Old Drugs Are New Weapons in the Fight against Alzheimer’s Disease

By Murray Raskind, MD

UW ADRC investigators awarded two grants from National Institute on Aging to study drugs used in general medicine for prevention and treatment of Alzheimer’s disease.

“I knew about lowering cholesterol with statins to prevent heart disease, but can it prevent Alzheimer’s disease?”

One of the most important advances in preventive medicine has been the use of the cholesterol-lowering statin drugs to reduce the risk of heart disease. These drugs are taken by millions of healthy middle-aged Americans to help prevent heart attack decades later.

Recent studies suggest that too much cholesterol in healthy middle age may also increase the risk of Alzheimer’s disease in later life. Building on these studies, UW ADRC investigator Gail Li, PhD, has been investigating whether lowering cholesterol can also reduce the risk of Alzheimer’s disease.

“How can adrenaline-blocking drugs used for high blood pressure or prostate symptoms calm agitated Alzheimer’s disease patients with no sedation or sleepiness?”

Agitation and aggressive behaviors are the most common reason an exhausted family finally places their loved ones with Alzheimer’s disease into long-term care. Irritability, uncooperativeness with necessary care, anger outbursts, pressured pacing and sleep disruption can exhaust even the most devoted family. The antipsychotic drugs (such as quetiapine and olanzapine) most commonly used to treat agitation/aggression in Alzheimer’s disease often are not effective. In addition, these antipsychotics produce side effects such as excessive sedation symptoms similar to those experienced by persons with Parkinson’s disease, and increase the risk of stroke and death. Clearly, research is needed to develop new treatments for these life altering behavioral problems of the later stages of Alzheimer’s disease that plague patients.

Elaine Peskind, MD, and ADRC investigators have taken a novel approach to discovering effective treatments for agitation/aggression in Alzheimer’s disease.

Elaine Peskind Continued on page 3

Gail Li, MD, PhD

Elaine R. Peskind, MD

In This Issue

Old Drugs are New Weapons in the Fight Against Alzheimer’s Disease 1

ADRC Profile: Meet Manard Stewart, Research Coordinator 4

African-Americans and Alzheimer’s Disease 6

Moments in Mind: the 25th Annual Alzheimer’s Association Regional Conference 7

Town Hall Talk: Gary Small, “Technology is Changing Your Brain” 8

Pacific Northwest Udall Center 9

Our Common Challenge: finding new treatments for Alzheimer’s disease 10

The Thousand Mile Stare, announcing new book, and author events 11

See Inside for Research Studies Seeking Volunteers
DIFFICULT BEHAVIORS & ALZHEIMER’S DISEASE

Do you know someone with Alzheimer’s disease who has any of these behaviors?

- Overly anxious or excited
- Making offensive comments
- Pacing, unable to sit still
- Kicking, biting, scratching
- Trying to leave
- Resisting help with daily care
- Anger and hostility
- Shouting or swearing
- Uncooperative
- Throwing things

Medical research provides new hope for adults suffering from symptoms of agitation and aggression associated with Alzheimer’s disease and other dementias. Such symptoms often respond poorly to currently available treatments.

The Alzheimer’s Disease Research Center is studying a new use for an old medication. We are currently investigating the use of a blood pressure medication, prazosin, for its effectiveness in the treatment of these behavioral problems.

Each study participant will have a 50:50 chance of being on prazosin or placebo (a sugar pill) for the first 12 weeks of the study. Everyone will be on prazosin for the second 12 weeks. Participation, which lasts about 24 weeks, involves up to 14 visits to our clinic (at the Veterans Medical Center on Beacon Hill in Seattle). Some of these visits can be done by phone.

The study is available to all members of the public, not just veterans. All participation is free of charge.

For more information about this study or other concerns about treating agitation in Alzheimer’s disease contact:

Murray Raskind, MD, Director Alzheimer’s Disease Research Center
murray.raskind@va.gov

or phone: Kirsten Rohde, RN 206-764-2713 or 1-800-329-8387 ext 62713
Working with ADRC neuroscientist Patti Szot, PhD, they discovered a cause of agitation in Alzheimer’s disease: over activity of the brain “adrenaline” arousal system that uses the messenger chemical norepinephrine.

