



# PATHWAYS

*Moving Toward a Cure*

Fall 2006

## Message from the Director

Welcome to the new newsletter! We hope you will enjoy what will be an expanded source of information and updates about the University of Pittsburgh Alzheimer Disease Research Center (ADRC). This fall, we will mark the completion of our 20th year of service and we are planning a celebration with our staff, patients, and families on September 28.

ADRC was funded by the National Institute on Aging (NIA) in 1985 as one of the first 10 federal Alzheimer's Disease Centers. From these early efforts, NIA's Alzheimer's disease research program has grown to 30 national centers, a central database of clinical and pathology information on more than 30,000 subjects, a standardized assessment of all patients who come through all the centers, multiple collaborative studies, and large, shared databases of genetic information—all directed toward the defeat of Alzheimer's disease (AD) and related disorders.

As described elsewhere in this issue of *Pathways*, this year we initiated a nationwide neuroimaging, cognitive assessment and biomarker study (from blood and cerebrospinal fluid), the Alzheimer's Disease Neuroimaging Initiative or ADNI. ADNI is of great interest not only because of its promise to tell us much about how AD changes over time and the multiple ways we can track the disease, but also because it represents a collaboration between NIA and private industry. NIA provided \$40 million for this three-year study, and a consortium of several large pharmaceutical and biotech companies contributed \$20 million. We at Pitt are especially proud to be involved in ADNI, because a study

of the amyloid imaging compound Pittsburgh Compound-B (or PiB) has been added to ADNI, at 12 of the ADNI sites. We hope PiB will become a standard way of diagnosing AD and will make assessment of anti-AD medications much more efficient.

Each center is reviewed every five years on a competitive basis to determine if the clinical, administrative, research, and educational/outreach efforts of the previous funding period justify funding for another five years. Pitt's ADRC is recognized as one of the best in the country, receiving excellent evaluations, most recently in our 2005 renewal. While our record of clinical excellence and diagnostic accuracy are excellent, and our research contributions are among the most distinguished in the field, a great feature of our center is the experience and warmth of our group. The majority of our faculty and staff have been working in the ADRC for more than 10 years, and in many cases more than 15. This reservoir of skill in dealing with patients and families makes the ADRC an expert facility for the diagnosis of and caring for people with AD and related disorders. We enjoy close relationships with the Department of Neurology and the Benedum Geriatric Clinic, which provide evaluations and ongoing care for many of our patients.

But we are most grateful for the ongoing support and collaboration of our patients and family members, without whom we could not do the research and advance our understanding

of the disease. No center can aspire to excellence and medical advances without such a partnership.

We thank you all for your contributions to this incredibly important effort.



Steven T. DeKosky, MD  
Director

## ADRC Research Subjects Propel the "Pittsburgh Compound" Around the World

— William E. Klunk, MD, PhD

There have been many articles, news reports, and even Emmy award-winning PBS specials like *The Forgetting* that have covered our brain imaging work here at the University of Pittsburgh Alzheimer Disease Research Center (ADRC) during the past four years. However, the one title that sticks in my mind is that of the March 2005 *Pittsburgh Magazine* sidebar that read, "Compound to Call Our Own." This title really captures the essence of our work with the brain imaging technology that has come to be known around the world as Pittsburgh Compound-B or simply PiB.

From the very beginning, a close collaboration existed among several

(continued on page 4)



## An Introduction to Clinical Trials

### What is a clinical trial?

A clinical trial is a research study in human volunteers to answer specific health questions. Carefully conducted clinical trials are the fastest and safest way to find treatments that work in people and ways to improve health. Interventional trials determine whether experimental treatments or new ways of using known therapies are safe and effective under controlled environments. Observational trials address health issues in large groups of people or populations in natural settings.

### Who can participate?

All clinical trials have guidelines about who can participate. Using inclusion/exclusion criteria is an important principle of medical research that helps to produce reliable results. These criteria are based on such factors as age, gender, type, and stage of a disease, previous treatment history, and other medical conditions. Before joining a clinical trial, a participant must qualify for the study. It is important to note that inclusion and exclusion criteria are not used to reject people personally. Instead, the criteria are used to identify appropriate participants and keep them safe.

