

# Exploring MEemory@



EMORY UNIVERSITY SCHOOL OF MEDICINE

ALZHEIMER'S DISEASE RESEARCH CENTER

Spring 2006 - Volume 1 - Issue 1

The Emory Alzheimer's Disease Research Center is a coalition of Emory faculty, staff, and programs that focuses on Alzheimer's disease and related disorders across research, teaching or clinical activities. The mission of the Emory Alzheimer's Disease Research Center is to support multidisciplinary activities related to Alzheimer's disease and related disorders. We provide compassionate, cutting edge diagnosis, treatment and education for people with Alzheimer's disease and their families. We focus on research for early diagnosis, to advance treatment and find a cure, and place importance on education for the next generation of clinicians and researchers.

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### *Message from our Director...*

On behalf of everyone at the Emory Alzheimer's Disease Research Center (ADRC) we would like to thank you for your interest and support for our first edition of the Emory ADRC newsletter. You may not know that the Emory ADRC is one of 30 centers in the nation supported by the National Institutes of Health. It is also one of 15 centers with research as its primary mission.

The goal of these centers is to bring together scientists and facilitate their research to help learn more about Alzheimer's and related diseases. We are also committed to the education of health care professionals, persons with Alzheimer's disease, their families, and our community to aid in understanding, diagnosing and treating these illnesses.



Memory, the ability of the brain to store, retain, and subsequently recall information is key to understanding Alzheimer's disease and related dementias. We invite you to join us in our efforts to explore memory at Emory through understanding the importance of research in discovering answers.

Research is crucial to gain more information about disease, provide better care, and ultimately, prevent the burden of neurological diseases for future generations. A major thrust of the ADRC is to gain a better understanding of mild cognitive impairment which is likely key in determining early diagnosis and subsequent treatment of memory disorders. To gain this understanding some of our studies need volunteers to learn how memory changes with normal aging compared to those with Alzheimer's disease. We are also interested in involving persons who are often underrepresented in research. For example, more African Americans are affected by Al-

zheimer's disease and we need more volunteers to insure our research applies to everyone. Research activities include a variety of preclinical and clinical studies, as well as research for family caregivers.

Within this edition learn about the ADRC research registry and how you can become involved in research. In this and future issues meet Emory ADRC Investigators in the researchers profile section and learn about our clinical services. See other ways that you can support the ADRC through donations or participation in an upcoming educational event.

We hope this newsletter will provide you with new information and a better understanding about the goals of the Emory ADRC. If you have any suggestions or comments about the newsletter or would like to volunteer for one of the studies described, please contact us. We look forward to your support as we start this journey together.

- a journey that ends with a cure.

## Alzheimer's Research Requires Volunteers

Alzheimer's disease (AD) increases with age. Some research studies report that as many as 19% of those over 75 and nearly 50% over age 85 have AD. While these are concerning statistics, we need to remember that most elderly individuals do not have AD; AD is *NOT* a normal consequence of aging. Alzheimer's Disease Research Centers (ADRC) look for reasons that people have a higher risk of AD as they age. To help find answers, volunteers are enrolled in a "research registry."

### What is an Alzheimer's Disease Research Center "research registry"?

Research Centers enroll volunteers in a long term study. People who join the study are interviewed and have tests that measure "thinking ability" about once a year. These visits take two to four hours. Most Research Centers want each enrolled person to have a "study partner." Spouses, an adult child or grandchild, a brother or sister, or a friend all make good study partners.

The yearly testing that volunteers receive is sensitive to changes in memory. To learn more about the earliest signs of memory changes Alzheimer's Disease Research Centers enroll three or more groups of people. First they enroll people over age 65 with no diagnosed memory disorder. The second group is people of any age who have mild memory problems or mild cognitive impairment (MCI). The third group is people diagnosed with early Alzheimer's disease. At Emory, we also enroll people with other neurological conditions that can cause memory loss and dementia, including Parkinson's disease, and other conditions.

Following people over many years helps unlock mysteries about Alzheimer's disease. One mystery is "when does Alzheimer's disease begin?" Past research has led to earlier diagnosis of memory problems. Mild cognitive impairment (MCI) is a new category of memory loss. People with MCI have short term memory loss, but otherwise function independently. Some people with MCI will develop Alzheimer's within three years.

### Why have an ADRC "research registry"?

One reason to have a research registry is to have a group of people to participate in new studies. A researcher may need as many as 30 people for a study. He or she may need 10 people in three different categories: normal aging, MCI and early AD. Research Center staff contact volunteers

in the research registry and ask if they would be interested in joining this study. Registry volunteers always have the right to say no.

