

SHILEY-MARCOS ALZHEIMER'S DISEASE RESEARCH CENTER

# CURRENTS

UPDATES IN RESEARCH AND RESOURCES



## An Overview of Neuroimaging

BY CHRISTINA GIGLIOTTI, PhD

Historically, the changes that occurred in the brains of persons with memory loss were only observable upon autopsy by neuropathologists. Analysis of the brain's structure and biochemistry at autopsy was limited to the specific point in time and stage of the disease that the individual died. The science of neuroimaging has enabled scientists to observe the disease in a more dynamic way; that is, they can now view the living brain and assess both its structure and function at various points over time.

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## Advocacy for Alzheimer's

BY DAVID SHAY



JOHN DALY, MD; BRIAN BILBRAY; MARY SUNDSMO; DAVID SHAY

I was invited by Mary Sundsmo, Program Director of the Shiley-Marcos Alzheimer's Disease Research Center (ADRC) and Alzheimer's advocate both state-wide and nationally, to join her and UCSD geriatrician Dr. John Daly, for a meeting with Congressman Brian Bilbray. Our goal was to stimulate considerably more funding from Washington for a major research push on Alzheimer's disease. I have a strong business background in creating persuasive presentations and selling into

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Several neuroimaging techniques have played a critical role in the advancement of neurology research, as they have enabled scientists to detect neurodegenerative diseases that cause dementia earlier, diagnose them more accurately by differentiating them from one another, and study the effects of treatments more systematically. These neuroimaging techniques have provided researchers with tools that enable them 1. to calculate the volumes of specific structures within the brain and assess how they change over time, 2. to measure the abnormal accumulation of proteins that are hallmarks of specific diseases (such as amyloid beta protein in Alzheimer's disease) in the brain tissue, and 3. to assess brain functioning during specific cognitive tasks. The following article will provide a brief overview of several of these neuroimaging techniques that are being used in the research arena to better understand neurodegenerative diseases such as Alzheimer's disease, Frontotemporal dementia, Dementia with Lewy Bodies, and Parkinson's disease.

**Magnetic Resonance Imaging (MRI)** uses a powerful magnetic field in conjunction with different radio frequencies to produce extremely detailed images of brain structure from different angles and can reveal tumors, strokes, and (importantly for Alzheimer's disease and other neurodegenerative dementias) atrophy (or shrinkage) in particular parts of the brain that can be helpful in reaching an accurate diagnosis. It is a safe, painless, and non-invasive procedure, as no X-rays or radioactive materials are used. However, because of the large magnet, persons with metallic implants, such as pacemakers or cochlear implants are not able to undergo a MRI scan. In addition to providing



### VOLUMETRIC MRI (vMRI)

pictures of brain structure, some specialized MRI scans provide pictures of the brain chemistry (MR spectroscopy) and brain function (functional MRI).

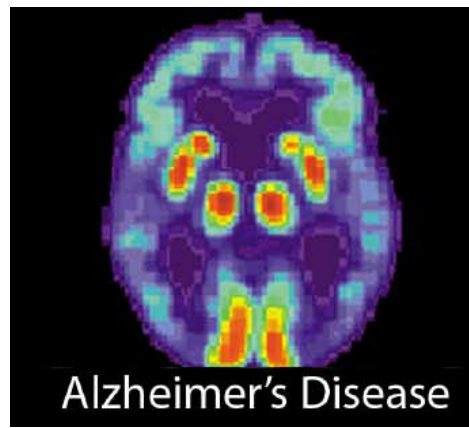
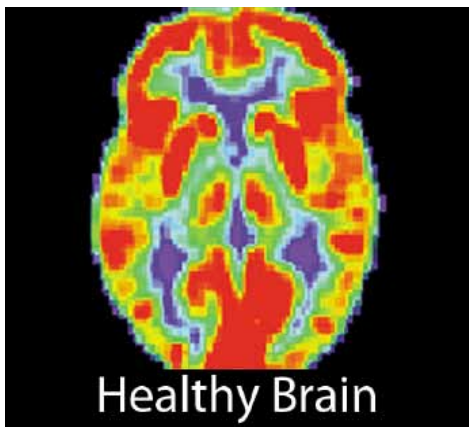
**Volumetric MRI (vMRI)** scans enable researchers to give special attention to certain regions and structures within the brain that are known to be important in memory formation and retention. This technique allows researchers to systematically compare the volume of a person's hippocampus and temporal horn of the lateral ventricle with others in various diagnostic groups. In addition, persons can be compared with themselves over time to better understand what changes are occurring in these specific brain regions.