### What happens during a clinical trial?

The clinical trial process depends on the kind of trial being conducted. The clinical trial team may include doctors and nurses, as well as social workers and other healthcare professionals. They check the health of the participant at the beginning of the trial, give specific instructions for participating in the trial, monitor the participant carefully during the trial, and stay in touch after the trial is completed. For all types of trials, the participant works with a research team.

### What are the benefits and risks of participating in a clinical trial?

Clinical trials that are well designed and well executed are the best approach for eligible participants to: play an active role in their own health care, gain access to new research treatments before they are widely available, obtain expert medical care at leading healthcare facilities during the trial, and help others by contributing to medical research. There are risks to clinical trials. There may be unpleasant, serious, or even life-threatening side effects to experimental treatment; the experimental treatment may not be effective for the participant; and the protocol may require more of the participant's time and attention than would a non-protocol treatment.

### What is informed consent?

Informed consent is the process of learning the key facts about a clinical trial before deciding whether or not to participate. It is also a continuing process throughout the study to provide information for participants. To help someone decide whether or not to participate, health professionals involved in the trial explain the details of the study. Then the research team provides an informed consent document that includes details about the study. The participant then decides whether or not to sign the document.

### How is the safety of the participant protected?

The ethical and legal codes that govern medical practice also apply to clinical trials. In addition, most clinical research is federally regulated with built-in safeguards to protect the participants.

— Information excerpted from *ClinicalTrials.gov*

### Does a participant continue to work with a primary healthcare provider while in a trial?

Yes. Most clinical trials provide short-term treatments related to a designated illness or condition, but do not provide extended or complete primary health care. In addition, by having the healthcare provider work with the research team, the participant can ensure that other medications or treatments will not conflict with the protocol.

### Can a participant leave a clinical trial after it has begun?

Yes. A participant can leave a clinical trial at any time. When withdrawing from the trial, the participant should let the research team know about the withdrawal and the reasons for leaving the study.

### Who sponsors clinical trials?

Clinical trials are sponsored or funded by a variety of organizations or individuals such as physicians, medical institutions, foundations, voluntary groups, and pharmaceutical companies, in addition to federal agencies such as the National Institutes of Health (NIH), the Department of Defense (DOD), and the Department of Veterans Affairs (VA). Trials can take place in a variety of locations, such as hospitals, universities, doctors' offices, or community clinics.



## Clinical Trial Volunteers Needed

### Huperzine A in Alzheimer's Disease

This study will evaluate the safety and efficacy of the Chinese herb huperzine A in the treatment of Alzheimer's disease (AD) in a randomized controlled trial of its effect on cognitive function. There is evidence that huperzine A may compare favorably in symptomatic efficacy to cholinesterase inhibitors currently in use. Huperzine A also has antioxidant and neuroprotective properties that suggest it may be useful as a disease-modifying AD treatment. The primary aim of this multicenter, Phase II trial is to determine whether treatment with huperzine A improves cognitive function. Volunteers must be able to participate in the study for 24 weeks and make nine visits to the trial site. At the study's end, participants will be invited to continue huperzine A treatment for six months in an open-label extension phase. *For more information, contact MaryAnn Oakley at 412-692-2721 or oakleymupmc.edu or Thomas Baumgartner at 412-692-2716 or baumgartnertc@upmc.edu.*

### ADNI: Alzheimer's Disease Neuroimaging Initiative

The purpose of this study is to examine how brain imaging technology can be used with other tests to measure the progression of mild cognitive impairment (MCI) and early Alzheimer's disease (AD). This information will aid future clinical trials by providing a standard assessment tool to measure the effects of treatments being studied. Study participants—aged 55 to 90—with MCI and controls with no memory complaints will be followed for three years, and those with AD will be followed for two years. At six-month intervals, all participants will be seen in person or contacted by telephone. All will undergo repeated scanning and blood and urine biomarkers will be collected at the time of each scan. All will be asked if they are willing to undergo lumbar puncture at baseline and year one, with the goal of a minimum of 20 percent, and as many as 50 percent, of each group providing cerebrospinal fluid (CSF) samples for analysis and storage for future analyses. Read an expanded description of this study on page 10. *For more information, contact MaryAnn Oakley at 412-692-2721 or oakleym@upmc.edu.*