Decades ago, drugs had been developed to lower high blood pressure without producing sedation by blocking excess effects of norepinephrine on blood vessels. Dr. Peskind reasoned that if one of these “adrenaline blocker” drugs could enter the brain it might reduce agitation/aggression in Alzheimer’s disease. Prazosin (formerly marketed as “Minipress”) is just such an inexpensive generic drug – and it worked! In a small pilot study in 22 persons with Alzheimer’s disease agitation/aggression, prazosin was markedly more effective than placebo for reducing these distressing symptoms and did not produce sedation or other problem side effects.

The National Institute on Aging was so impressed with Dr. Peskind’s pilot study results that they awarded her a one million dollar grant to perform a larger definitive study of prazosin in one hundred Alzheimer’s disease patients living with a caregiver in the community who have problematic behaviors such as uncooperativeness with care, irritability/anger, physically aggressive behavior or restlessness which occur at least two times per week.

The pressing need now is for volunteers to participate in Dr. Li’s pioneering study.

To participate in this study research volunteers must:

- Be age 45-64
- Have normal memory
- Not be on medication for high cholesterol or lipids
- Able to come to the research center for nine visits over one year
- Have a “study companion” who can answer questions by phone
- Willing to have two lumbar punctures to obtain cerebral spinal fluid for measurement of tau, p-tau, BDNF and other important brain chemicals.

One half of study participants will receive simvastatin and the other half will receive placebo (a pill without any medication in it.)

For more information, please call 1-800 317-5382 or 206 764-2069.
Could you walk us through what someone’s first appointment might look like?

By the time someone arrives for their first appointment, they’ve already gone through a pretty extensive review where we’ve requested medical records, conducted a phone interview, and sent them the consent forms, so they come to the appointment with a pretty clear understanding of what’s going to happen.

Once someone arrives, we answer any questions they might have and outline what’s going to happen at the appointment. Everything in research is voluntary, so we want to make it very clear in the consenting process what is going to be expected of them so they can confirm that it’s something they want to do.

Then the participant is seen by the doctor who performs a neurological evaluation. At the end of the appointment, vital signs are taken and a blood draw is performed to obtain DNA. If they’re going to have a lumbar puncture, there is an EKG.

The first appointment usually takes three to four hours—we specialize in unusual forms of dementia, so community doctors often refer subjects to this clinic because they can’t quite pinpoint what’s going on, and we’re careful about getting a thorough evaluation. But the follow-up appointments go faster. And if someone is a control, meaning they don’t have any memory or thinking problems, those appointments go faster as well.

What’s your favorite part of the job?

The study participants. They’re amazing. They are incredible people. I always look forward to meeting them or talking to them on the phone because they are always extraordinary.

In fact, when I interviewed for the job, and they told me that they get volunteers to do spinal taps, I thought they were kidding. I thought there was no way that you could convince someone to do that for a non-medical reason.

But since working here, I’ve realized that a research spinal tap is a very different animal than a...
medically indicated spinal tap. With a research spinal tap, the doctors take different precautions and use different equipment. Also, if there’s any reason they think a lumbar puncture might cause problems, they won’t do it. A lot of the participants with Alzheimer’s disease fall asleep during the spinal tap. It’s really a very benign experience. Some say that they would much rather have a lumbar puncture than do the memory testing!

**What drew you to this position?**

I was a professional ballet dancer for sixteen years. I started studying dance when I was a little kid; it was a compromise—I grew up in a family of jocks, and I had no interest in sports, so I started tap dancing and then moved to ballet. Much to my parents’ consternation, when I was eighteen, I decided to pursue dancing as a career. I danced with the Cleveland Ballet, the National Ballet of Canada, Ballet Chicago, and then I came here and danced six seasons with Pacific Northwest Ballet.

Dancer career spans are usually about ten years, and in my fifteenth year, my orthopedist told me, “Well, you could dance another season or you could climb stairs when you’re sixty.” I was running into some very significant injuries—back problems, knee problems, ankle problems—so it was becoming very difficult to perform. And so while I was still at the top of my form, I decided to retire and go back to school. My most interesting class was cell biology, so I got a degree in molecular biology. I knew that I wanted to work in the sciences, but I didn’t want to work with mice, rats, E. coli, or yeast; I wanted to work with people.

During my last two years of undergraduate education, I worked as a nursing assistant. I went to a nursing home where they had a lock-down dementia ward, and on that very first afternoon, I had one of those revelatory moments where I thought, “This is it! This is a population who I really enjoy working with.”

**Now that you’ve been here for a while, what are your plans for the future?**

I am applying to nursing schools to become a registered nurse. Ideally, I’d like to get into a part-time program so that I can continue working here. It’s hard to predict the future, but I really enjoy working in research, and I really enjoy working for this organization, so after I become a nurse, the idea would be that I could become a research nurse here.

