Why Don’t We All Get Alzheimer’s Disease?

Though one might think the brains of people who develop Alzheimer’s disease (AD) possess building blocks of the disease absent in healthy brains, for most people with Alzheimer’s, this is not true. Every human brain contains the ingredients necessary to spark AD, but while an estimated five million Americans have AD – a number projected to triple by 2050 – the vast majority of people do not and will not develop the devastating neurological condition. For researchers like Subhojit Roy, MD, PhD, associate professor in the departments of Pathology and Neuroscience and a cell biologist and neuropathologist with our Shiley-Marcos Alzheimer’s Disease Research Center, these facts produce a singular question: Why don’t we all get Alzheimer’s disease?

Questions and Answers About Younger Onset Alzheimer’s Disease

BY DOUG GALASKO, MD

What is younger onset Alzheimer’s disease? Younger onset Alzheimer’s disease (AD) is defined according to an arbitrary age cutoff – it refers to patients whose symptoms clearly begin before the age of 65. There are two subgroups: 1) familial Alzheimer’s disease (fAD) and 2) sporadic younger onset Alzheimer’s. Familial AD is due to inherited changes (mutations) in the DNA of one of three genes, namely APP, PS1 or PS2. These mutations are associated with early onset, even as young as people in their late 20s or early 30s. They are inherited in a pattern described as autosomal dominant: each child born to a parent with a fAD mutation has a 50% chance of inheriting that mutation.

Left to right: Uptal Das; Archan Ganguly; Subhojit Roy; Lina Wang; Yong Tang
Sporadic younger Alzheimer’s disease accounts for an unclear percentage of Alzheimer’s overall, perhaps about 5%. The diagnosis of sporadic younger onset patients is often delayed because the disease is not expected to occur in younger people and because the clinical picture sometimes does not start with memory loss and includes atypical forms of AD.

What can cause cognitive symptoms in younger adults?
Many conditions may cause cognitive and memory problems with onset before the age of 65. AD is only one possibility. The most common other type of degenerative dementia with its onset typically before age 65 is Fronto-temporal dementia (FTD). FTD starts with changes in behavior and personality - which are often striking - or with changes in language. A host of medical conditions also can result in cognitive problems in younger adults, and the clinical evaluation will often include a search for general health problems such as hypothyroidism, vitamin B12 deficiency, sleep apnea and conditions such as depression and anxiety. Some rare but potentially treatable causes include vasculitis (inflammation of blood vessels within the brain), infections (for example, viruses) attacking the brain, including the possibility of HIV, and autoimmune diseases where the immune system attacks specific targets within the brain. Disorders like Multiple Sclerosis, Parkinson’s disease and stroke may lead to cognitive problems in this age group.

What are some of the atypical forms of Alzheimer’s disease?
Posterior Cortical Atrophy (PCA) is often misdiagnosed as a primary eye problem, often leading to an initial workup by an Ophthalmologist. People with PCA have a progressive decline in how well the brain integrates visuospatial information. Some patients have difficulty with tasks such as fastening buttons, judging distances when driving, reading, or identifying people in a crowd. Clinical evaluation by an expert clinician and MRI showing atrophy (shrinkage of brain tissue) in the visual areas in the back of the brain are helpful tests to clarify the diagnosis. In addition, most people with PCA show amyloid biomarkers in cerebral spinal fluid or on amyloid imaging.

“Many conditions may cause cognitive and memory problems with onset before the age of 65. AD is only one possibility. The most common other type of degenerative dementia with its onset typically before age 65 is Frontotemporal dementia (FTD).”

In Progressive Aphasia, people show progressive decline in the ability to use language or name objects as their main problem. One type of language loss is called the logopenic variant of Progressive Aphasia and strongly suggests that there is underlying Alzheimer pathology. People with this clinical picture may begin with problems such as difficulty finding words, sometimes mispronouncing words, and difficulty reading or repeating sentences - especially when these sentences are longer. Patients with logopenic progressive aphasia may have particular difficulty reading (and pronouncing) words that are spelled irregularly (e.g., mortgage). With time, other symptoms pointing to AD may emerge, including memory loss. Clinical testing, MRI analysis and biomarker tests can help to clarify this diagnosis.