### PiB Brain Imaging Studies

In the brains of patients with Alzheimer's disease (AD), we routinely find deposits of a protein called amyloid-beta (A) protein, or amyloid. Many scientists believe amyloid deposits are a major cause of AD. We do not know for sure how the amount of amyloid varies across different degrees of severity in AD or if it can be seen in people with mild cognitive impairment (MCI) or even in elderly individuals without memory impairment. This is because, until recently, we could not detect amyloid in living people. Using a new radiotracer developed by Pitt called [C-11]6-OH-BTA-1 or Pittsburgh Compound-B (or simply PiB) along with positron emission tomography (PET) scanning, this research will determine how amyloid changes across stages of disease severity in AD and whether amyloid is present in elderly individuals without memory problems. We are recruiting individuals with the diagnosis of AD, MCI, and healthy control subjects. Participants will be asked to complete paper and pencil testing, a brief MRI scan, and the PiB PET imaging scan. Subjects must be able to lie flat on the scanner table for two imaging sessions of approximately two hours each. Intervenes (IV) and/or arterial catheters will be inserted into participant's arms for PiB injection and blood sampling. Many of the studies are longitudinal. Participants will be invited back to have the PiB scan repeated yearly to evaluate changes in the amyloid deposits. Read more about PiB imaging on page 1. *For more information on PiB brain imaging studies, contact Claire McConaha at 412-692-2727.*

## Caregiver Studies

### Reducing Stress and Improving Sleep in AD

Caregiving can be stressful and may have a negative effect on health, such as symptoms of depression, anxiety, and general medical illnesses. More than two-thirds of caregivers say they have trouble sleeping. A small study conducted by the Alzheimer Disease Research Center (ADRC) seems to indicate that a variety of techniques can be used to reduce caregiver stress and improve sleep. Using the techniques in the study, caregivers took less time to fall asleep and did not wake up as often during the night. Caregivers also indicated that they appreciated the techniques they learned to manage stress.

ADRC is now conducting a new study to evaluate these techniques in a larger group of caregivers and to determine if improvements in stress and sleep lead to improvements in overall health.

*If you would like to learn more about this new and exciting study, please call toll-free 1-866-647-3440.*

### Clinical Trials in Progress – Enrollment Complete

- Act-Earli-AD study
- Alzhemed™ in patients with mild to moderate Alzheimer's disease
- CLASP: Cholesterol Lowering Agent to Slow Progression of Alzheimer's disease study
- VITAL: VITamins to slow ALzheimer's disease (homocysteine study)
- Effects of ONO-2506PO in patients with Alzheimer's disease
- AAB-001-201 in patients with mild to moderate Alzheimer's disease

(continued from page 1)

researchers in the University of Pittsburgh Departments of Psychiatry, Radiology, Neurology, and Neuropathology, and the professionals at the ADRC and UPMC. But even more than that, the *Pittsburgh Magazine* story title acknowledges the critical role played by the many altruistic research subjects (and their families) who gave of their time to participate in these brain imaging studies.

Most of these subjects also are ADRC participants. Without their willingness to give of themselves to propel this research forward, the advances we have made in brain imaging in Alzheimer's disease (AD) would not have been possible. Recently, one of the most prestigious scientific journals, *Nature Medicine*, named our imaging work as No. 1 among the "most notable advances in the field" over the past four years. We take great pride in this work, and believe, as the magazine title suggests, the research subjects who made this work possible should take equal pride. Just as the UPMC PET (positron emission tomography) Facility and ADRC researchers and clinical staff call PiB their own, so can our research subjects.

Those who have participated in PiB studies know that University and federal rules prohibit us from sharing many of the individual research results with our subjects (again underlining the altruism of these special volunteers). However, we believe it is important not only to thank these individuals and their families for their generous participation, but also to take a minute to give some feedback about the progress of this research during the past few years.