“ VOLUMETRIC MRI SCANS REVEAL CERTAIN REGIONS AND STRUCTURES WITHIN THE BRAIN THAT ARE KNOWN TO BE IMPORTANT IN MEMORY FORMATION AND RETENTION. ”

**Functional Magnetic Imaging (fMRI)** Functional magnetic resonance imaging (fMRI) is a non-invasive tech-

nique for imaging the activation of brain areas by different types of physical sensation (sight, sound, touch, taste, smell) or activity such as problem solving and/or movement (limited by the machine). fMRI scans are an increasingly common tool, as they allow researchers to look at how the brain works and observe which regions of the brain are activated when presented with certain conditions, stimuli, or tasks to perform. While a regular MRI measures tissue density and structure, fMRI measures the flow, volume, and oxygenation of blood in tissue.

**Positron Emission Tomography (PET)** produces an image of brain metabolism and reveals where brain cells engage the healthy activities of their daily function. In some instances, this can reveal an earlier stage of a problem than MRI would reveal because cells may have stopped functioning but remained intact structurally. In a PET scan, a small amount of a short-lived radioactive substance is attached to another molecule and injected into the body. The radioactive molecule travels through the blood and becomes concentrated in the organs and tissues where it is normally found. The PET machine measures the energy given off by the radioactive material and translates that information into pictures that can



### POSITRON EMISSION TOMOGRAPHY (PET)

be viewed on a computer screen. PET scans frequently are used in brain research because they allow researchers to observe and measure activity in different parts of the brain by monitoring blood flow and the concentrations of the radioactive material in different areas of the brain.

**Amyloid Imaging with PET:** Amyloid imaging is the use of radiotracers (most notably Pittsburgh Compound B or PIB) that are injected into the blood and ultimately make their way to the brain to bind with beta amyloid, so it can be clearly viewed in a PET scan. This technique is important because beta amyloid is one of the hallmark proteins that abnormally accumulates in the brains of persons with Alzheimer's disease. While PIB studies are generally promising, the PIB compound has some significant practical shortcomings. PIB breaks down rapidly and must therefore be injected very quickly after it is created. For that reason alone, it is not currently used in the clinical setting and the search for other more stable radiotracers that can bind to amyloid are under investigation.

**Electroencephalograms (EEGs)** are recordings of the brain's electrical signals and are made by non-invasively attaching electrodes to the scalp. EEGs

allow researchers to follow electrical impulses across the surface of the brain and observe changes over split seconds of time. One important use of EEGs has been to show how long it takes the brain to process various stimuli. Several disadvantages of EEGs include: they cannot show us the structures and anatomy of the brain; they do not tell us which specific regions of the brain do what; and their sensitivity is limited since the electrodes can only be stuck to the scalp making it difficult to tell how far down an activity is located.

**SPECT scans:** A Single Photon Emission Computed Tomography (SPECT) scan is a type of nuclear imaging test that shows how blood flows to tissues and organs. It integrates two technologies to view your body: computed tomography (CT) and a radioactive material (tracer). The tracer is what allows doctors to see how blood flows to tissues and organs. While imaging tests such as X-rays can show what the structures inside your body look like, a SPECT scan produces images that show how your organs work. For instance, a SPECT scan can show what areas of your brain are more active or less active. The most common uses of SPECT are to help diagnose or monitor brain disorders. For most people, SPECT scans are safe; however, they are not safe for women

who are pregnant or nursing. In general, a SPECT scan exposes you to radiation levels similar to those you might encounter naturally in the environment over the course of a year.

**DaTscan:** DaTscan is a specialized imaging technique that allows doctors to capture detailed pictures of the dopamine system in your brain. It is the first FDA-approved diagnostic imaging technique for the assessment of movement disorders such as Parkinson's disease.

DaTscan (Ioflupane I 123 injection, also known as phenyltropane) is a radiopharmaceutical agent that is injected into a patient's veins in a SPECT scan. It measures something called the dopamine transporter (DaT), and it can help a doctor determine if patients are suffering from essential tremor vs. Parkinson's disease (PD) or another parkinsonism (other problems affecting dopamine systems that have symptoms of Parkinson's disease). Functional scans such as DaT/SPECT scans are very important in assessing PD because the anatomy/structure of the brain is largely normal in persons with PD.