**What do you do for fun?**

I sing with a group called the Tudor Choir. We specialize in polyphony and music from the English Renaissance—it’s a really fascinating period of music, and it’s kind of been forgotten. We are the artists in residence at Blessed Sacrament and at St. Thomas’s out in Medina.

My choir is sometimes contracted to sing scores for movies and video games. I’ve sung for *Halo*, *World of Warcraft*, and some of the *Star Wars* video games, which is a real pain because you have to learn to sing in a made-up language. I’ve also done the *Shrek Christmas Special*. And I hear our choir all of the time in commercials, like right now there’s the film *Book of Eli*, and we’re in the soundtrack for the commercial. So if you hear anything where there’s an enormous choir, it’s very likely that it was recorded in Seattle with my choir.

Would you prefer to receive *Dimensions* by email?

If you would like to receive this newsletter by email in the future, please send your email address to: [Susan.Martin@va.gov](mailto:Susan.Martin@va.gov)

Please put “*Dimensions* email list” in the subject line and put your name as it appears on this issue’s mailing label in the body of the message so we can take you off the list for receiving a paper copy.

We will send future newsletters to you by email in a pdf file format. Also all issues of *Dimensions* are available at our website: [www.uwadrc.org](http://www.uwadrc.org)
African-Americans and Alzheimer’s Disease

African-Americans may be at a higher risk for Alzheimer’s disease. Know the warning signs and be aware.

The Alzheimer’s Association is featuring information about African-Americans and Alzheimer’s disease on their website. The site below provides information about Alzheimer’s disease, the specific risks faced by African-Americans, ways to help with community awareness and support for caregivers.

http://www.alz.org/africanamerican/overview.asp?type=homepage

ADRC African American Advisory Board has inaugural meeting

The first meeting of the Alzheimer’s Disease Research Center’s African American advisory board (AAAB) was held on January 19th at the Madrona Presbyterian Church. The AAAB has been formed to improve collaborations between the African American community and the ADRC. Ultimately, the goals are to improve service for African American patients and families and to increase African American participation in research at the ADRC. Community members include Trina Burton, Clifford Holland, Gayle Johnson, Lemuel Lee Jones, Larry Low, and Helen Sikov. Patricia Hunter and Rowena Rye from the Alzheimer’s Association and Drs Leverenz and Raskind and Taylene Watson, MSW, from the ADRC are also on the AAAB. The first meeting was a great success with a review of community and ADRC needs and AAAB expertise. Currently the board plans to meet on a monthly basis. Questions regarding this new ADRC and community effort can be directed to Rowena Rye at (206) 363-5500.
Moments are defined as specific events in time. Some moments are so significant that they become emotionally etched in our minds. This year’s Alzheimer’s Regional Conference will focus on how to use these moments as well as the value of creating new “moments in mind.”

To do this, we extended a challenge to conference faculty members: increase our knowledge about dementia; create interactive, evidence-based workshops; address issues of diversity; and provide practical tools or skills that are easy to implement and share.

From family caregivers to advanced practice professionals to activities to direct care staff, there is something for everyone. Moments in Mind includes a keynote address and workshop from brain fitness pioneer Gary Small, M.D., Director of UCLA’s Center on Aging and author of several books, including iBrain, The Memory Bible and The Longevity Bible (www.drgarysmall.com).

Penelope Garner, developer of the SPECAL (Specialized Early Care for Alzheimer’s) Method and the focus of the book Contented Dementia by Oliver James, will come to Seattle from England to share her person-centered, evidence-based approach to dementia care that has been a great success in Europe. This will be Ms. Garner’s debut of the SPECAL Method in the U.S. (http://www.specal.co.uk/)

Other notable faculty at the conference include the ADRC’s own James Leverenz, MD; Murray Raskind, MD; and Elaine Peskind, MD, presenting on development disabilities and dementia; the connection between stress and dementia; and disruptive agitation and pharmacological management, respectively.

Pre-conference intensive workshops offered on April 15 are intended for the advanced practice professional. On the full conference day, April 16, twenty-one workshops include topics such as: improving memory; specialized early care for Alzheimer’s; innovative approaches to dining at home and in a community setting; the art of de-escalating aggressive behavior; home adaptations for independence; using the Wii gaming system; and activities for self-expression, to name a few.

For more information, visit the Alzheimer’s Association’s website at www.alzwa.org, or call the Chapter at 206.363.5500 and ask for Julie Shatzer.