Prior to PiB, the only practical way to see the amyloid protein brain deposits that are characteristic of AD was after death at the time of autopsy. Pathologists look for these amyloid deposits before confirming a diagnosis of AD. PiB brain imaging allows us to detect these deposits in living people. This has generated considerable excitement because of the possibilities that this sort of brain imaging opens for early diagnosis and for the development of new AD treatments. While PiB research has been widely recognized around the world since 2002, the foundations for it were laid very quietly here at

the University of Pittsburgh between 1987 and 1999. It was during that period of time that our team tediously worked out the chemistry for the design and synthesis of a chemical that would 1) fool and penetrate the brain's natural barrier to most foreign substances in the bloodstream; and 2) find and stick to the amyloid protein deposits in the brain.

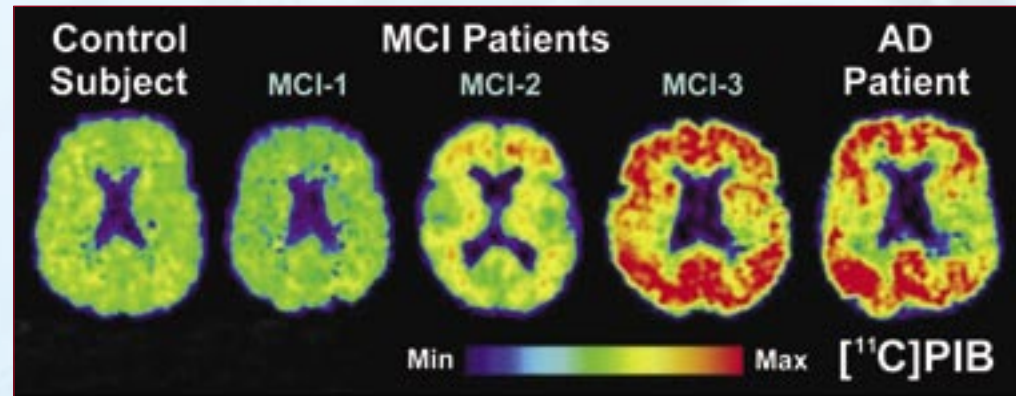
PiB was first synthesized in 2000 and was one of several hundred similar compounds that were made and evaluated for the purpose of detecting amyloid deposits in brain. PiB stood out as the most promising imaging agent. It was first used in humans in a collaborative study between our Pittsburgh research team and researchers at the University of Uppsala in Sweden, where the first human PiB study was performed on February 14, 2002. After local regulatory approvals, the first PiB study in Pittsburgh was performed on Feb 3, 2003, on one of our ADRC normal control subjects. We have completed more than 100 PiB studies on equally gracious subjects since then.

A large amount of important information has been gained from these studies including the following:

- PiB is retained in the brains of AD patients 2-3 times more than in most normal control subjects, even in very mild cases of AD.
- PiB retention in the living brain accurately reflects the amount of amyloid deposited in the brain as determined after death. (For this data, we are highly indebted to dedicated research subjects and their families who not only participated in the PiB imaging research while alive, but also gave autopsy consent to donate their brains for research after their deaths.)
- PiB images are highly reproducible from study to study in the same subject.
- PiB brain images can be performed quickly and conveniently in a way that would be practical for routine clinical use outside of research studies. (However we continue to use longer imaging times in our research studies to maximize the amount of information gained from each study.)
- PiB appears to be more sensitive than previously used imaging technologies.
- Two-thirds of subjects with mild cognitive impairment (MCI) have evidence of amyloid deposition that would be typical of AD patients.
- One-third of MCI subjects have no evidence of amyloid deposition. This is interesting because about one-third of MCI subjects never develop AD and we wonder if PiB imaging is identifying these subjects early on. This will require repeated studies over time to determine the answer with certainty.
- In certain highly-genetic forms of AD in which symptoms begin in the mid-to-late 40s, amyloid deposition can be detected with PiB in the early-to-mid 30s (more than 10 years before the expected onset of symptoms).
- About 20 percent of older subjects with normal memory show evidence of early amyloid deposition. It is not yet known if these people will develop AD later. As in the case of the MCI studies, repeated studies over time will be required to answer these questions.
- At least 19 different sites around the world (nine in the United States, six in Europe, two in Japan, one in Canada, and one in Australia) have begun to use PiB and have completed more than 500 PiB studies to date. The number of sites is expected to increase to at least 30 during the next year, partially because PiB imaging was recently made a part of the large U.S. Alzheimer's Disease Neuroimaging Initiative. This initiative is intended to provide data that will aid in the development of new drugs to treat AD.
- PiB imaging is currently being used by several drug companies who are testing new drugs designed to decrease amyloid in the brain. PiB images are being obtained before and after treatment to determine if the drug can decrease amyloid. The use of PiB could speed the availability of these new drugs to AD patients.