“SEVERAL NEUROIMAGING TECHNIQUES HAVE PLAYED A CRITICAL ROLE IN THE ADVANCEMENT OF NEUROLOGY RESEARCH.”

Research participants at the Shiley-Marcos Alzheimer's Disease Research Center will likely be asked to agree to one or more of the brain scans reviewed in this article. The type of scan and frequency with which it will need to be performed will vary from one study to another.

## Advocacy for Alzheimer's

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the Fortune 100. I was to be the lead-off speaker, and my primary assignment was to "put a face" on Alzheimer's so that when Congressman Bilbray was debating about funding in Congress, he could recall an actual face and personality of a person afflicted with cognitive impairment or Alzheimer's. I wanted him to know that I live in his district and I voted for him! I also learned he was active in committees on the Armed Forces and Veteran Affairs, so I wanted him to understand that I am a veteran who made it through rigorous training in Officer Candidate School and low-level helicopter flight school. I also went on to have a successful business career. I presented some key points concerning Alzheimer's disease:

1. Only some doctors really know about the disease. That must change if we are going to spot Alzheimer's in its early phases.
2. Support groups for people with the earlier stages of Alzheimer's like mine

at the UCSD Shiley-Marcos Alzheimer's Disease Research Center (ADRC) really help the afflicted and need more funding so we can formally research their benefits.

3. Many people with Alzheimer's never receive a diagnosis and few doctors seem to know how and where a person can be diagnosed if they need help.

I had prepared a 10-minute speech, but upon our arrival, we were told that all three of us could only have 20 minutes. We were a good team and ultimately we exceeded 45 minutes!

Now I have a new passion. I want people to listen to someone who has Alzheimer's. I want them to realize that those afflicted by this disease can speak for themselves. I am also passionate about afflicted persons getting the support they need. I am lucky. I got an early diagnosis by a neurologist at UCSD, Dr. Michael Rafii. I want all doctors to know about early identification techniques, so they can inform their patients about Alzheimer's and how to get diagnosed and receive care.

Dr. Rafii referred me to the Shiley-Marcos ADRC support group for people with Alzheimer's or related disorders and my group has given me a chance to be heard. The first thing I noticed was that the group laughed a great deal and they really shared very deep personal feelings about their new life with memory loss. I wish that others afflicted with the disease had access to such a support group, but there are only 2 groups like mine in San Diego County vs. approximately 60 support groups for the caregivers! I am now working with the Shiley-Marcos ADRC staff to do a research project that I will help develop and champion to prove the value of the support group process for those of us with the disease.

I closed my discussion with Congressman Bilbray by stating that the only way we can eliminate Alzheimer's disease is through research. I participate in research at the Shiley-Marcos ADRC and have consented to donate my brain for autopsy at the time of my death. I am committed! That's how much I believe that research is the only way to stop this Alzheimer's curse.

**January 18, 2012**  
**10:00 AM - 12:00 PM**

Sheraton Hotel  
 3299 Holiday Court  
 La Jolla, CA 92039  
 (Across the street from the ADRC,  
 behind the gas station as you're  
 coming up the hill.)

To RSVP, please call  
 858-822-4800.

SHILEY-MARCOS  
**ADRC**  
 OPEN  
 HOUSE

# Paws'itive Teams

## PERSONAL PAWS PROGRAM



PERSONAL PAWS TEAMS LUANNE GOOD AND OSCAR; CELESTE KENNEDY AND OSTA; ELLEN WARD AND LEEMA VISIT THE SHILEY-MARCOS ADRC.

**P**aws'itive Teams is a San Diego-based organization that provides service dogs for persons with disabilities. "Personal Paws" is a program of this organization that partners clients (including persons with dementia) with a therapy dog for one-on-one, ongoing therapy sessions. This unique approach to therapy dog volunteering enables therapy dog teams to develop close relationships with individuals on an ongoing basis. The program mission is to bring individualized comfort to people who may benefit from the interaction with, and unconditional love of, a dog.