A frontal variant of AD may occur but is much less uncommon. Symptoms frequently include marked difficulty with judgment and planning, and sometimes symptoms of disinhibition in the presence of relatively preserved memory. These types of symptoms usually point to Frontotemporal dementia rather than Alzheimer’s disease. Tests such as MRI, Fluoro-deoxyglucose (FDG) PET scan, or tests for amyloid biomarkers may help to clarify the diagnosis.

Finally, Corticobasal syndrome (CBS) may start with unusual movements and posturing of one arm or leg. Another presentation is with cognitive changes, often involving vision. Patients with CBS may have either a form of tau pathology or AD.

Why do people develop younger onset Alzheimer’s disease?
Familial AD occurs because the genes for APP, PS1 and PS2 alter the production of amyloid beta protein (Aβ), which forms the plaques characteristic of AD. Changes in the production of Aβ result in an increase in the aggregation of longer forms of this protein which are prone to aggregate (clump together) and form plaques. Although patients with fAD typically have a strong positive family history, an interesting recent update involves Auguste D., who was famous for being the first patient described by Professor Alzheimer in 1907, as a 53-year old
woman who presented with memory loss and prominent delusions. Her brain showed extensive plaques and tangles. Very recently, with improved methods of extracting DNA from tissues that have been stored for decades, it became possible to sequence her DNA. This showed a mutation in the PS1 gene, which suggests that she in fact suffered from an inherited form of AD.

Most people with younger onset AD lack an obvious family history of siblings or parents with AD. This does not exclude a genetic influence. For example, new genetic problems (DNA changes) may arise and show in somebody for the first time, or gene-environment interactions or unusual types of genetic changes may be present. About 60% of younger onset AD patients carry the e4 variant of the APOE gene, and about 15-20% of younger onset patients have two copies of this gene (e4/e4). Other genes could potentially play a role, and efforts are underway to try to sequence DNA from people with younger onset AD. The role of non-genetic risk factors remains elusive. There is no evidence to support head injury, diet, toxins, or vascular risk factors in the vast majority of people with younger onset AD.

**How are we contributing to early onset AD research at UCSD?**

1) We have evaluated a number of patients and families with familial AD over the years, including determining a diagnosis, providing genetic counseling, and organizing DNA sequencing. We are pleased to report that UCSD has recently become a site in the DIAN Study (www.dian.org) – see below.

2) Regarding younger onset AD, the UCSD Neurology clinic and the ADRC have offered expert diagnosis, and genetic testing where appropriate. We are collecting DNA for sequencing, as part of an AD Genetic Consortium, a collaborative effort among the network of NIH-funded AD Centers. We are also collaborating as part of a worldwide Posterior Cortical Atrophy consortium, to develop standardized clinical tests and evaluation for patients with this problem and also to conduct research. An initial research study will involve DNA sequencing from patients with PCA, which will be carried out in the UK.

3) We are studying mechanisms and biomarkers in CSF and MRI, and also studying autopsy brain tissue in patients with younger onset AD.

4) We also have provided cells from patients with familial and younger onset AD to support stem cell related research at UCSD. Novel methods allow cells such as skin cells to be transformed into pluripotent cells which can further be changed into nerve cells, to try to understand mechanisms of disease more clearly – see page 6 for related article.

**The Shiley-Marcos ADRC meets DIAN**

DIAN (short for Dominantly Inherited Alzheimer’s Network) is a consortium of research sites around the world that studies clinical and biomarker changes in people with familial Alzheimer’s disease mutations, and also is investigating new options for treatment. It is headquartered at Washington University, St. Louis. We are excited to become a participating site within this network, starting in the Fall of 2013.

Over the years, we have identified people in the San Diego region who are members of families with familial early onset Alzheimer’s due to APP, PS1 or PS2 gene mutations. The onset of cognitive problems can occur in the age range of 30-to-50 years in these individuals. We will now be able to offer research opportunities to discover the sequence of changes in brain imaging and biomarkers that precedes the onset of cognitive symptoms by at least a decade. In addition, clinical trials that examine different antibodies directed against the amyloid-beta protein will start later this year. The first proof that statins are effective treatment to lower cholesterol and reduce the risk of heart disease came from studies of people with rare, inherited alterations in cholesterol metabolism. Early intervention studies in people with familial early onset Alzheimer’s may provide a unique opportunity to identify effective treatments.