William E. Klunk, MD, PhD



PET images obtained with the amyloid-imaging agent, Pittsburgh Compound-B ([<sup>11</sup>C]PiB) in a normal control subject (far left), three different patients with mild cognitive impairment (MCI; center images), and a mild AD patient (far right). Some MCI patients have control-like levels of amyloid, some have AD-like levels of amyloid, and some have intermediate levels.

Despite the rapid progress, it is important to keep in mind that PiB brain imaging is still a research technology and not a clinical test. It is not developed to the point where a doctor can order a PiB brain scan and use the results to guide a diagnosis or treatment. This is certainly one of our current goals, but it will take several more years of work to bring this technology to the status of a clinical diagnostic test.

We have received many accolades from the AD research community, but one point should be immediately clear after reading through the list above—the absolutely critical role of the research volunteers. We are well aware that not a single bullet point above would have been possible without the willing volunteers from our ADRC and we want to express our gratitude for their participation in the research. The mantra that our research team works under is,

“Remember that our volunteers are doing us a big favor and ask them if there is anything we can do to make their participation in our imaging research more comfortable and convenient.” I hope that one small thing we can do is to let our past (and future) participants know how valued and important their contribution is to the PiB imaging research—work that *Nature Medicine* has recognized as one of the “most notable advances in the field” of AD research.

# In Memoriam



**The University of Pittsburgh Alzheimer Disease Research Center thanks the following individuals and companies for their generous donations received June 1, 2005, through July 31, 2006.**

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Pittsburgh, PA 15213



## Celebrating 20 Years of Alzheimer's Disease Research

As the world recognizes the 100-year anniversary of the discovery of what we now refer to as Alzheimer's disease (AD) in 2006, the University of Pittsburgh Alzheimer Disease Research Center (ADRC) will mark its 20th year as one of the nation's premiere centers for dementia research and clinical care.

Pitt's ADRC has produced major advances in diagnosis, neuropsychiatric characterization, genetics, and neuroimaging in Alzheimer's disease, and is now world-renowned for developing Pittsburgh Compound-B, or PiB, which can visualize the abnormal amyloid protein plaques of AD in living humans, using a positron emission tomography (PET) scanner.

The credit for our advances is shared by the selfless participation of our patients, their families, caregivers, and our healthy volunteers. In their

honor, ADRC is planning to host a celebration to extend our thanks and appreciation for participating in the center and for contributing to AD research. The celebration titled "Celebrating 20 Years of Alzheimer's Disease Research" will take place on September 28, 2006, 1–4 p.m., at the Circuit Center on the South Side (formerly called the IBEW Conference Center).

The event will include an educational program highlighting major advances in AD research during the past 20 years, including presentations by ADRC faculty researchers who will provide updates on past research studies, current research at the center, and what's on the horizon. The event is for ADRC participants who are actively involved in the center or other research studies.

### Did You Know?

Alois Alzheimer, a German psychiatrist, discovered Alzheimer's disease in 1906. Since that time much research has been conducted to determine the cause of and treatments for this devastating disease. During the past two decades, research was accelerated in the United States and in the 1980s the National Institute on Aging was started.

Research techniques have vastly improved during the past 20-plus years and, although the cause of the disease remains a mystery, major advances lead the scientific community to be hopeful that future research will lead to effective treatments.

## New Directions: Lumbar Puncture

New directions in Alzheimer's disease research are leading researchers down a familiar path, the use of cerebrospinal fluid (CSF) analysis. Lumbar punctures (LP) are a well-known diagnostic procedure and a routine part of the evaluation of patients with ALS, multiple sclerosis, possible meningitis, and other central nervous system disorders. Until the mid-1980s, an LP and CSF examination was a standard, routine part of the evaluation of dementia.