IN THE NEWS

Alzheimer’s research: Aerobic exercise can protect brain, improve mental agility

An article recently appeared in The Oregonian describing research at the Veterans Affairs Memory Wellness Group that documents the value of exercise in improving mental agility. This study is also published in the Archives of Neurology.

SAVE THE DATE

2010 Spring Workshop with Teepa Snow, Dementia Care & Training Specialist.

Join us for “The Dementia Journey-Finding the Best Route” on April 16, 2010, 8:00am-4:30pm at Christ the King Center, 4173 Meridian Street, Bellingham, Washington. Continuing education units available. Pre-registration required. Call for registration or vendor information 360-671-3316.

Volunteers Needed

Help us find the Link between Hormones and Memory

The University of Washington Memory Health Research Program at VAPSHCS is looking for men over 60 to come in for one 2-3 hour visit which will include a memory and hormone level screening. You may also qualify for a six month hormone treatment study

Please Contact Christina at:

206.277.1155 or 1.866.577.1913

Or by email at: wellness@u.washington.edu
(The confidentiality of email cannot be guaranteed)

11th Annual “Miles for Memories”
A walk and sanctioned run featuring food, fun, families, and dogs!

Join us Saturday, May 15, 2010 at the Fairhaven Village Green in Bellingham, Washington. Starting gun is at 9:00am and when you return to the Village Green, enjoy the music, food, and watching dogs compete for prizes. Please call 360-671-3316 for information on sponsorship, teams, and registration for this extremely worthwhile cause.

Future of Health:

Gary Small: Technology is Changing Your Brain

Date    Thursday, April 15, 2010
Time    7:30 pm – 9:00 pm
Where   Downstairs at Town Hall; enter on Seneca Street.

If you think our constant use of the Internet, iPods, text messages, and video games has changed our lives, think some more: Technology has not only altered our lives; it’s altered our brains. Neuroscientist Gary Small, co-author of iBrain, says never before has one generation experienced such rapid change in the brain’s underlying wiring system, and something’s got to give. His Technology Tool Kit explains how we can compete, adapt, and thrive in this age of brain evolution without losing our social skills, or our minds.

Presented by Alzheimer’s Association of Western and Central Washington and Town Hall’s Future of Health Lecture Series with University Bookstore. Series sponsored by Bastyr University and PCC Natural Markets.

Tickets are $5 at www.brownpapertickets.com or 800/838-3006, and at the door beginning at 6:30 pm. Town Hall members receive priority seating. Late seating is not guaranteed.

Learn More
www.drgarysmall.com
We are very excited to announce that the National Institute of Health has funded a new center to study Parkinson’s Disease (PD) here in the northwest named the Pacific Northwest Udall Center or “PANUC”. This is the 14th Morris K. Udall Center of Excellence for Parkinson’s Disease Research funded nationwide. These centers are named after the former congressman Morris Udall who suffered from Parkinson’s disease. The aim is to conduct research into the causes of PD and to develop new treatments for PD. The PANUC is a collaboration among the University of Washington, Oregon Health Science University, and the Seattle and Portland Veterans Affairs Medical Centers.

Similar to the Alzheimer’s Center, one of the main goals for the PANUC will be to evaluate patients with PD over time with examinations and testing of thinking skills (cognition). While the results from these evaluations will be used for already developed research projects, this large sample (600 patients) of well-characterized PD patients will be used as a resource for future research as well. In addition to the patient-based component, other studies within the PANUC will study animal models of PD, brain changes in PD that account for clinical symptoms, and the role of genetics in PD.

Many of the investigators already working in the UW ADRC will also be participating in the PANUC, including Drs. Leverenz, Tsuang, Peskind, and Montine. One focus of the PANUC is to study the cognitive impairment observed in PD and the expertise of these investigators with Alzheimer’s disease and dementia will be quite valuable for the PANUC studies.

The PANUC is actively looking to recruit people with PD for this new center. If you, a loved one, or acquaintance suffers from PD please consider calling the PANUC to learn more about this new research effort. The PANUC toll free phone number is 1-866-932-7380. We need your help to make this center a success and to improve the lives of those who suffer from PD.
Our Common Challenge: finding new treatments for Alzheimer's disease

The UW ADRC and the Alzheimer's Association, Western and Central Washington Chapter, collaborated to hold an educational evening in University Place on November 19th, 2009. The focus of this forum was on research and Alzheimer's disease. 46 attendees heard from two research participants and the wife of an early onset research participant about their experiences as research volunteers. James Leverenz, MD, from the ADRC presented an overview about the disease and current research findings. Representatives from both organizations provided information about support and resources available and ways that people can be involved in the challenge to find treatments for Alzheimer’s disease.