In addition to the families we have worked with so far, we are interested in identifying new family members who live within San Diego or could travel to UCSD for research evaluations. We will be able to cover a large geographical area, including California, Nevada, Arizona, and Utah, and also will enroll participants from Mexico. For more information, please call Deborah Fontaine, NP, at our Shiley-Marcos Alzheimer’s Disease Research Center at 858-822-4800.
In a paper published in the August 7, 2013 issue of the journal *Neuron*, Roy and colleagues offer an explanation – a trick of nature that, in most people, maintains critical separation between a protein and an enzyme that, when combined, trigger the progressive cell destruction characteristic of AD.

The severity of AD is measured in the loss of functioning neurons (brain cells). There are two tell-tale signs of AD: clumps of a protein called beta-amyloid “plaques” that accumulate outside neurons and threads or “tangles” of another protein, called tau, found inside neurons. Most neuroscientists believe AD is caused by the accumulating assemblies of beta-amyloid protein triggering a sequence of events that leads to impaired cell function and death. This so-called “amyloid cascade hypothesis” puts beta-amyloid protein at the center of AD pathology.

Das said the findings are fundamentally important because they clarify some of the earliest molecular events triggering AD and show how a healthy brain naturally avoids them. In clinical terms, they point to a possible new avenue for ultimately treating or even preventing the disease. “An exciting aspect is that we can perhaps screen for molecules that can physically keep APP and BACE-1 apart,” said Das. “It’s a somewhat unconventional approach.”

Co-authors are David Scott, Archan Ganguly and Yong Tang, UCSD Departments of Pathology and Neurosciences; and Edward H. Koo, UCSD Department of Neurosciences and co-director of our Shiley-Marcos Alzheimer’s Disease Research Center.

To watch an educational and entertaining brief video about this research, see: [http://www.roylab.org/app-bace_video.html](http://www.roylab.org/app-bace_video.html)

Funding for this research came from the American Federation for Aging Research, National Institutes of Health grant P50AG005131 and a gift from Darlene Shiley to the ADRC.

This article was originally written by Scott LaFee and published on the UC San Diego Health System’s website. It was revised and reprinted with permission.
Do You Have A Family Member or Friend with Frontotemporal Dementia?

The Shiley-Marcos Alzheimer's Disease Research Center is interested in enhancing our understanding of frontotemporal dementia (FTD) by including persons with FTD in our longitudinal study. This National Institute on Aging (NIA) funded, multiyear study enables our center, in conjunction with 26 other NIA funded centers, to gather data annually on a large group of individuals with a wide array of neurodegenerative diseases, including Alzheimer’s disease, FTD, Dementia with Lewy Bodies, and Parkinson’s disease dementia and an age matched control group. Researchers learn more about detecting these diseases earlier, diagnosing them more accurately, and treating them more effectively. This data, combined with an analysis of brain tissue donated at the end of life provides us with valuable information that can further essential research in FTD and related disorders.

As a research center, we also remain dedicated to the education and support of families living with FTD. Our Shiley-Marcos ADRC provides a monthly support group for FTD caregivers and participants do not need to be enrolled in the research program to take advantage of the support group. This fall, we are partnering with the Southern Caregiver Resource Center and the Association for Frontotemporal Degeneration to provide San Diego’s first FTD caregiver conference. See our announcement below.

