NEW RESEARCH ADVANCES from the Alzheimer's Association International Conference on Alzheimer's Disease (ICAD) 2010

Held in July, the Alzheimer’s Association International Conference on Alzheimer’s Disease (AAICAD) brought together thousands of researchers from around the world. They spent one week reporting and discussing groundbreaking research and information on the cause, diagnosis, treatment and prevention of Alzheimer’s disease and related disorders. Following are research highlights from AAICAD 2010:

- The primary therapeutic target in Alzheimer’s disease has been the beta amyloid peptide, but recently, more attention has been given to the tau protein. New studies on immunotherapies targeting tau indicate that amyloid changes in the brain may happen early in Alzheimer’s, and tau-related changes happen later where they have a more direct effect on cognitive function. This implies immunotherapy treatments targeting amyloid may also alter neurodegenerative processes that occur later in the disease.

- Researchers using a new imaging tool suggest that there are different shapes of beta amyloid deposits in the Alzheimer brain based on which version a person has of Alzheimer’s risk gene APOE. This may be especially important because in some recent drug trials, the therapy benefited people who had certain types of APOE but were less effective or not effective in others.

- Long-term, large-scale studies support the association of physical activity and certain dietary elements (tea, vitamin D) with possibly maintaining cognitive ability and reducing dementia risk in older adults. Plus, a new study in an animal model of Alzheimer’s suggests that an antioxidant-rich diet with walnuts may benefit brain function.

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Recently, Dr. Lennart Mucke of the Gladstone Institute, a leading basic scientist in our field and chair of our Chapter Medical and Scientific Council, presented on the current state of Alzheimer research.

He covered some discouraging ground: the latest “hot” prospect Dimebon failed in Phase III clinical trials; and a National Institute of Health report threw cold water on data suggesting exercise, diet and mental stimulation might lower Alzheimer’s risk.

Dr. Mucke acknowledged the Alzheimer research road is hard, and he explained how much more complex the basic science of Alzheimer’s is than many other diseases.

It seems we are often found living in hope while simultaneously asking families to take research news with a significant grain of salt “…more research is needed.”

Alzheimer’s is a very difficult issue at the molecular level. There will be dead ends. There will be disappointments. Most of what we know about the disease, we’ve learned in just the past 20 years. Four drugs are approved for Alzheimer’s. There is enough good research out there that we can hold events like the Alzheimer’s Association International Conference on Alzheimer’s Disease. The Association funds New Investigator Grants to attract the best and brightest to our field.

Cancer, heart disease and AIDS receive 10 to 15 times the Federal funding of Alzheimer’s disease. It’s no coincidence that deaths from all these conditions declined over the last five years while deaths from Alzheimer’s rose. Research investments have paid off in these areas and it can in Alzheimer’s disease.

A lot of this will be up to us — you and me. We can’t simply bow our heads, slink away and buy long term care insurance for our grandchildren. We need to walk, talk, write, call, give. We need to insist that Alzheimer’s become the national priority it deserves to be.

See you at Memory Walk.

Wm H. Fisher, william.fisher@alz.org

Researchers Ride in Hopes of a Breakthrough

More than 60 Alzheimer researchers shed their lab coats and donned helmets for the Alzheimer’s Association Breakthrough Ride, a cross-country bike ride to raise awareness of Alzheimer’s disease.

You and your friends can show your support by signing the Breakthrough Ride petition to make Alzheimer’s a national priority and leaving encouraging words for the researchers at www.alz.org/breakthroughride.

The researchers will conclude their journey and present the signed petitions to Congress in Washington, D.C. on September 21, World Alzheimer’s Day!
New Research Advances at from ICAD (continued)

- A short-term clinical trial of intranasal insulin in Alzheimer’s and mild cognitive impairment (MCI) showed statistically significant benefits on certain tests of memory and functioning, but no changes on others. In those who showed benefits on memory tests, there were also positive changes in Alzheimer’s biomarkers in spinal fluid.

- Two new studies suggest that having Alzheimer’s disease may increase the risk of getting other potentially disabling health conditions, including seizures and anemia.

- The Dementia Demonstration Project (DDP), found that early detection, diagnosis and care management for people newly diagnosed with cognitive impairment and dementia can reduce outpatient costs by almost 30 percent.

- Scientists presented draft proposals to update the diagnostic criteria for Alzheimer’s for the first time in 25 years. The proposals would change the existing criteria by better reflecting the various stages of the disease and including Alzheimer’s disease biomarkers. While the role of biomarkers differs in each of the three stages, much remains to be understood concerning their reliability and validity in diagnosis. This makes it critical that any new recommendations be thoroughly tested.