Visits may take place in the client's home, a nearby park, or at the Paws'itive Teams Training Center in Clairemont. A typical visit may include activities such as tossing a ball or toy, brushing the dog, going for a short walk, or just enjoying

canine companionship. Most visits last about an hour and are scheduled a few times a month over an extended period of time. In addition to the handler and dog, each visit will include another volunteer called a Team Manager.

Because the program is designed to give one-on-one dog interactions with clients, the matching process is very important. Paws'itive Teams strives to limit driving times for both volunteers and clients by placing teams within geographic areas. The activity levels of both clients and dogs are assessed, as well as times and days requested for visits and special needs of clients. This program is offered free-of-charge.

For more information on the Personal Paws program, call 858-279-7297 or visit [www.PawsitiveTeams.org](http://www.PawsitiveTeams.org).

### A PERSONAL STORY

BY JOE LA BONTE

I was diagnosed with Alzheimer's and severe vision loss. Two years ago a therapy dog named Watson was sent to me as a birthday present. He visits me every Friday morning through the Personal Paws program. We take walks together and I carry snacks for him in my pocket.

The first thing he does when he arrives is to sniff my pocket because he knows that's where the snacks are. When we are walking, he is careful to guide me around drains in the sidewalk and he stops for me when we come to a curb or a step. Along the way, we go up a hill which we named Watson's hill because we work hard to reach the top. When we finish our walk on hot days, I hear that he goes home and jumps in the pool to cool off.

Watson and I have become very good friends. It's amazing how much happiness you can get from a therapy dog.



## HOPE FOR AN ALZHEIMER'S VACCINE?

BY JAMES BREWER, MD, PhD

In searching for an Alzheimer's disease treatment, one approach is to exploit the power of the body's own immune system. The Shiley-Marcos Alzheimer's Disease Research Center (ADRC) and the UCSD Comprehensive Alzheimer Program (CAP) are testing therapies that use the immune system to remove the bad protein deposits of Alzheimer's disease from the brain. Clinical trials are currently underway to test the effectiveness of these approaches and whether a patient can be "immunized" against Alzheimer's disease.

“GENERATING AND ADMINISTERING VACCINES IS A TRIED AND TRUE METHOD FOR RAMPING UP THE IMMUNE ATTACK AGAINST A GIVEN PROTEIN OR 'ANTIGEN.'”

The approach is, in principle, simple. The body has a natural ability to identify foreign "intruders" and when it does, it releases its armies— the different components of the immune system— to attack and remove the offending particle. Not only are the general troops deployed, but specialized attack units are built to specifically recognize and target this intruder. As far as we know, the body does not see the bad protein of Alzheimer's disease, ABeta42, as a foreign intruder (though the immune system randomly generates a staggering array of attack proteins, so it is exciting to consider whether some individuals in the population might have generated such immunity on their own). In most

people, the immune system sees this protein as a welcome guest. So how can we teach this "attack dog" inside of us to see ABeta42 not as a welcome guest, but as a loathed and despicable enemy? How about an ABeta42 vaccine?

Generating and administering vaccines is a tried and true method for ramping up the immune attack against a given protein or "antigen." It's like giving that attack dog a whiff of the enemy and telling it to "sick 'em!" Of course, most vaccines are designed to protect against proteins that are encountered in the outside world, such as viruses. After infection with a virus, a cell is tricked into generating more copies of the virus, but if the body had been previously exposed to a similar virus, the enemy is quickly recognized and the attack can begin immediately.



ABeta42 is also generated by one's own body, but important differences exist between ABeta42 and viruses that likely make ABeta42 a more difficult and insidious enemy. One difference is that the clinically relevant ABeta42 deposition is occurring in the extremely protected environment of the brain. This means that it may be difficult to bring the attack to the enemy, as it sits behind the fortifications originally built to protect the brain. Another difference is that by the time we recognize

the need to start the attack, the enemy has taken up residence and built up in numbers quite extensively. In such a situation, the fighting could be intense and innocent bystanders (brain tissue) could get hurt.

“THE HOPE IS THAT AN ABETA 42 IMMUNIZATION WILL RECRUIT THE IMMUNE SYSTEM TO HELP REMOVE THE AMYLOID PROTEIN FROM THE BRAIN AND THEREBY SLOW OR HALT THE PROGRESSION OF ALZHEIMER'S.”