The Diagnosis, Management, and Treatment of Frontotemporal Dementia

Free in-home care is available for your loved one upon advanced request. Please call to register for this service by September 27th

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<td>8:30-9:00</td>
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**Saturday, October 19, 2013**
8:30am-12:00pm

**First United Methodist Church**
-Linder Hall-
2111 Camino del Rio South
San Diego, CA 92108

To Register, please call 1-800-827-1008

Dr. Galasko is Professor of Neurosciences at University of California, San Diego and Director of the UCSD Shiley-Marcos Alzheimer's Disease Research Center. He is internationally recognized for his research in biological markers and genetic risk factors for Alzheimer's and related disorders including Dementia with Lewy Bodies and Frontotemporal dementia. He has published over 200 research articles. Dr. Galasko evaluates and treats patients in his neurology clinic at UCSD and maintains a particular interest in younger onset dementia.
**Stem Cell Research Updates**

**Collection of Skin and Blood Samples to Establish a Stem Cell Bank**

Dr. Douglas Galasko, Shiley-Marcos ADRC Director, has been awarded grant funding from the California Institute of Regenerative medicine (CIRM) to help establish a bank of cells to support stem cell research. The goal is to collect either blood cells or skin biopsy samples, which will be used to make pluripotent stem cells that can be reprogrammed into nerve or other cells to study Alzheimer’s disease mechanisms. For people who agree to have a skin biopsy, cells can be used by Dr. Goldstein at UCSD and also sent to the CIRM bank.

This will be a large-scale banking effort, in which stem cells will be made from blood or skin cells from about 3000 people. To manage such a massive effort, a special laboratory facility has been set up in Northern California. The project will establish a unique resource to provide stem cells to scientists in California and elsewhere to help with research on a number of important health conditions. In addition to Alzheimer’s, projects to collect cells from five other types of disorders have been funded, with collection by researchers at universities in California. For example, a project on late-life eye disorders (glaucoma and macular degeneration) has been awarded to Dr. Kang Zhang at UCSD’s Shiley Eye Center. Other projects will focus on heart, lung and liver disorders, as well as pediatric neurodevelopmental disorders.

Control subjects are needed for all of these projects. In order to maximize the number of controls for the Alzheimer, eye, and lung disease projects, controls who volunteer to donate blood or a skin biopsy for one project will be asked to undergo brief testing to determine whether they can serve as shared controls for other disorders. Controls who qualify for the Alzheimer project will be invited to undergo a brief eye examination at Shiley Eye Center and

**A Research Update from Lawrence Goldstein, PhD**

The 2007 punches allowed us to learn some very important things. First, among those that were reprogrammed to become pluripotent stem cells and then neurons, we learned that some exhibited unusual behaviors typical of hereditary AD. This gave us important clues and suggested that this technology might enable us to learn important new information about sporadic (non-hereditary) AD. These initial findings were published in an important paper in the journal *Nature* last year.

Nearly seven years later, Dr. Goldstein’s team is collecting more skin cells from willing ADRC participants with a diagnosis of AD and from participants who do not have cognitive (thinking) impairment. This project prompted us to interview Dr. Goldstein, so we could provide readers with an update about this project and the important findings that have been generated from it thus far.

The second thing we’ve used these biopsies for is to learn more about genetic risk factors. We know that a big fraction of the risk of developing AD is genetic. Specifically, whether a person develops AD or not is in part a function of the unique variation that each of us has in our DNA compared to all other people. By studying individuals with risk factors and an important gene called
to complete a questionnaire about possible lung problems.

How can you help? Current Shiley-Marcos ADRC participants and their family members, as well as patients with Alzheimer’s and healthy elderly volunteers from the San Diego community, will be eligible once the project starts in October. We will be looking for people with Alzheimer’s with onset in the age range of 50 – 80, and controls aged 60 – 85, with a preference for controls who are 75 or older. For more information visit the ADRC website and follow the link to CIRM_Project.htm or call 858-246-4800.

CONTINUED

SORL1, we learned from reprogramming skin cells to stem cells and then to neurons that risk factors at the SORL1 gene act by impairing the ability of this gene to respond to an important signaling system in the human brain driven by a molecule called Brain-Derived Neurotrophic Factor (BDNF). People with this risk factor appear to respond less well to BDNF in terms of their activation of the SORL1 gene. This generates more bad behavior of amyloid precursor protein, a key culprit in AD.

The implication of this work is that people with the SORL1 risk factor should perhaps be treated differently in certain types of clinical trials that rely on activation of the BDNF pathway as a possible treatment for AD. Our findings also suggest strategies for activating this pathway independent of BDNF that might be a useful therapeutic strategy moving forward.