Young Scientists Awarded for Alzheimer Research

The 2010 Alzheimer’s Association Awards for Excellence in Research on Alzheimer’s Disease and Related Disorders were presented to eight young scientists in recognition of their promising discoveries in Alzheimer’s related basic biomedical, patient-oriented or social/behavioral research. All recipients are post doctoral fellows or students enrolled in undergraduate or graduate programs at institutions in Northern California and Northern Nevada.

Congratulations to these full award recipients who received a cash award and travel stipend:

Sachi Jain – Gladstone Institute and UC San Francisco
"Arf4 regulates dendritic spine development in primary neurons"

Jitka Petrlova, Ph.D. – UC Davis
"The differences in the association between Apolipoprotein isoform E4 and E3 with Abeta"

Keith Vossel, M.D. – Gladstone Institute and UC San Francisco, Memory & Aging Center
"Tau reduction ameliorates amyloid-beta-induced impairments in axonal transport"

Qiang (Johnson) Zhang, M.D. – Buck Institute for Age Research
"Novel downstream mediators of APP signaling"

Congratulations to the honorable mention award recipients:

- Samuel Lockhart – UC Davis
- Sang-Won Min, Ph.D. – Gladstone Institute and UC San Francisco
- Mekala Raman – UC Davis
- Christopher Schwarz – UC Davis

For more information about the latest research advances and more details about these and other studies presented at AAICAD, visit www.alz.org/research.
Alzheimer’s Association Awards
Local Research Grants

The Alzheimer’s Association is proud to be the largest private, non-profit funder of Alzheimer research. We funded 84 out of the 850 research submissions that went through a rigorous peer review process in the past year. Four of those grants went to fund projects right here in the Northern California and Northern Nevada Chapter, including:

**Impact of Late-Life Anxiety and Depressive Symptoms on Cognitive Impairment**
*Sherry Beaudreau, Ph.D., Palo Alto Institute for Research & Education, Inc.*
This study aims to investigate the impact of anxiety and depressive symptoms on cognitive decline and progression to cognitive impairment in older adults. Identification of neuropsychiatric markers for cognitive decline would allow for tailored treatment much earlier in the cognitive impairment process targeting anxiety and depressive symptoms – perhaps even before cognitive decline is detected or occurs.

**Multi-ethnic Neuropathological Comparison of Alzheimer’s Disease: Focus on Control Cases**
*Lea T. Grinberg, M.D., Ph.D., UCSF*
This study looks at brain pathology in more than 500 donated brain specimens. The researchers will determine if donors of different ethnic backgrounds exhibit differences in brain lesions. It will also examine risk factors and genetic characteristics to determine if these characteristics are related to differences in brain pathology. This study could lead to a greater understanding of whether differences in ethnicity, risk factors or genetics may cause different forms of brain pathology.

**System for Assessing Speech Feedback Processing in Alzheimer’s Disease**
*John Houde, Ph.D., UCSF*
Alzheimer’s is associated with a breakdown of frontal cognitive systems related to memory, speech and language. This project provides a system for the automatic assessment of frontal function based on measuring responses to altered auditory feedback during speaking. It allows real-time alterations of auditory feedback during speaking and could be an inexpensive, automated tool for detecting subclinical signs of Alzheimer’s disease earlier and measuring the effectiveness of treatments that focus on speech and language in Alzheimer’s.

**The Role of DJ-1 in Cognitive Impairment**
*Amy B. Manning-Bog, Ph.D., Stanford*
This study examines the role of the DJ-1 gene in Parkinson’s disease and dementia. The researchers have shown that lack of a functional DJ-1 gene can lead to cognitive impairment and development of some Alzheimer-like pathologies in the brain. They now plan to perform a detailed analysis of the role of DJ-1 and how its absence leads to a brain condition exhibiting features of both Parkinson’s and Alzheimer’s.

To read more about studies funded by the Alzheimer’s Association around the nation and world, visit www.alz.org/research/alzheimers_grants/2009_overview.asp.

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Alzheimer Basics:
Plaques and Tangles

Scientists are not absolutely sure what causes Alzheimer’s but plaques and tangles are prime suspects in cell death and tissue loss in the Alzheimer brain.

**Plaques** are abnormal clusters of chemically “sticky” proteins called beta-amyloid that build up between nerve cells. The most damaging form of beta-amyloid may be groups of a few pieces rather than the plaques themselves. The small clumps may block cell-to-cell signaling at synapses. They may also activate immune system cells that trigger inflammation and devour disabled cells.

**Tangles** form inside dying cells. Tangles are twisted fibers of a protein called tau. In healthy areas, tau helps keep the transport system on track. But in areas where tangles are forming, the twisted strands of tau essentially disintegrate the transport system so that nutrients and other essential supplies can no longer move through the cells, which eventually die.

Though most people develop some plaques and tangles as they age, those with Alzheimer’s tend to develop far more. The plaques and tangles tend to form in a predictable pattern, beginning in areas important in learning and memory and then spreading to other regions.