By 1985, researchers realized that the standard CSF examination—cell counts, glucose, and total protein—didn't serve a useful purpose. However, in the last few years, as researchers come closer to understanding the brain changes that occur in Alzheimer's disease, they are now able to measure new biological markers such as the tau protein and A (amyloid) levels in CSF with increasing accuracy. The presence of these biomarkers in the CSF—the clear, colorless fluid that

bathes the brain and spinal cord—is the focus of much evolving research. Understanding when and how these proteins react at different points in the illness, and how they react to different medications, is helping researchers learn more about the brain and Alzheimer's disease, and carries information about diagnosis and prognosis.

LP is also known as a spinal tap, a simple procedure. The patient may lie on his or her side with knees drawn up toward the chest, or sit in a crouched forward position. The skin at the base of the back is cleaned and anesthetized prior to the tap, therefore there is very little, if any, discomfort.

Once the area is completely numb, a thin needle is inserted between the bones in the back, into the spinal cavity, below the level of the spinal cord. Approximately three tablespoons of fluid are removed. A Band-Aid is placed over the site once the needle is removed.

Side effects may include slight bruising, discomfort, or swelling at the area where the needle was inserted. Less commonly, headaches can occur (in less than 10 percent). Very rarely, severe headache can occur requiring further treatment. We anticipate that our new knowledge of the information we gain from CSF analysis will lead to increased routine use of this procedure.

## Educational Events

- The southwestern region office of the Greater Pennsylvania Chapter of the Alzheimer's Association is conducting community seminars on the **Maintain Your Brain** program, which teaches techniques to maintain a sharp mind as people age. *For more information, call the chapter office at 412-261-5040 or visit [www.alz.org](http://www.alz.org).*
- St. John's Specialty Care Center in Mars will host a six-hour training program for professional caregivers, **Foundations of Care: Understanding the Person with Dementia**, on September 19, 2006. The event is being presented by Lori Macedonia of the University of Pittsburgh Alzheimer Disease Research Center (ADRC) as part of the Dementia Training Institute (a partnership of agencies including the Alzheimer's Association, Greater Pennsylvania Chapter, and ADRC).

## Alzheimer Outreach Center

The Alzheimer Outreach Center (AOC) is the community satellite and outreach program of the University of Pittsburgh Alzheimer Disease Research Center (ADRC). Located at Hill House in the Hill District, AOC serves as an information and support center.

Shirley Portis, AOC social worker, is active in community education and outreach efforts. She is on the program committee of the Southwestern Pennsylvania regional office of the Greater Pittsburgh Chapter of the Alzheimer's Association and is a member of the aging discussion group at the Area Agency on Aging in Allegheny County.

During this past year, Portis has been involved with presentations at the K. Leroy Irvis Senior Highrise, Bellefield Dwellings, and Hill Senior Services. She has been active in networking with Alma Illery Health Center, Gateway Medical Society, the Metro Institute (seminary), and a number of long-term care facilities. She also coordinates a monthly support group for families and caregivers of Alzheimer's patients.

AOC is serving as a field placement for a School of Social Work graduate student, Laura Hayes, who received her bachelor's degree in social work at the University of Pittsburgh in 1994 and most recently worked as a social worker at the HCR

Manor Care Skilled Nursing and Rehabilitation Center in Pittsburgh.

With regret, we report that our longtime AOC secretary, Kathleen Douglass, retired at the end of July. She had been the secretary since 1992 when the AOC opened, and we will miss her. Though she is retiring from the ADRC/AOC, she will remain active in her personal life and is planning a trip to Arkansas with her family. We all wish her the best.