Introducing the Shiley-Marcos ADRC Community Health Practitioner Advisory Board

The Shiley-Marcos Alzheimer’s Disease Research Center is committed to building relationships with the multitude of health care practitioners in San Diego who work with patients and families living with neurodegenerative dementias. We value the opportunity to support our participants’ health care providers by complementing their care with written feedback regarding our assessment and diagnostic impression (when approved by the participant). In addition, we host a bi-annual continuing medical education conference for practitioners interested in enhancing their knowledge about the most innovative and cutting edge treatments, diagnostic criteria, and assessment tools available in the field of dementia care. In an effort to further support and engage several of our local health care practitioners, we recently developed our Community Health Practitioner Advisory Board (CHPAB).

The Community Health Practitioner Advisory Board is comprised of 11 local practitioners (primarily advanced practice nurses), representing a wide array of health groups and clinics that serve persons with neurodegenerative dementias, including Alzheimer’s disease, Frontotemporal dementia, Dementia with Lewy Bodies, and Parkinson’s disease with dementia. We created this board to strengthen partnerships we have with area practitioners by providing a forum for generating meaningful discussion about the ways in which the research community can better serve the practitioners in their work with persons with dementia and their families. In addition, these quarterly meetings will include ongoing continuing medical education programming for the attendees to increase their clinical knowledge and foster their active collaboration in our outreach. We will welcome the Advisory Board members’ advice about what specific information, resources, and access is needed by the broader community of practitioners in San Diego County.

We would like to introduce you to our CHPAB members, (presented in alphabetical order) and we thank them for their participation in this new advisory board:

Sheila Caldito, ASN, Vi at La Jolla Village
Jackie Close, RN, CNS, PhD, Palomar Hospital
Kathleen Ellstrom, PhD, Veterans Affairs Medical Center
Marianne Hoftiezer, NP, Balboa Naval Neurology
Kathy Huyhn, NP, UC San Diego Movement Disorder Clinic
Sherrie Gould, NP, Scripps Movement Disorders Clinic
Karen MacCauley, RN, DNP, NP, Scripps Mercy Internal Medicine
Ann Mayo, PhD, University of San Diego School of Nursing
Juany Mazaira, NP, Kaiser Neurology
Lorena Montes, BS, PA, San Ysidro Health Centers
Marie Naughton, NP, Kaiser Neurology
### Roche WN25203B (SCarlet RoAD)

**Principal Investigator:** James Brewer, MD, PhD  
**Time Involved:** 4 Years | **Contact:** Helen Vanderswag, RN - (858) 822-4800

Randomized, double-blind, placebo-controlled, parallel-group two-year study to evaluate the effect on cognition and function in prodromal Alzheimer's disease of subcutaneous gantenerumab.

**Requirements:**
- Early memory problems, a diagnosis of MCI or AD, and those without memory changes
- 55-90 years old; 65-90 for normal controls
- Have a study partner for all visits
- Able and willing to undergo MRI, PET scans, and lumbar puncture procedure (LP)
- MMSE score of 20 or above

### Alzheimer’s Disease Neuroimaging Initiative 2 (ADNI 2)

**Principal Investigator:** James Brewer, MD, PhD  
**Time Involved:** 4 Years | **Contact:** Helen Vanderswag, RN - (858) 822-4800

The purpose of the study is to examine how brain imaging technology and biomarker tests, along with measurements of memory and daily functioning, can be used in the future conduct of studies that focus on the identification and treatment of AD at an early stage.

**Requirements:**
- Early memory problems, a diagnosis of MCI or AD, and those without memory changes
- 55-90 years old; 65-90 for normal controls
- Have a study partner for all visits
- Able and willing to undergo MRI, PET scans, and lumbar puncture procedure (LP)
- MMSE score of 20 or above

### Coming Soon!

**Stay tuned for these and several other studies in which recruitment will begin Fall 2013**

Visit: [www.adrc.ucsd.edu](http://www.adrc.ucsd.edu) for research study updates

### Accera AC-1204

**Principal Investigator:** Michael Rafii, MD, PhD  
**Time Involved:** 26 Weeks | **Contact:** Michelle Herman, BS - (858) 246-1305

Double-blind, randomized, placebo-controlled, parallel-group study to investigate AC-1204 (active ingredient, caprylic triglyceride) in participants with mild to moderate Alzheimer’s disease (AD) with an optional 26-week open label extension.