The first vaccine trial, AN1792, had mixed results. The exciting news was that it appeared, in some cases, to have cleared out much of the ABeta42 deposits from the brain. However, the unfortunate news was that also in some cases, the attack on these deposits was too intense, and these patients developed a dangerous level of brain inflammation, called encephalitis. The trial had to be stopped early.

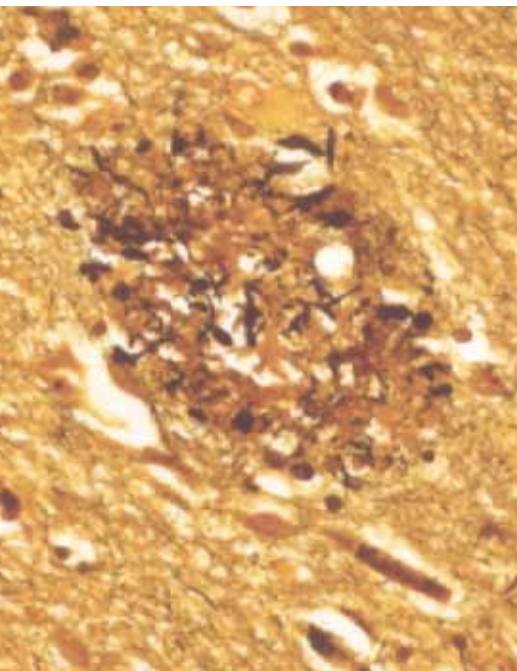
Since then, developments have been made to make these vaccines safer and to markedly reduce any brain inflammation that might accompany the immune attack on ABeta42. It is also likely safer to start treatment at a slightly earlier stage, before the disease pathology is extensive. The ACC-001 trial, sponsored by Janssen Alzheimer Immunotherapy and underway at the Shiley-Marcos Alzheimer's Disease Research Center, is testing the efficacy of ABeta 42 immunization using a small

## JELLYFISH, COCONUTS, AND ALZHEIMER'S?

BY MIKE RAFII, MD, PhD

portion of the ABeta 42 molecule as the vaccine. The hope is that this will recruit the immune system to help remove the amyloid protein from the brain and thereby slow or halt the progression of Alzheimer's. A specialized brain imaging technique that allows measurement of brain amyloid will be used to examine whether the new medication is indeed leading to removal of the protein, and detailed cognitive testing will be performed to see if the medication is stabilizing the cognitive and clinical decline associated with the disease. This trial is no longer recruiting new participants; however, if the results are positive, future studies of this kind will likely be available.

For a listing of all the currently enrolling clinical trials underway at the ADRC and CAP, please see the clinical trials section of this newsletter. Clinical trials enrolling new participants can also be viewed on our website at [www.adrc.ucsd.edu](http://www.adrc.ucsd.edu).



ABETA 42 ALZHEIMER'S PLAQUE



It is common to hear distinctions made between “traditional” medicine and “alternative or complimentary” medicine. Some express concern that scientists involved in more academic or traditional medical research may not be open minded to “natural” supplements or other therapeutics. At the Shiley-Marcos Alzheimer's Disease Research Center, we attempt to be informed of any potentially beneficial therapeutic agent for treating Alzheimer's or related disorders and are always open to your questions concerning both traditional medicines and nutritional supplements or alternative medicines. We have recently received inquiries about both jellyfish protein and coconut oil for treatment of Alzheimer's.

Jellyfish protein is Apoaequorin. The main manufacturer is Quincy, and they ran one study. Study QB-0011 (Madison Memory Study) included men and women between the age of 40 and 95 who were experiencing some memory loss and examined the effect of an apoaequorin dietary supplement on cognitive functioning and other quality of life measures. A total of 218 adults who had self-reported memory concerns were randomly assigned to receive a 90 day supply of either apoaequorin 10 mg daily or a matched placebo. Participants were tested at predetermined time points using computer-based assessments from CogState Ltd ([www.cogstate.com](http://www.cogstate.com)).

Changes on specific assessments of cognitive function were measured at various time points during the study. This study required the completion of five visits to the study site in Madison, Wisconsin during the three months of the study. The Madison Memory Study is a funded by Quincy Bioscience in Madison, Wisconsin and conducts human research studies to examine the effects of an Apoaequorin dietary supplement. The study was not published in any peer reviewed journal, and the results were only reported by the company (<http://www.prevagen.com/research/madison-memory-study/>).