*Individuals seeking information about Alzheimer's disease can contact Shirley Portis at 412-261-0742. Evaluations are conducted at the ADRC in Oakland.*

## Topics at Noon Series Fall 2006

Noon-1 p.m.  
ADRC Conference Room  
4 South UPMC Montefiore  
Pittsburgh, PA 15213

### September 21, 2006

*Changes in reward-related  
fMRI activation*

*associated with aging*

Julie Fiez, PhD

Associate Professor of  
Psychology and Neuroscience  
University of Pittsburgh

### October 19, 2006

*Cognitive variability*

Laura Lavery, MD

Postdoctoral Scholar

Division of Geriatric Medicine  
Benedum Geriatrics Center

### November 16, 2006

*Tauopathies: Tau aggregation  
disorders of the brain*

Ronald Hamilton, MD

Associate Professor of  
Pathology (Neuropathology)  
University of Pittsburgh

### December 14, 2006

*Screening for memory  
problems at the doctor's office*

Judy Saxton, PhD

Associate Professor of  
Neurology and Psychiatry  
Director, Training and  
Information Core, ADRC  
Associate Director, Clinical  
Core, ADRC  
University of Pittsburgh

*Light refreshments will be served.  
Registration not required. For more  
information, call 412-692-2700.*

## ADNI: Alzheimer's Disease Neuroimaging Initiative

Researchers at the University of Pittsburgh Alzheimer Disease Research Center (ADRC) are looking for men and women aged 55 to 90 to participate in a study designed to speed the development of new Alzheimer's disease treatments.

The study is currently enrolling three types of participants: people who have been diagnosed with Alzheimer's disease (AD), people diagnosed with mild cognitive impairment (MCI), and people with no known memory complaints, or at least no more than the normal memory problems associated with advancing age. Selected participants will be assessed every six months for two to three years and will be compensated for their time.

"There are a number of new drugs under development for the treatment of Alzheimer's, but how do you evaluate their effectiveness in patients?" asked Michael Weiner, principal investigator of the study.

Pitt's ADRC is one site taking part in the national Alzheimer's Disease Neuroimaging Initiative (ADNI), a unique partnership sponsored by the National Institutes of Health (NIH), with major support from the private sector. The initiative will attempt to find the most effective methods for tracking physical changes in the brain and in body fluids during the course of Alzheimer's disease and to establish those methods as clinical standards. These standards would then be used during clinical trials to assess the effectiveness of new Alzheimer's medications, which in turn could lead to more efficient trials and faster approval of medications. Researchers emphasize that these standards are urgently

needed to facilitate clinical trials as potential Alzheimer's drugs become ready for human testing.

In ADNI, magnetic resonance imaging (MRI) and positron emission tomography (PET) will be used to directly measure changes in brain structures. Blood and cerebrospinal fluid, which contain brain chemicals, will be tested as indirect indicators of change.

Nationwide, the ADNI study aims to recruit a total of 200 people with AD, 400 people with MCI, and 200 people with no known cognitive problems. They will be studied at more than 60 medical centers across the United States and Canada. People with MCI and with no cognitive problems will be studied for three years, and people with Alzheimer's for two years. Every six months during the course of the study, every participant will receive standard neuropsychological testing, blood and urine tests, and an MRI scan.

"The goal of the study is to provide researchers with better tools so that we can find a drug, demonstrate its effectiveness, and offer new treatments as soon as possible," said Susan Molchan, director of the Alzheimer's Disease Clinical Trials Program at the National Institute on Aging at NIH, which spearheads the effort. Molchan pointed out that the data and samples from the study will be made available to qualified researchers in government, academia, and the pharmaceutical industry so that analyses can be done as quickly as possible.

*Interested participants should call  
MaryAnn Oakley at 412-692-2721.*

## Staff Spotlights

### Nurse Practitioner

After graduating from the University of Pittsburgh School of Nursing, Donna Simpson worked as a registered nurse (RN) in a variety of patient care areas. She then pursued her Master of Public Health (MPH) degree at Pitt, while working as an RN at Shadyside Hospital and as a presenter of a health education program at the Carnegie Science Center.

After completion of her MPH, she began working as a clinical research nurse at the University of Pittsburgh, Division of General Internal Medicine. She also served as patient education specialist in the outpatient clinics and later completed her Master of Science in Nursing/Family Nurse Practitioner degree and worked at the Center for Research on Healthcare, where she functioned as a study monitor and coordinator of Institutional Review Board (IRB) submissions.