**Requirements:**
- 66-90 years old
- Diagnosis of mild to moderate AD
- Have a study partner for all visits
- No allergies to milk or soy

### Lundbeck LuAE58054

**Principal Investigator:** Douglas Galasko, MD  
**Time Involved:** 28 Weeks | **Contact:** Deborah Fontaine, NP - (858) 822-4800

Phase 3, randomized, double-blind, parallel-group, placebo-controlled, fixed-dose study of Lu AE58054 in persons with mild to moderate AD treated with donepezil.

**Requirements:**
- 50+ years old
- Probable AD
- Stable dose of 10mg/day of donepezil for at least 6 months
- MMSE 12-22

### DIAN (Dominantly Inherited Alzheimer Network)

**Principal Investigator:** Douglas Galasko, MD  
**Time Involved:** 3.5 Years | **Contact:** Deborah Fontaine, NP - (858) 822-4800

People from families with a known mutation causing Alzheimer’s disease are eligible to participate in DIAN and its studies of physical and mental changes that may predict future Alzheimer’s disease.

**Requirements:**
- 18+ years old
- Have a biological parent or sibling with AD caused by a known mutation
- Have a study partner for all visits
- Speak and read English
Enrolling Now!
Michael J Fox Foundation’s Study to Understand Pre-Motor Symptoms of PD

The Parkinson’s Progression Markers Initiative (PPMI) is a landmark observational study designed to help define biomarkers, or indicators of Parkinson’s disease (PD) progression. PPMI has added a new arm to the existing study that will investigate certain risk factors of PD. By better understanding risk factors, such as smell loss, doctors may be able to identify people with PD before the onset of motor symptoms. Early detection is a crucial step in understanding the causes of PD and developing better treatments for the disorder.

The task of identifying risk factors for PD offers friends and family of people with Parkinson’s a unique role to play in Parkinson’s research. People who are over the age of 60 and who do not have Parkinson’s are needed for this study that will assess the relationship between Parkinson’s and sense of smell. Find out if you are eligible to participate by taking the smell survey at www.michaeljfox.org/takeathemellsurvey or call (877) 525-PPMI. If you have PD, we need your help to reach the 10,000 people without PD who may qualify. Invite family and friends to follow their noses to research that could make a difference for Parkinson’s research. UC San Diego is a site for this study. Contact Christina Gigliotti, PhD at 858-246-1243 for information.

Questions & Answers

Q: I saw a news article about a research study out of Oxford University in England that suggested vitamins B6 and B12 combined with folic acid slowed atrophy of gray matter in brain areas affected by Alzheimer’s disease? Will this help me?

A: Michael Rafii, MD, PhD, responds: The study, which was published in the Proceedings of the National Academy of Sciences, demonstrated that brain shrinkage slowed by 30% in the treatment group and in some cases slowed more than 50%. It is a very promising study, given its inclusion of a placebo arm and that it had a two-year duration. A few details still remain unresolved from this clinical trial that limit its power, including the fact that the treatment works only in Mild Cognitive Impairment (MCI) patients with Hyperhomocysteinemia (a medical condition characterized by abnormally high levels of homocysteine in the blood, which can be caused by deficiencies of vitamin B6, folic acid, and vitamin B12). It is also limited by a small subject sample. The authors of this paper warn people not to start taking high levels of Vitamin B without any medical advice or supervision by their own doctor.

Q: I saw a news story about a compound being tested by Salk Researchers called J147. The article suggested that J147 can halt progression of Alzheimer’s in very old mice. When can I get my wife enrolled in that study?