Another important reason to have a research registry is to look at large numbers of people with a similar condition. Researchers look for patterns in the information. These patterns could yield important clues about the disease. An example is genetic research to help decide if a condition is inherited. Blood samples from many people are needed to look for inherited patterns. ADRC's around the country share information to help look for patterns. ADRC's remove all personal information about their volunteers before they combine the information. Maintaining confidentiality of research volunteers is very important.

### Does the Emory Alzheimer's Disease Research Center have a research registry?

Yes! Volunteers over the age of 65, without memory problems are critical to several new research studies. People with MCI or AD are also needed for these studies.

### New Neuroimaging Study

Finding the earliest signs of memory loss is the first step in preventing Alzheimer's. Researchers are searching for ways to identify who will get Alzheimer's disease in the future. The goal of a new study is to determine if pictures of the brain every six months can help predict the onset and monitor the progression of Alzheimer's disease.

This neuroimaging (brain picture) study is starting at 50 research centers. Researchers will examine how positron emission tomography (PET) and magnetic resonance imaging (MRI) can be used to measure memory changes. 800 people with normal memory, mild cognitive impairment (MCI) or early Alzheimer's disease will be participating in the study. Participants will be followed for three years. The Emory Alzheimer's Disease Research Center is taking part in this study. For more information call 404-728-6950. Other research centers taking part in this study can be found at [www.alzheimers.org](http://www.alzheimers.org).

### New Publication on Alzheimer's Research

The National Institute on Aging has published a booklet titled "Progress Report on Alzheimer's Disease 2004-2005: New Discoveries, New Insights." Order a free copy by calling 1-800-438-4380. You can read the report at [www.alzheimers.org](http://www.alzheimers.org).

## Dr. Donald Bliwise



Donald L. Bliwise, PhD, is Professor of Neurology at Emory University Medical School. He established and serves as Director of the Program in Sleep, Aging and Chronobiology in the Department of Neurology. Dr. Bliwise received his PhD in Behavioral Science from the University of Chicago and completed a fellowship in sleep disorders medicine at Stanford University Medical Center. He is a licensed psychologist and also a fellow in the American Academy of Sleep Medicine. His specific area of interest has been the description, explanation of pathophysiology, and treatment of sleep disorders in the aged, with special interest in sleep in neurodegenerative conditions such as Alzheimer's disease and Parkinson's disease.

Dr. Bliwise has been active in the field of sleep for 30 years and is internationally recognized for his work. He has published over 125 peer-reviewed papers and 185 abstracts.

Dr. Bliwise is a lead investigator for the Clinical Core of the Emory Alzheimer's Disease Research Center. The Clinical Core is responsible for providing state of the art diagnostic assessment of patients with Alzheimer's disease and other dementias and has a special interest in other medical conditions that may contribute to impaired cognition. The core also recruits and organizes the ADRC registry, a pool of patients that have an interest in participating in research.

Dr. Bliwise was awarded an investigator initiated Alzheimer's Association grant to study the role of sleep apnea as a risk factor for developing Alzheimer's disease. Sleep apnea occurs when breathing stops or gets very shallow while an individual is sleeping. Research studies have found that sleep disturbances occur in up to 54% of patients with Alzheimer's disease (Carpenter et al., 1995; Chen et al., 2000; Hart et al., 2003; McCurry et al., 1999). He has studied over 300 elderly subjects using microprocessor/computer processor technology to record breathing during sleep.

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## Dr. Junmin Peng

Dr. Junmin Peng is an Assistant Professor in the Department of Human Genetics and in Emory University's Center for Neurodegenerative Disease. He joined the faculty at Emory in 2002 after receiving his PhD in Biochemistry from the University of Iowa and after completing a post doctoral fellowship in neuroscience and proteomics at Harvard Medical School.

Dr. Peng's current work includes a mix of teaching and research. He leads one of three research projects supported by the ADRC. His area of specialization is Proteomics Technologies, specifically Mass Spectrometry. Proteomics is the study of the structure and function of proteins and mass spectrometry is an instrument that can be used to look at and explore proteins. Dr. Peng is currently using this innovative technology to look at protein



changes in the development of neurodegeneration. Neurodegeneration is a break down of brain and nerve cells that can lead to problems with movement and memory.