Additionally, she worked as a nurse practitioner at the Senior Care Institute at UPMC completing clinical evaluations for the geriatric population. Simpson has been working at ADRC since 2001 performing clinical evaluations for registry subjects, coordinating clinical drug trials and IRB submissions, and monitoring pharmacological therapy for dementia patients.

Simpson lives in Cranberry Township with her husband Tim and her two-year-old twins Zoe and Luke. If you look around in her office you might spot a picture of them. We are extremely fortunate to have such a well-trained, experienced, and thoughtful clinician in the ADRC, and her unfailingly positive outlook is a boon to both patients and colleagues.



Pictured left to right: Zoe, Donna, Tim, and Luke

### New ADRC Physician Investigator

David A. Wolk is a neurologist who joined the Alzheimer Disease Research Center and the Department of Neurology at the University of Pittsburgh this past winter as assistant professor of neurology. Wolk came from Boston where he was an instructor at Harvard Medical School and a member of the Division of Cognitive and Behavioral Neurology at Brigham and Women's Hospital. He completed his medical training at Johns Hopkins University, his residency in neurology at the University of Pennsylvania, and clinical fellowship training in cognitive and behavioral neurology at Brigham and Women's Hospital/Harvard Medical School. Wolk completed a postdoctoral Ruth L. Kirschtin National Research Service Award, studying memory in patients with Alzheimer's disease (AD). His research continues to focus on memory impairment in aging and AD.

Wolk was awarded an ADRC pilot research award in 2006. He is studying the types of memory difficulties that differentiate patients with the very earliest signs of AD from healthy aging or other conditions, such as cerebrovascular disease. Preliminary work has suggested that memory for details of a prior encounter are diminished with aging, but one's sense of familiarity remains intact.

Identification and measurement of this loss of familiarity may help determine whether patients with mild cognitive impairment (MCI) will eventually develop AD. Further, such testing may allow for screening of healthy elderly patients at risk for the development of AD. Such early detection will be particularly important as treatments to slow down or stop the disease process are developed.

For this pilot study, Wolk will measure these different forms of memory with computer-based tests in healthy elderly subjects and patients with MCI and AD. He will examine MRIs of the patients tested to determine the underlying brain structures involved in these memory processes. This will aid in understanding how Alzheimer's disease affects memory, the cardinal symptom of the disease.

*For more information on this  
study, contact Claire McConaha  
at 412-692-2727.*

David A. Wolk, MD



# University of Pittsburgh

*Alzheimer Disease Research Center  
UPMC Montefiore  
Suite 421 West  
200 Lothrop Street  
Pittsburgh, PA 15213-2582*

[www.adrc.pitt.edu](http://www.adrc.pitt.edu)

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*Moving Toward a Cure*

## **PATHWAYS**

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MaryAnn Oakley, MA  
*Editor*

Steven T. DeKosky, MD  
*ADRC Director*

James T. Becker, PhD  
*ADRC Associate Director*

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M. Ilyas Kamboh, MD, PhD  
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James T. Becker, PhD  
*Director, Neuroimaging Core*

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alzheimer's association

# memory walk®

Taking steps to end Alzheimer's

Each year the Alzheimer Disease Research Center staff and their friends and families participate in the Alzheimer's Association Memory Walk for Allegheny County, which is the association's largest fundraiser of the year.

The Allegheny County walk will be held at the Pittsburgh Zoo and PPG Aquarium in Highland Park, on Saturday, October 14, 2006. As the ADRC team captain I, along with the other ADRC staff, would like to invite you to join ADRC's team!

We would like to have a large presence at the walk, and you can help us achieve that goal! Feel free to register online with our team "ADRC" by going to [www.alz.org](http://www.alz.org).

If you go the Memory Walk site, [www.alz.org/memorywalk/overview.asp](http://www.alz.org/memorywalk/overview.asp) and search the Greater Pennsylvania Chapter, you will find the Pittsburgh walk and can sign up and/or make a donation!

Registration on the day of the walk will begin at 7:30 a.m. and the walk usually starts at 9 a.m. There are various information booths and tables to visit, and a light breakfast is usually provided. Park in the zoo parking lot, and take the escalator or elevator to the main entrance. Look for someone holding the ADRC sign. We hope to see you on **October 14!**

— Beth Sarles