clinical director Neuro-Education Initiative, Johns Hopkins University School of Education

Art and the Learning Brain
At a critical time in public education, critics are scrutinizing all aspects of curriculum and teaching styles. Mariale Hardiman, Ed.D. has developed a rich exchange between teachers and neuroscientists. Her Brain-Targeted Teaching Model is recognized as a national model for both arts programming and integration.

Lectures are at 7 p.m. Newmark Theater, 1111 SW Broadway, Portland.
To learn more and purchase tickets visit www.ohsubrain.com/bas or call 800 273-1530.

Living with Alzheimer’s
Free educational programs, offered by Oregon Care Partners, are available for families coping with dementia, as well as for professional caregivers. Part of this series, held at OHSU:

Living with Alzheimer’s, Late-stage
March 21 from 2:00 to 4:30 PM
OHSU Center for Health and Healing, 3303 SW Bond Ave., Portland, room 3171
Other topics are offered at locations all across Oregon. A complete listing can be found at oregoncarepartners.org, or alz.org/oregon.
Dr. Goeres, who was born and raised in Klamath Falls, Oregon, currently works and resides in Portland, Oregon. She is grateful for the generosity of Oregon taxpayers, who provided funding for her research through the Oregon Alzheimer’s Research Fund Charitable Tax Check Off Program.

Help Oregon discover new treatments for Alzheimer’s disease.

Alzheimer’s disease is a devastating disease — for the 76,000 Oregonians 65 and older who have it, for their 167,000 caregivers, and for everyone touched by it.

The Oregon Alzheimer’s Research Fund has helped researchers advance our understanding and test effective ways to address the myriad impacts of Alzheimer’s disease on our state’s families.

Oregon taxpayers who “check off” Alzheimer’s research on their tax return form each year make a difference by supporting new ideas by Oregon researchers who are advancing understanding and treatments for Alzheimer’s and other dementias.

You can also support grants to new Alzheimer’s disease researchers in Oregon by donating directly to the Oregon Partnership for Alzheimer’s Research. To do so, visit www.opar.ohsufoundation.org.

In our aging society, many people develop chronic conditions. As a result, many different medications may be used to treat older adults. Dr. Leah Goeres, Post-Doctoral Fellow in Pharmacoepidemiology investigates whether using too many medications may speed up the development of dementia in persons over the age of 85. A new grant will allow Dr. Goeres to explore questions comparing chronic disease, adverse effects and cognitive impairment with medication use. The study’s overall goal is to increase understanding of how disease burden relates to cognitive decline and how treatment of disease relates to cognition. Better understanding of multiple medication use among older adults can help guide medical planning and decision making.

Dr. Goeres uses data from two Layton Center longitudinal studies of older Oregonians. One study was conducted in older adults of the Portland Metro area and the other in older adults of the Klamath Basin region. In addition, Dr. Goeres compares the differences between health status, disease burden, and medication usage in rural versus urban residents. Because rural adults generally have less access to health services, it is possible that they suffer worse outcomes than urban adults. Dr. Goeres feels that it is important to account for regional differences when studying overall health. Dr. Goeres hopes that this project will benefit many older Oregonians, regardless of the region where they live.

UPDATE: The C. Rex and Ruth H. Layton Aging & Alzheimer’s Disease Center • March 2015

For more information about the Charitable Check off for Alzheimer’s Disease research visit www.ohsu.edu/alzcheck
Avoiding over medication

To lower the chances of over medication and drug reactions, the American Geriatrics Society’s foundation for Health in Aging recommends the following tips:

**List** Make a current list of all your medications, including OTCs and supplements. Include dosages and how often you take them. Take this list with you to each medical appointment, share with care providers and carry a copy with you at all times in case of an emergency.

**Ask** Over the counter drugs (OTC) may interact with your prescription drugs to create serious side effects. Always check with your health care provider or pharmacist before taking any OTC or supplement. Whenever you are prescribed a new medication, ask about its purpose, and about possible side effects. Ask your provider or pharmacist to check the new medication against your current ones in a drug interaction database.

**Read** prescription labels and look in the bottle to make sure the pharmacist has given you the right amount of the right drug, at the right dose. Your pharmacist can put large print labels on your medications if you have difficulty reading smaller text.

**Follow directions** for your medications exactly. Be sure you understand how, when and for how long you should take the medication. Have all your prescriptions filled at the same pharmacy so they get to know you and are aware of all the different medications you are taking.

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**Report problems**

If you begin to have new health problems after starting a new medication, tell your healthcare provider right away. If you have a serious reaction, such as difficulty breathing or swelling in your throat, call 911 or go to the emergency room immediately.

**Review**

Once or twice a year, ask your primary care provider to review your list of medications and supplements. Ask whether you still need to take each one at its current dose.

**Do**

- Throw away any medication if the expiration date has passed
- Keep your prescriptions filled so you don’t run out

**Don’t**

- Take a medication not prescribed for you
- Use medication past its expiration date
- Stop taking a medication just because you feel better
- Drink alcohol when you take medicine for sleep, pain, anxiety or depression
Dr. Amala Soumyanath, Associate Professor of Neurology, recently received a 5 year R01 grant from the NIH/National Center for Complementary and Alternative Medicine (R01AT00809) to study “Mechanisms and active compounds in the cognitive effects of Centella asiatica.” OHSU based co-investigators on this grant are Dr. Joseph Quinn, Professor of Neurology, and Dr. Nora Gray, Senior Research Associate, Department of Neurology. Dr. Claudia Maier and Dr. Fred Stevens, co-investigators from Oregon State University, will provide expertise for chemical aspects of the project.