Read more about plaques and tangles at www.alz.org/braintour.
CarePRO Comes to Nevada

Giving care to a loved one exacts a heavy toll on many families. Alzheimer’s disease and other dementias are among the most challenging conditions for which to provide care in the home.

Studies have found that the stress from caregiving can cascade into depressive symptoms: anxiety, anger, poor health and social isolation. It is not unusual for caregivers to develop health problems such as high blood pressure, diabetes, a compromised immune system, susceptibility to heart attacks and arthritis.

The Alzheimer’s Association offers several programs to help caregivers with their journey, including support groups and education programs.

Now, we are pleased to announce a new program that will begin in Northern Nevada in October 2010: Care Partners Reaching Out (CarePRO). This program offers skill-building workshops for persons caring for loved ones diagnosed with dementia, including Alzheimer’s disease and related disorders.

An estimated 84,700 Nevadans provide care to individuals with Alzheimer’s. That is an equivalent of 96 million hours of unpaid care at a value of more than $1.1 billion. With the incidence of Alzheimer’s expected to double within the state from 2000 – 2025, the need for more caregiver support and services is critical.

Arizona and Nevada have received three-year grants from the Alzheimer’s Disease Supportive Services Program to enable this innovative skill-building program, which is designed by and based on research conducted at Stanford University by David W. Coon, Ph.D., acting associate dean for Research and professor, College of Nursing & Health Innovation at Arizona State University. Dr. Coon is one of the nation’s leading experts on caregiver support.

CarePRO is part of a nationwide effort to provide evidence-based skills to caregivers. A collaborative team that includes the Alzheimer’s Association’s Northern Nevada and Southern Nevada Chapters, Arizona State University, the Arizona Department of Economic Security, the Cleveland Clinic/Lou Ruvo Brain Health Institute and the Nevada Aging and Disability Services Division is heading the effort in Nevada.

Each CarePRO session engages ten caregivers in workshops that provide education about dementia and its impact on families. Caregivers will learn techniques for managing stress, coping with the disease and communicating with loved ones suffering from memory loss. The program includes personalized telephone “coaching” calls that help caregivers implement the new skills introduced in the workshops.

Pre-registration and an initial screening process are required for participation. For more information, please contact Vicki Lebsack, program director at 1.775.786.8061.

Modest Research Breakthroughs Can Make a Big Difference

According to the new Alzheimer’s Association report “The Changing Trajectory of Alzheimer’s Disease: A National Imperative,” the number of Americans age 65 or older who will have Alzheimer’s disease is projected to reach 13.5 million by 2050.

But the report also shows that a research breakthrough that delays onset by a mere five years would decrease the total number of Americans age 65 and older with Alzheimer’s by more than 40%, from 13.5 million to 7.7 million in 2050.

And while a treatment breakthrough that slowed disease progression would actually increase the number of people over the age of 65 with Alzheimer’s because more people would be living longer with it, such a breakthrough would decrease the number of those in the severe stage from 6.5 million to 1.2 million by 2050.

For more on the benefits of investing in Alzheimer research, read the entire trajectory report at www.alz.org/trajectory.
When Charles (Chuck) Fulkerson was recently diagnosed with early stage dementia, he decided to take action and get involved with the cause—no surprise considering his history of distinguishing himself as a passionate leader in several community organizations.

Chuck is co-founder of the Reno Veterans Guest House, a non-profit facility that provides safe and comfortable lodging for families of veterans and veterans themselves who are receiving care at the VA Medical Center.

In addition, Chuck served on the Nevada Veterans Service Commission and as the executive director of the Nevada Office of Veterans Services.

Chuck’s commitment to the community is not limited to veterans. For over two decades, he served our youth through Nevada’s scouting programs.

The Alzheimer’s Association, Northern Nevada is pleased to welcome Chuck as a new volunteer on the Public Policy and Advocacy Committee. He is anxious to begin helping the Association advocate for legislation which will aid families caring for loved ones with Alzheimer’s disease.

“Chuck’s extensive background with community building and work with the State of Nevada government agencies will be invaluable in helping our local Public Policy Committee learn best practices in approaching our legislators,” said Angie Pratt, regional director of the Alzheimer’s Association Reno office. “He will be invaluable in helping us aid families in Nevada caring for loved ones with Alzheimer’s disease and other dementias.”

Chuck, with the help of his wife, Mary Lee, will be joining in the work of our other Northern Nevada Advocacy members: Bruce Arkell, Sandra Borrelli, Becky Calhoun, Ashley Carrigan, Gilda Johnstone, Angela Little, Mary Liveratti, and Laura Tellez.

On a Personal Note...

Three Action Items: Get Involved in Research

1. Visit the Alzheimer’s Association TrialMatch at [www.alz.org/trialmatch](http://www.alz.org/trialmatch) or call 1.800.272.3900 and press 1 to find out how you can participate in one of the more than 100 current clinical trials available for Alzheimer’s and related dementias.