Alzheimer's and Parkinson's disease are the two most common neurodegenerative diseases. They both share a common feature: an abnormal build up and change in proteins with aging. These common features have been recognized as hallmarks of neurodegeneration; however, the role they play in the development of disease is

poorly understood. Dr. Peng's research uses mass spectrometry-based technologies to identify and validate protein changes in post-mortem brain cell samples of individuals with Mild Cognitive Impairment, Alzheimer's disease and Parkinson's disease. His goal is to develop strategies that will lead to improved diagnosis and treatment for neurodegenerative diseases.

Dr. Peng has always been fascinated by how the brain works and how we remember and learn things. While performing his first post-doctoral training in a lab focused on neurodevelopment and neurodegeneration, he began to recognize that understanding the mechanism of memory loss in Alzheimer's disease will not only help treat patients but also deepen our insights into the acquisition and consolidation of memory. He also began to recognize that the research tools

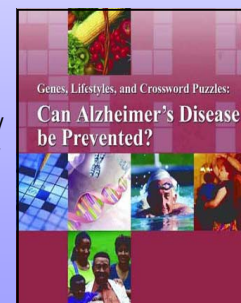
available in the field were limited and could not address how protein networks work together in a systematic manner. Therefore, he switched to another lab in proteomics and developed the technologies for large scale analysis. He is now striving to apply these advanced technologies to Alzheimer's disease research. When Dr. Peng is not teaching or performing research he enjoys spending time with his two year old son. He is also an avid sports fan and plays soccer in his free time.

## Free Booklet Stresses AD Prevention

A free 28-page booklet from the National Institute on Aging (NIA) Alzheimer's Disease Education and Referral Center (ADEAR) — *Can Alzheimer's Disease be Prevented?* — provides the latest research findings on risk factors for developing Alzheimer's Disease (AD). It describes the ongoing search for prevention strategies and how heart disease, high blood pressure, diabetes and insulin resistance, and inflammation may affect development of (AD). The booklet discusses new research from observational studies of AD.

The findings and NIA's continuing research programs are renewing hope that someday we will be able to delay the onset of AD, slow its progress, or even prevent it altogether.

The booklet can be viewed and ordered online at: [www.alzheimers.org/pubs/PreventingAD/TOC.htm](http://www.alzheimers.org/pubs/PreventingAD/TOC.htm) You can also order copies by calling the ADEAR Center at: 1-800-438-4380.



Listed below are current research studies taking place. If you are interested in participating or would like more information, please contact the Study Coordinator listed with each trial.

**Condition Being Studied**

Normal Aging, Mild Cognitive Impairment & early Alzheimer's Disease

**Procedure Being Tested**

Neuroimaging and biomarkers study

**Design**

- 2-3 years
- Visits every 6-12 months
- Blood tests, memory testing, MRI scans, PET scans and
- optional lumbar puncture

**Eligibility Criteria**

- Age 55-90
- Study partner available
- Stable on medications

**Contact Person**

Janet Cellar, RN, NP  
404-728-6453  
jcellar@emory.edu

**Condition Being Studied**

Moderate Alzheimer's Disease

**Medication Being Tested**

Valproate

**Design**

- 26 month study
- 12 visits to the clinic
- Placebo-controlled
- Memory testing
- Physical exams and laboratory assessments

**Eligibility Criteria**

- Diagnosis of probable Alzheimer's disease
- Age 55-90
- Have not experienced agitation or psychosis since the onset of Alzheimer's disease

**Contact Person**

R.D. Jewart, PhD  
404-728-6414  
rjewart@emory.edu

**Condition Being Studied**

Alzheimer's Disease

**Procedure Being Tested**

Increasing knowledge of vascular risk factors

**Design**

- Memory testing
- Blood tests, EKG, and blood pressure taken
- 1 visit. Some patients might be asked to be seen 12 months after initial visit

**Eligibility Criteria**

- Diagnosis of Probable Alzheimer's disease
- Any age

**Contact Person**

Felicia Goldstein, PhD  
404-728-6680  
fgoldst@emory.edu

**Condition Being Studied**

Mild to moderate Alzheimer's Disease

**Medication Being Tested**

Huperzine (Chinese herb)

**Design**

- 24 week study
- 9 study visits
- Placebo-controlled for first 16 weeks, however all patients will receive active Huperzine the final 8 weeks of study
- Memory testing, brief physical exams

**Eligibility Criteria**

- Diagnosis of probable Alzheimer's disease
- Have not taken Aricept, Exelon, or Reminyl in the past 2 months
- Can be on Namenda