Coconut oil has medium chain fatty acids which are a good source of energy, but have not been shown to have any direct beneficial impact on Alzheimer's. The long and short chain omega-3 and 6 lipids are the most studied supplements for Alzheimer's, with DHA receiving the most attention. At present, however, studies of DHA in patients with Alzheimer's have not revealed any ability of this supplement to treat symptoms or slow progression of the disease once the dementia phase has started. There are ongoing studies looking at its effects in the earliest stages of AD, before dementia has set in.

# CLINICAL TRIALS

## NERVE GROWTH FACTOR

**PRINCIPAL INVESTIGATOR:** Michael Rafii, MD, PhD  
**TIME INVOLVED:** 24 Months

Nerve Growth factor (NGF) research is a phase 2 double-blind placebo-controlled study. The purpose is to test the safety, tolerability, and effectiveness of a new experimental gene transfer drug called Cere-110 in those with mild-to-moderate AD. Studies suggest that NGF may help increase the survival of neurons that degenerate in AD. In this study NGF is delivered directly by surgical insertion into the region of the brain where cell death occurs. Gene therapy is experimental and has not yet been approved by the FDA.

**REQUIREMENTS:**

- 55-80 years old and in general good health
- On stable AD medication for 3 months
- Have a study partner for all visits
- Fluent in English

**CONTACT:** Christina Gigliotti, PhD  
 (858) 822-4800 | cgigliotti@ucsd.edu  
 Ask for the "Cere-100" Study

## GENENTECH ABE4869G (ABBY)

**PRINCIPAL INVESTIGATOR:** Michael Rafii, MD, PhD; Judith Rivera, NP  
**TIME INVOLVED:** 22 Months

Phase II drug trial, randomized at 2:1 with a monoclonal beta-amyloid antibody. Subjects will receive either subcutaneous injections every two weeks or an IV infusion monthly for 69 weeks. MRIs required. Optional cerebral spinal fluid (CSF) and DNA repository studies.

**REQUIREMENTS:**

- 50-80 years old
- Mild-moderate AD with MMSE score 18-26
- Have a study partner for all visits

**CONTACT:** Michelle Herman  
 858-246-1305

## ALZHEIMER'S DISEASE NEUROIMAGING INITIATIVE 2 (ADNI2)

**PRINCIPAL INVESTIGATOR:** James Brewer, MD, PhD  
**TIME INVOLVED:** 4 Years

ADNI 2 is building upon the information obtained in the original Alzheimer's Disease Neuroimaging Initiative (ADNI1) and ADNI-GO (Grand Opportunity - a study funded through NIH grant under the American Recovery and Reinvestment Act). 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 Alzheimer's disease (AD) at an early stage.

**REQUIREMENTS:**

- Persons with 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)

**CONTACT:** Helen Vanderswag, RN  
 (858) 822-4800

## ROCHE WN25203B (SCARLET ROAD)

**PRINCIPAL INVESTIGATOR:** Michael Rafii, MD, PhD; Judith Rivera, NP  
**TIME INVOLVED:** 24 Months

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:**

- 50-85 years old
- Prodromal AD with MMSE greater than 24
- Have a study partner for all visits
- On no memory medications

**CONTACT:** Kacie Smith  
 (858) 246-1303



## CLINICAL TRIALS REGISTRY

Are you interested in clinical trials but don't find one that suits you? You can now join the Shiley-Marcos ADRC registry to be placed on a list for future studies. Participants can be normal controls, can have a mild memory problem, or can be diagnosed with early-to-moderate Alzheimer's. Call the Shiley-Marcos ADRC at (858) 822-4800.

## HELPFUL WEBSITES FOR UP-TO-DATE INFORMATION ON CLINICAL TRIALS

Many people wonder where to get accurate information or updates about the status of clinical trials in Alzheimer's or related disorders. The following websites are affiliated with our Shiley-Marcos Alzheimer's Disease Research Center and can serve as excellent resources:

### NATIONAL INSTITUTE ON AGING'S ALZHEIMER'S DISEASE EDUCATION AND REFERRAL (ADEAR)

This website provides considerable information on clinical trials including ways to find clinical trials in your geographic area and updates in the news about clinical trials. The site also has a helpful fact sheet that describes Alzheimer's disease studies, explains their scientific design, and offers key facts and questions to consider about volunteering for clinical trials.