A: J147 was developed at Salk in the laboratory of David Schubert, a professor in the Cellular Neurobiology Laboratory. He and his colleagues bucked the trend within the pharmaceutical industry, which has focused on the biological pathways involved in the formation of amyloid plaques, the dense deposits of protein that characterize the disease. Instead, the Salk team used living neurons grown in laboratory dishes to test whether their new synthetic compounds, which are based upon natural products derived from plants, were effective at protecting brain cells against several pathologies associated with brain aging. These researchers indicate that several cellular processes known to be associated with Alzheimer’s pathology are affected by J147, including an increase in a protein called brain-derived neurotrophic factor (BDNF), which protects neurons from toxic insults, helps new neurons grow and connect with other brain cells, and is involved in memory formation. The Salk researchers say that J147, with its memory enhancing and neuroprotective properties, along with its safety and availability as an oral medication, would make an “ideal candidate” for Alzheimer’s disease clinical trials. Although J147 appears to be safe in mice, the next step will require early stage clinical trials to determine whether the compound will prove safe in humans and to get an idea of what doses to use. They are currently seeking funding for such a trial. This will be necessary before going on to longer clinical trials to find out whether the drug benefits people with Alzheimer’s or not.

Please e-mail your questions about Alzheimer’s or a related disorder to adrc@ucsd.edu with “Currents Q&A” in the subject line for possible inclusion in future issues of this newsletter.
Helpful Resources

Annual Progress Report on Alzheimer’s Disease Now Available

Every year, the National Institute on Aging (NIA) publishes a comprehensive update on science and research advances in Alzheimer’s and related disorders from the projects and organizations that the Institute funds. This year’s annual publication provides an overview of Alzheimer’s (AD) including the biology and genetics of the disease. Risk factors, methods of detection and diagnosis, and developing treatments are discussed as well as advances in providing care for those affected.

The comprehensive progress report can be read or downloaded on the NIA’s Alzheimer’s Disease Education and Referral (ADEAR) website at: http://www.nia.nih.gov/alzheimers/publication

Reading the report online also affords access to some interesting video clips and interviews that help to further explain reported updates.

Caregiving Fact Sheets and Resource Lists

The NIA’s Alzheimer’s Disease Education and Referral (ADEAR) provides an array of caregiving tip sheets and resource lists that are electronically available for free download at http://www.nia.nih.gov/alzheimers/topics/caregiving#pubs. These 1.5 page, easy-to-read and very practical fact sheets are grouped into eight major categories with a number of fact sheets within each group, including: Behaviors (5), Everyday Care (10), Communication (2), Relationships (6), Safety (5), Caregiver Health (2), Legal and Financial Issues (2), and Middle- and Late – Stage Care (2). Caregivers can quickly and easily review the most pertinent information about this wide array of topics but are also directed to additional resources for more in-depth information.

Whether caregivers are looking for information about hallucinations and delusions, hints for the holidays, tips for traveling overnight, or ways in which they can help kids understand Alzheimer’s disease, these fact sheets can be a valuable tool for caregivers looking for reliable, easy to understand information that is helpful at any stage of the disease.

While you’re on the website, be sure to review the many other helpful publications and resources available through ADEAR. You call also call ADEAR at 1-800-438-4380.

Talking With Your Doctor: A Guide for Older People

Constructive and caring communication between a doctor and patient is an essential part of good health care. It is important to take an active role in your health maintenance and medical treatment and to feel that you and your doctor can work as a team. Talking with your doctor is a 44-page booklet full of ideas and tips for choosing a doctor you can talk to and maintaining good communication with your doctor. The illustrations and conversational tone help to explain how to prepare for a medical appointment, discuss sensitive topics, and coordinate help from family and friends.

This booklet is available on the NIA website at: http://www.nia.nih.gov/health/publication/talking-your-doctor-guide-older-people
How You Can Support the Shiley-Marcos Alzheimer’s Disease Research Center (ADRC) with a Year-End Gift

There are many ways to support the Shiley-Marcos Alzheimer’s Disease Research Center (ADRC). Your annual gifts are important to the research we are doing and the programs that are in place today. And when you extend your support into the future through your long-term estate or financial plans, you ensure that your endorsement of our work and your special relationship with our ARDC will continue for years to come. Here are a few ideas for making that happen.