Dr. Soumyanath received funding for her original pilot study through the Oregon Alzheimer’s Research Fund of the Charitable Tax Check Off Program. Her pilot study results helped her to gain the award of the current 5 year NIH grant.

Studies to date by this collaborative group have shown that Centella asiatica (CA) protects neurons from the toxic effects of beta amyloid, a protein deposited in large amounts in the brain of persons with Alzheimer’s disease (AD). This suggests that CA may offer an exciting new possibility for treating AD. Treatments designed to lower beta amyloid levels have not been successful in clinical trials, suggesting that therapy might be directed instead to reducing the beta amyloid’s toxic effects. Dr. Gray’s recent experiments have demonstrated that CA can improve mitochondrial function and antioxidant status in neurons exposed to beta amyloid. These and other mechanisms will be explored in more detail in the R01-funded project.

Investigations by this group of the active compounds in CA, have highlighted a neuroprotective role for caffeoylquinic acids. The new project will focus on identifying additional active components and examining synergism or other interactions between them.

Eventually, the goal is to evaluate CA’s effects on cognition and disease progression in AD. Identifying active compounds will facilitate the production of standardized extracts of CA for human clinical trials. Better understanding of CA’s mechanism of action will indicate what signals of efficacy to expect in humans.

OHSU memory care providers and dementia researchers Deniz Erten-Lyons, M.D. and Lisa Silbert, M.D. were featured in an article, “Jogging Your Memory” in the September 2014 issue of Portland Monthly.

The article by Carin Moonin gives an overview of risk factors for Alzheimer’s and other dementias, as well as prevention strategies, such as taking care of one's cardiovascular health.

Dr. Erten-Lyons also spoke on this topic at the Alzheimer’s Association McGinty conference November 4. Dr. Silbert covered the topic at an “Ask the Experts” talk at OHSU that same evening.

Here are some key points from the article in case you missed the article or talks:

Although it’s the most common of its kind in the U.S., Alzheimer’s is just one form of dementia. Vascular dementia, a decline in mental ability caused by conditions that impede blood flow to the brain, such hardened arteries or stroke, is also a leading cause of cognitive decline. Silbert says, “It’s very common to have Alzheimer’s along with other dementias or cerebrovascular diseases. In fact, cerebrovascular disease likely plays a prominent role in age-related mental decline.”

Unlike Alzheimer’s, cerebrovascular disease is preventable, adds Dr. Deniz Erten-Lyons, director of the Clinical Care and Therapeutics Program at OHSU’s Layton Aging and Alzheimer’s Disease Center. “Studies have shown that maintaining a healthy diet, blood pressure and cholesterol levels plus regular exercise may help prevent damage to your brain that manifests itself later in life.”

A few memory lapses aren’t enough for a dementia self-diagnosis. Other health issues — such as vitamin B12 deficiency, thyroid conditions, infections or depression — can cause similar symptoms, and those conditions are treatable.

Women are also more likely to develop Alzheimer’s. According to the Alzheimer’s Association, a woman’s estimated lifetime risk of developing Alzheimer’s after age 65 is one in six, compared with nearly one in 11 for a man.

Erten-Lyons adds, “Women are at increased risk, primarily because they live longer. Hormones or genetics may also play a part; these factors are still being researched. Alzheimer’s also affects women more in that women often serve as primary caretakers.”

So what should women do if they’re concerned about Alzheimer’s? The first thing, Silbert says, is to talk to your primary care provider. “Dementia is not a normal occurrence as we age. Many causes of memory decline are easily treatable.”

Erten-Lyons emphasizes the importance of research. “We are doing all kinds of research studies on Alzheimer’s and other types of dementia: prevention for those who don’t have it and treatment for those who are at all stages of the disease. By taking part in Alzheimer’s research, you may be able to help yourselves and others.”

BE A PART OF THE SOLUTION

If you’d like to get more information about OHSU’s research studies on aging, contact the Layton Aging and Alzheimer’s Disease Center at 503 494-7615 or adresearch@ohsu.edu.

To find out more about our current clinical studies, contact Lisa Loree: 503-494-7615.
Celebrating in a generous spirit

To mark the occasion of Phil Kreitner’s 75th birthday, he and his wife, Sherril Gelmon, threw a wonderful party in September and invited friends and family from all over the world to celebrate with them. Phil has received care at the Memory Clinic and participated in several clinical trials for treatment of mild cognitive impairment. In lieu of gifts, Phil and Sherril asked that well-wishers donate to the Layton Center, and so far they have raised over $3,000 to support research activities! We are grateful for their gift and especially for their generous participation in clinical trials.

The C. Rex & Ruth H. Layton Aging & Alzheimer’s Disease Center UPDATE

OHSU Brain Institute (OBI) is a national leader in neuroscience patient care, research and education. We provide the most comprehensive care of the brain, spine and central nervous system in the Pacific Northwest. Our nationally recognized neurological programs and centers offer comprehensive care, advanced research and clinical trial opportunities.

The Layton Aging & Alzheimer’s Disease Center is one of 28 NIH Alzheimer’s Disease Centers in the United States and the only one of its kind in Oregon. Our Center is recognized as a national leader in dementia care and research, and is committed to serving the needs of people throughout the Northwest.