See: <http://www.nia.nih.gov/Alzheimers/ResearchInformation/ClinicalTrials/>

### ALZHEIMER'S DISEASE COOPERATIVE STUDY (ADCS)

The ADCS is a major initiative for Alzheimer's disease clinical studies in the Federal Government. This organization is part of the National Institute on Aging's Division of Neuroscience's effort to facilitate the discovery, development, and testing of new drugs for the treatment of Alzheimer's. The ADCS is also part of the Alzheimer's Disease Prevention Initiative.

See: <http://www.adcs.org/>

### ADCS MONTHLY NEWSLETTER ON CLINICAL TRIALS

The purpose of the information network is to educate the public about AD research and upcoming clinical research studies.

See: <http://adcs.org/Research/registry.aspx>

Back issues of the newsletter are available at:

<http://www.adcs.org/Research/InformationNewsletters.aspx>

### ALZHEIMER'S INSIGHTS BLOG

A new posting goes up once a week and UCSD's Mike Rafii, MD, writes updates about the science behind Alzheimer's on this blog. The blog can be accessed on the ADCS home page, right hand bottom corner or by going to the blog page.

See: <http://adcs.org/Blog/ADCSBlog.aspx>

## CALL FOR PARTICIPANTS

## MRI / CSF TRIALS

At the Shiley-Marcos Alzheimer's Disease Research Center, biomarkers are at the forefront of our research efforts. Biomarkers are objective measures of structural and/or neurochemical changes in the brain that can result from neurodegenerative diseases, such as Alzheimer's disease and Dementia with Lewy Bodies. We are analyzing both cerebral spinal fluid (CSF) data as well as Volumetric MRI (vMRI) data on all of our longitudinal participants who are eligible and interested in contributing to this important area of study. This data is an important addition to the other neuropsychological and clinical assessments that we gather during the annual longitudinal visit. It can assist our researchers in better understanding ways in which we can detect these diseases earlier, diagnose them more accurately, and track their progression with and without the intervention of pharmaceuticals.

If you are a participant in our longitudinal study, who has not already had a volumetric MRI scan or lumbar puncture procedure, (used to collect the CSF) and is willing to undergo either or both of these assessments, please call the Shiley-Marcos ADRC to schedule an appointment.

Contact: Alicia Booth  
(858) 822-4800

## THE LOOMING CRISIS OF DEMENTIA SERVICES FOR LATINOS

Prevalence refers to the percentage of people in a community that have a particular medical condition. Knowing this number is critical in planning medical and care services. Several factors drive the prevalence of Alzheimer's disease and associated disorders (ADAD). Because age is the most important risk factor, the older a population becomes, the higher the expected prevalence of Alzheimer's. Another important driving force is an array of health risk factors that may influence blood flow and metabolism in the brain, mediated by vascular disease processes. Diabetes, hypertension, obesity, increased cholesterol and other lipids are important processes in this cluster of medical risk factors, and have a major impact among Latinos.

The growing numbers of elderly Latinos in San Diego combined with these medical risk factors is especially worrisome when evaluating prevalence of Alzheimer's in our regional Latino population. According to San Diego State University professors, Mario Garrett, PhD and Ramón Valle, PhD: "San Diego Association of Governments (SANDAG) projections for 2050 show a 652% growth in the

“THE GROWING NUMBERS OF ELDERLY LATINOS IN SAN DIEGO COMBINED WITH MEDICAL RISK FACTORS IS ESPECIALLY WORRISOME WHEN EVALUATING PREVALENCE OF ALZHEIMER'S IN OUR REGIONAL LATINO POPULATION.”

older San Diego Latino age 60+ group, while in the Euro-Anglo population, the growth will only be 107%. In Imperial County the older Latino population will soar to 689% while the Euro Anglo growth will be a minus 6%. Looking to 2050 and combining the health and demographic risk factors, and using a conservative algorithm with a prior delineated prevalence rate of 3.58%—and also including mortality estimates—our study projects an exponential 1,123% increase of ADAD affected Latinos in San Diego County and 1,213% in Imperial County. By 2050, this combination of forces will be cataclysmic. Without planning, services will be completely overrun. Early preparation is in order.”

(Funding for the project of Drs. Garrett and Valle was from the Bravo Foundation, through a grant initiated by the San Diego/Imperial Chapter of the Alzheimer's Association.)