**Gifts of Cash:** Nothing is as simple and direct as giving cash. You can make an unrestricted donation that we will use to meet our greatest current need or you can earmark a gift specifically towards research or our patient and family services. All contributions are greatly valued and contribute toward furthering our efforts. Gifts of cash are deductible on your federal income tax return, and don’t forget that many companies sponsor matching gift programs that can dramatically increase the impact of your donation. To make your gift, visit our website: http://adrc.ucsd.edu/giving.html.

**IRA Rollover:** If you are 70½ years or older, you can direct a distribution from your IRA to the Shiley-Marcos ADRC through the UC San Diego Foundation without incurring income tax on the withdrawal. You may have your IRA administrator transfer up to $100,000 directly from your IRA until December 31, 2013. There is no guarantee that this opportunity will be extended into 2014, so please visit http://giftplanning.ucsd.edu for more information and the needed forms.

**Gifts of Securities:** Stocks or other investments that have grown in value and that you have owned longer than one year can become a gift. You receive a charitable deduction, which is based on the stock’s fair market value on the date of the gift. You also eliminate all federal capital gains tax that would otherwise be owed on a sale of the assets. Please visit: http://giftplanning.ucsd.edu for more information.

**Life Income Gifts:** Are you looking for additional income or a possible tax deduction, while making a charitable contribution to the Shiley-Marcos ADRC? Our charitable gift annuity (CGA) program provides you with attractive rates of return, partially tax-free payments, an income tax deduction, and fixed payments for your lifetime. For more information on charitable gift annuities and current rates, please visit http://giftplanning.ucsd.edu.

**Bequests:** Another opportunity available is to include the Shiley-Marcos ADRC in your estate plan through a bequest or in your trust. Simply use the following when working with your attorney: “I hereby bequeath or the trustee shall distribute [insert amount, percentage of the estate, or “the remainder of my estate”] to the UC San Diego Foundation to support the Shiley-Marcos Alzheimer’s Disease Research Center at the University of California, San Diego (UCSD).”

For more information about these and other year-end giving opportunities, please visit our website at http://adrc.ucsd.edu/giving.html and/or contact Mary Sundsmo at (858) 822-4800 or at msundsmo@ucsd.edu.

The Shiley-Marcos Alzheimer’s Disease Research Center is funded primarily from a grant from the National Institute on Aging and relies on the generosity of donors like you to supplement this grant and support our scientific efforts, programs and services. For the purposes of clarification, the Shiley-Marcos ADRC and the Alzheimer’s Association are entirely separate organizations.

The UC San Diego Office of Gift Planning and ADRC are not engaged in rendering tax or legal advice. As you consider charitable gifts, we strongly encourage you to consult with your own attorney, CPA and/or other financial advisors as needed.
Shiley-Marcos Alzheimer’s Disease Research Center
University of California, San Diego
9500 Gilman Drive -0948
La Jolla, CA 92093-0948
(858) 822-4800
http://adrc.ucsd.edu

Co-Directors:
Douglas Galasko, MD
Edward Koo, MD

Program Director:
Mary P. Sundsmo, MBA

Editors:
Christina Gigliotti, PhD
Lisa Snyder, LCSW

Layout Design:
Yada Khoongumjorn

Currents newsletter is supported by the National Institute on Aging grant P50 AG05131

2013 SERIES

Memories at the Museums

SAN DIEGO MUSEUM OF ART
January 11, May 10, September 13

MINGEI INTERNATIONAL MUSEUM
February 8, June 14, October 11

TIMKEN MUSEUM OF ART
March 8, July 12, November 8

MUSEUM OF PHOTOGRAPHIC ARTS
April 12, August 9, December 13

Join us on the second Friday of each month from 2:00 - 3:00 at one of these exceptional San Diego museums for a unique docent-led discussion and tour. Museum docents engage people with mild-to-moderate Alzheimer's or a related disorder and an accompanying family member or friend in discussions about the artwork to stimulate visual and verbal abilities and to spark memory. Memories at the Museums alternates between the four co-sponsoring museums that are all located in central Balboa Park. Museum admission and tours are free of charge to participants.

Each monthly tour is limited to 8 pairs (16 participants total). Pre-registration is required. Please call Lisa Snyder, LCSW at the Shiley-Marcos Alzheimer’s Disease Research Center at (858) 822-4800 to register for a tour.