2. Visit the Alzheimer’s Association’s new research Web page to keep up to date on the latest research breakthroughs—including new drugs in the pipeline, news about early diagnosis, and more—at [www.alz.org/research](http://www.alz.org/research).

3. Sign a petition in support of asking the Federal government to pass the Breakthrough Act, which would allow the National Institutes of Health to allocate more funds for desperately needed Alzheimer research. Just visit [www.actionalz.org](http://www.actionalz.org).

VOLUNTEER WITH US!

The Alzheimer’s Association office in Reno has several volunteer opportunities available from event committees to office work to helpline volunteers. If you’re interested, just give us a call at 1.775.786.8061.
MAKE A DIFFERENCE IN THE FIGHT AGAINST ALZHEIMER’S: JOIN MEMORY WALK TODAY!

Joining Memory Walk is one simple way you can join the national movement against Alzheimer’s disease. Memory Walk helps the Alzheimer’s Association generate awareness of this disease within the community, creates an environment of support and understanding for participants and of course, raises funds for the mission of the Alzheimer’s Association. Last year, Memory Walk events in Northern California and Northern Nevada raised $2.4 million!

Don’t miss your chance to be inspired, motivated and moved – not to mention the opportunity to make a real impact on the future of Alzheimer’s disease. Visit www.alz.org/memorywalk and register today for one of these 2010 walks:

San Francisco
Silicon Valley
Aptos/Santa Cruz
Sacramento
Fresno
Reno/Sparks
Chico
Wine Country
Monterey

SEPTEMBER 11
SEPTEMBER 25
SEPTEMBER 25
OCTOBER 2
OCTOBER 2
OCTOBER 9
OCTOBER 9
OCTOBER 16
OCTOBER 16

Mission Creek Park, Mission Bay, San Francisco
Arena Green, Downtown San Jose
Seascape Resort and Park, Aptos
State Capitol (South Steps), Sacramento
Copper River Ranch Park/Eaton Trail, Fresno
Sparks Marina, Sparks
Bidwell Park (One Mile BBQ Area), Chico
Shollenberger Park, Petaluma
Custom House Plaza – Monterey State Historic Park, Monterey

REGISTER TODAY AT
WWW.ALZ.ORG/MEMORYWALK

How to Register for Memory Walk

✦ Visit www.alz.org/memorywalk and enter your zip code to find the walk nearest you
✦ Select your local walk and click on Sign Up
✦ Accept the terms in the participant waiver
✦ Click Start a Team if you want to be a team captain, Join a Team if you are a team member or Join as an Individual if you are not walking with a team
✦ Follow the prompts and enter the information requested

Memory Walk Fast Facts

✦ There is no registration fee or minimum fundraising amount to join Memory Walk
✦ All individuals who raise $100 get a Memory Walk t-shirt
✦ You can join Memory Walk as an individual or as part of a team
✦ There are no special requirements to start a team
✦ Memory Walk events feature a three-mile walk, with an optional shortcut at 1.5 miles
✦ Memory Walk provides fun and entertainment for the whole family
✦ All proceeds from Memory Walk benefit families in your community – whether it’s through programs and services or research

10th Annual Ride to Remember

This event is dedicated to Mary Wright, founder of Ride to Remember, who passed away in March 2010.

Saturday, October 16
Smith Valley, Nevada
Hunewill Ranch

Schedule of Events:

7 a.m.  Registration for Trail Run for Runners: cost $30*
8 a.m.  Trail Run for Runners begins
8:30 a.m.  Registration for Trail Trial for Horses: cost $10*
9 a.m.  Trail Trial for Horses begins
10 a.m.  Registration for Trail Ride for Horses: cost $30*
10:30 a.m.  Trail Ride for Horses begins
10:30 a.m.  Walk a Trail begins: donation required
12:30 p.m.  BBQ and Western Entertainment begins

For information on the horse ride or trail trial, contact Megan at 1.775.721.1679 or megan@hunewillranch.com. For information on the trail run for runners, contact tribob73@hotmail.com.

All funds raised go directly to the Alzheimer’s Association of Northern Nevada.
The Alzheimer’s Association is committed to continuing our tradition of serving families despite the challenging economic climate. Please help us streamline our costs by choosing to receive the tri-annual Alzheimer’s Association newsletter by email.

Contact us at newsletter@alznorcal.org and tell us if you would like to:

- Cancel your print subscription and subscribe to our e-newsletter
- Keep your print subscription AND subscribe to our e-newsletter

Please include the name and address on this newsletter and the email at which you would like to receive the e-newsletter.

Visit us on the web at www.alznornev.org to:

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- Register for conferences and events
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- Download resources for caregivers and professionals
- Donate online