**Condition Being Studied**

Healthy aging & all neurological disorders

**Procedure Being Tested**

No medication treatment

**Design**

- 1 study visit
- Blood sample
- Brief memory testing
- Brief history

**Eligibility Criteria**

- Any age
- Either with or without a neurological disorder

**Contact Person**

Ami Rosen, MS, CGC  
404-728-4956  
arosen@emory.edu

**Condition Being Studied**

Mild Cognitive Impairment

**Procedure Being Tested**

No medication treatment

**Design**

- 2-hours of computerized cognitive tasks or virtual reality device
- 1 or 3 year study
- 1 visit per year

**Eligibility Criteria**

- Diagnosis of Mild Cognitive Impairment

**Contact Person**

Felicia Goldstein, PhD  
404-728-6680  
fgoldst@emory.edu

**Medication Being Tested**

ONO 2506PO

**Design**

- 56 week study
- 11 study visits
- Memory testing, brief physical exams
- Placebo-controlled

**Eligibility Criteria**

- Mild to moderate Alzheimer's disease
- 50-90 years of age

**Contact Person**

R.D. Jewart, PhD  
404-728-6414  
rjewart@emory.edu

Thanks to friends and family members for these special contributions.

In memory of Mrs. B. June Baggett

Mr. and Mrs. Robert B. Ansley, Jr.  
Mr. and Mrs. Jack Bagwell  
Mr. Terry J. Bagwell  
Mr. and Mrs. Maxie C. Baughan  
Mr. and Mrs. Philip E. Beck  
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In memory of Mr. Joseph B. Ver-meulen

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In memory of Mrs. Laura Whitlock

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Other Donations

Clayton School Employees Foundation  
The Dr. Lloyd Westley Luttrell Memorial Foundation  
Wadleigh C. Winship Fund

**Contributions**

If you would like to make a contribution to support the Alzheimer's Disease Research Center, please use the following contribution form.

Enclosed is my tax deductible gift of \_\_\_\_\_

Please note that this contribution is  In Memory of  In Honor of  
Name \_\_\_\_\_

Please send of Acknowledgement of this donation to:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Donor Name: \_\_\_\_\_

Address: \_\_\_\_\_

Please make checks payable to:  
Emory Alzheimer's Disease  
Research Center  
1841 Clifton Road  
Atlanta, GA 30329

**ADRC Educational Events  
April—June 2006**

**Middle Stage Alzheimer's  
Challenges**

6 week class  
Fridays, April 14, 21, 28 and  
May 5 & 12  
10:30-12:00  
Location:  
Wesley Woods Health Center  
Susan Peterson-Hazan

**Research Update**

Dr. James Lah  
March 10, 2006  
10:30 – 12:00  
Location:  
Budd Terrace Auditorium  
1841 Clifton Rd.  
Atlanta, GA 30329

**Alzheimer's Disease Research**

Dr. Allan Levey  
March 21, 2006  
7:00 pm  
Hearthstone  
at Presbyterian Village  
Austell, GA

**Late Stage Alzheimer's Disease**

4 week class  
Fridays 10:30-12:00  
May 19, 26 and June 2 & 9  
Location:  
Wesley Woods Health Center  
Susan Peterson-Hazan

**Research Update**

April 20, 2006  
1:00 - 3:00 pm  
Susan Peterson-Hazan, MSW  
Alzheimer's Association Provider  
Intensive  
404-728-1181  
1:00 - 3:00 pm  
Susan Peterson-Hazan

**ADRC Caregiver Seminar  
Legal Planning when  
Alzheimer's disease is the  
Diagnosis**

Elder Lawyer  
June 22, 2006  
6:00 pm

**Stages of Alzheimer's Disease**

Susan Peterson-Hazan  
June 6, 2006  
7:00 pm  
Sugarloaf Alzheimer's Support  
Group  
Sugarloaf UMC, Duluth, GA



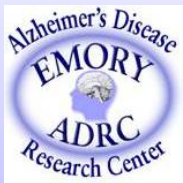
[Memory Assessment Clinics](#)

Wesley Woods Health Center  
1841 Clifton Road, NE  
Atlanta, GA 30329  
404-728-4936

Grady Memorial Hospital  
80 Butler Street, SE  
Atlanta, GA 30335  
404-616-4567

**Contact  
Information**

Emory Alzheimer's Disease Research Center  
Wesley Woods Health Center  
1841 Clifton Road  
Atlanta, GA 30329  
404-728-6950  
[emoryadc@emory.edu](mailto:emoryadc@emory.edu)



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