At the Shiley-Marcos Alzheimer's Disease Research Center (ADRC) we recognize that social and cultural factors play an important role in formulating services to improve care for Latinos with cognitive problems. Our Center has a bilingual bicultural team, consisting of a nurse practitioner, a social worker, and a psychometrician who carries out cognitive testing. Our ADRC is engaged in many efforts to improve diagnosis, education, and community resources for elderly Latinos with memory or cognitive disorders.

To facilitate efforts to make an early and accurate diagnosis, we host a Memory Screening Clinic at the San Ysidro Health Center and are working to set up similar efforts at other sites in South Bay. We will also be hosting Memory Screening Days, by appointment only, in South Bay. These services are offered in both

English and Spanish.

For families of patients enrolled in our ADRC, our nurse practitioner, Judith Rivera, NP, provides education about medical issues surrounding Alzheimer's disease. Our social worker, Frances Martinez-Goodrich, MSW, facilitates support groups, gives community talks, and works with the Alzheimer's Community Care Consortium to educate and provide support to caregivers and families. Ms. Martinez-Goodrich also helps families navigate the network of community resources essential to short and long-term planning for people with Alzheimer's or related disorders.

“AT THE ADRC WE RECOGNIZE THAT SOCIAL AND CULTURAL FACTORS PLAY AN IMPORTANT ROLE IN FORMULATING SERVICES TO IMPROVE CARE FOR LATINOS WITH COGNITIVE PROBLEMS.”

Research is essential to provide improved methods of detection, treatment, and prevention. At our ADRC, opportunities are available for research in bilingualism as a protective factor in Latinos (see Currents, Summer 2009), clinical trials of new medications for AD, and as part of a longitudinal study where information related to either normal aging or Alzheimer's is collected once a year.

For more information call Frances Martinez-Goodrich, MSW, on our bilingual line: 1-800-251-2495.



## YEAR-END GIVING TO THE SHILEY-MARCOS ALZHEIMER'S DISEASE RESEARCH CENTER

Over the years, many families seeking to donate to Alzheimer's research and family services have confused the Shiley-Marcos Alzheimer's Disease Research Center (ADRC) with the Alzheimer's Association. We are entirely separate entities. Donations made to the Alzheimer's Association do not directly benefit the Shiley-Marcos Alzheimer's Disease Research Center's scientific efforts, programs, or services. Our Shiley-Marcos ADRC is funded primarily through a grant from the National Institute on Aging and relies on the generosity of donors to supplement this grant. The following information is provided to assist those who may wish to make a contribution to our efforts.

**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 earmark a gift specifically towards research or our patient and family services. All contributions are greatly valued and contribute toward furthering our efforts. To make your gift, visit our website: <http://adrc.ucsd.edu/giving.html>.

**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 stocks' 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. For more information, please visit: [www.giftplanning.ucsd.edu](http://www.giftplanning.ucsd.edu).

**IRA ROLLOVER:** If you are 70 years or older, you can make a tax-free gift to the Shiley-Marcos ADRC through the UC San Diego Foundation, by making direct transfers from your IRA. Transfers generate neither taxable income nor a tax deduction, so you receive the benefit even if you do not itemize your tax deductions. You may transfer up to \$100,000 directly from your IRA until Dec. 31, 2011. For more information, please visit: [www.giftplanning.ucsd.edu/iraopportunity](http://www.giftplanning.ucsd.edu/iraopportunity).

**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 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: [www.giftplanning.ucsd.edu/cga](http://www.giftplanning.ucsd.edu/cga).

**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 year-end giving opportunities, please visit our website at <http://adrc.ucsd.edu/giving.html>, or contact Mary Sundsmo at (858) 822-4800 or [msundsmo@ucsd.edu](mailto:msundsmo@ucsd.edu).

Please note the UCSD Office of Gift Planning and the Shiley-Marcos 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, or other financial advisors.

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## SHILEY-MARCOS ALZHEIMER'S DISEASE RESEARCH CENTER

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## 2012 SERIES



### SAN DIEGO MUSEUM OF ART

January 13, May 11,  
September 14

### MINGEI INTERNATIONAL MUSEUM

February 10, June 8,  
October 12

### TIMKEN MUSEUM OF ART

March 9, July 13,  
November 9

### MUSEUM OF PHOTOGRAPHIC ARTS

April 13, August 10,  
December 14

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.