The event was rated a success by attendees and presenters alike. Future forums are planned for the Bellevue/Kirkland and the Edmonds/Lynnwood areas.

We are appreciative of members of the staff from both organizations who helped make this event a success.

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Alzheimer’s Disease Research Center
University of Washington
Veterans Affairs Puget Sound Health Care System

The Alzheimer’s Disease Research Center (ADRC) is enrolling research participants in several new investigational treatment studies. **Finding treatments that actually change the disease process in the body is the focus of this new research.** Currently the only available prescriptions for the treatment of Alzheimer’s disease are medications that are mostly aimed at helping with the symptoms of Alzheimer’s disease such as memory loss and trouble thinking.

**These new studies are aimed at both treatment and prevention. Persons without memory loss, with mild memory loss or with Alzheimer’s disease may be eligible.**

Research participation will not cost you anything, and is open to all members of the public. Some research participants will receive a placebo (a treatment without active medication) for at least some portion of the research.

To participate, individuals must:

- Have a diagnosis of mild to moderate Alzheimer’s disease, age 50 and older, or
- Have mild memory loss or
- Have no memory problems, ages 45-64
  and
- Be living at home (one study will allow residents of assisted living centers to participate.)
- For people with memory loss, have a companion who can accompany the participant to all research visits

All research visits occur at the Alzheimer’s Disease Research Center in Seattle.

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For more information, please call the UW Alzheimer's Disease Research Center at:
206-764-2069 or 1-800-317-5382
New Seminar Series for Physicians and Scientists

The UW Alzheimer’s Disease Research Center and the Pacific Northwest Udall Center of Excellence in Parkinson’s Disease Research are initiating a new seminar series called: BAND (Brain Aging and NeuroDegeneration). We will meet from 5 to 6 PM on the last Monday of every month at the Harborview Medical Center Research & Training Building auditorium for a convivium among physicians and scientists interested in learning more about mechanisms of brain aging and neurodegenerative diseases and in developing interventions. There will be food and an invited speaker for each session.

For more information: Aimee Schantz [aschantz@u.washington.edu].

The Thousand Mile Stare
by Gary Reiswig

Subtitled “One family’s journey through the struggle and science of Alzheimer’s,” this book chronicles the Reiswig family’s history as Volga Germans who carry the rare familiar gene tied to young-onset Alzheimer’s. Reiswig’s memoir balances the personal with modern science, bringing hope and insight.

Dr. Thomas Bird, a member of the UW ADRC faculty, has been instrumental in leading research to find the gene, PS2, which affects the Reiswig family. Dr. Bird has written the Foreword.

STAY TUNED: The ADRC and the Alzheimer’s Association, Western and Central Washington State Chapter, are working together on creating author events May 10 – 16, 2010, where both Dr. Bird and Gary Reiswig will interweave the Reiswig family’s poignant chronicle with cutting-edge medical science. Third Place Books (www.thirdplacebooks.com) in Lake Forest Park (17171 Bothell Way NE Lake Forest Park, WA 98155) has scheduled an author event on Tuesday, May 11, at 7:00 p.m.

Please visit the Alzheimer’s Association’s (www.alzwa.org) website for specifics. We will have additional dates, times and locations posted soon.

To learn more about the book, visit http://thethousandmilestare.com/

The University of Washington ADRC Support Fund:

The support fund is used to help support new junior faculty researchers with strong credentials in the field of Alzheimer’s disease and also to provide direct support for ongoing research projects of the ADRC. Community support of the ADRC’s mission is a valued contribution to the quest to find the causes of and treatments for Alzheimer’s disease and related disorders.

For more information regarding the Alzheimer’s Disease Research Center Program Support Fund, please contact Susan Martin, ADRC Program Coordinator, at 206-764-2072, or toll-free at 1-800-329-8387, ext. 6-2072 or by e-mail at susan.martin@va.gov. Checks should be made out to ADRC and addressed to: VAPSHCS (S-116 6 East), Attn: Susan Martin, 1660 S. Columbian Way, Seattle, WA 98108.
See Inside for Research Studies Seeking Volunteers

News Inside:

1. Old Drugs are Weapons in the Fight against Alzheimer's Disease

6. African-Americans and Alzheimer's Disease


9. Introducing the Pacific Northwest Udall Center