I am a research participant because I see what my mother is going through and I want to help…I’m also scared for my own health, and for my children’s’ health.” Research Participant, Alzheimer’s Family History Study.

Research tells us that people who have a parent with Alzheimer’s disease (AD) are at increased risk for AD because they have certain genes. These genes cause the accumulation of higher levels of AD-related proteins in middle age. The Emory Alzheimer’s Disease Research Center (ADRC) is now pursuing this important area of prevention research, making Emory one of only a handful of Centers focusing on middle aged, ‘at risk’ individuals. In order to help as many individuals as possible, we need to target people who are at the highest risk for AD. This includes people with a parental history, particularly women and African Americans.

Parental history research will provide information about the relationship between AD brain changes and other risk factors – particularly those we can modify such as high blood pressure. By studying these effects in individuals at risk for AD, we will have a higher likelihood of developing therapeutic strategies.

I am the lead Investigator on a National Institutes of Health (NIH) funded study investigating blood pressure and AD biomarkers in people with a parental history of AD. A person cannot change the fact that they have a parent with AD. They can, however, play an active role in better understanding AD prevention. The Association between Cardiovascular Risk and Preclinical Alzheimer’s Disease Pathology Study (ASCEND) focuses on individuals with a family history because they will benefit the most from an intervention or a treatment. This study will help us understand why some people go on to develop AD, while others don’t.

The ASCEND project is a prevention study for people between the ages of 45 – 65 who have a parent with AD. We will obtain pictures of the arteries in the body and the brain. Participants will also wear a blood pressure monitor for 24 hours, have a blood test, undergo measurement of spinal fluid and take tests that will examine their memory and thinking ability. Participants will receive the results of their 24 hour blood pressure assessment as well as the results of their metabolic and inflammatory blood tests, free of charge.

For more information on family history AD research or to sign up to participate in prevention research please contact: Whitney Wharton, PhD Assistant Professor w.wharton@emory.edu 404.728.6918
Patients with Alzheimer's disease have significantly higher levels of DDE, the long-lasting metabolite of the pesticide DDT, in their blood than healthy people, a team of researchers has found. In a case-control study involving 86 Alzheimer's patients and 79 healthy elderly controls, researchers found that DDE levels were almost four times higher in serum samples from Alzheimer's patients than in controls. Having DDE levels in the highest third of the range in the study increased someone's risk of Alzheimer's by a factor of four.

"This is one of the first studies identifying a strong environmental risk factor for Alzheimer's disease," says co-author Allan Levey, MD, PhD, director of Emory's Alzheimer's Disease Research Center and Betty Gage Holland chair of neurology at Emory University School of Medicine. "The magnitude of the effect is strikingly large -- it is comparable in size to the most common genetic risk factor for late-onset Alzheimer's."

The lead author is Jason Richardson, PhD, associate professor of environmental and occupational medicine at Rutgers-Robert Wood Johnson Medical School. Richardson collaborated with Dr. Levey at Emory University Alzheimer's Disease Research Center and Dwight German, PhD at the University of Texas Southwestern Medical School's Alzheimer's Disease Center, replicating the findings in independent samples from two regions of the country.

The researchers have also identified a plausible mechanism by which DDE and DDT have Alzheimer's-related effects on the brain. Exposure of cultured neural cells to high concentrations of DDT or DDE -- comparable to those seen in highly exposed humans -- increases levels of the protein that is a precursor to beta-amyloid, the main component of plaques found in the brains of Alzheimer's patients.

In the US, DDT (dichlorodiphenyltrichloroethane) was used extensively in agriculture and for mosquito control from the 1940s until it was banned in 1972. Concerns over DDT's effects on wildlife, especially birds, played an important role in the history of the environmental movement. Around the world, DDT's use continued in many countries until more recently. Public health authorities have said that DDT was critical for controlling mosquitos that spread malaria in several countries. For this reason, the World Health Organization called for DDT's reintroduction to fight malaria in African countries in 2006.

"We are still being exposed to these chemicals in the United States, both because we get food products from other countries and because DDE persists in the environment for a long time," Richardson says. In addition, DDT's half-life in the body is very long, between 8 and 10 years. Because of continuing exposure and its long half-life, the DDE metabolite accumulates in tissues as people age.

This observation could help explain why age is by far the largest risk factor for Alzheimer's disease, Levey says. The findings on DDT and Alzheimer's emerged from previous research conducted by Richardson, with Emory and UT Southwestern colleagues, on the connection between another pesticide, beta-HCH, and Parkinson's disease. Richardson first began examining the pesticide connection when he was a postdoctoral fellow at the Emory Center for Neurodegenerative Disease with Gary Miller, PhD, now associate dean for research at Rollins School of Public Health, between 2002 and 2005.
The Emory Alzheimer's Disease Research Center will host a memory screening on May 16, 2014 at Wesley Woods Outpatient clinic. This community service event is for individuals who want to know if their memory is normal for their age or who are concerned about memory changes. A memory screening is not the same as a clinical evaluation of memory that takes place when you see a physician. However we do give participants the results of their memory screening. If a weakness in memory is identified we discuss options for further evaluation. Call 404-778-7777 to schedule a memory screening.

In the current study, DDE levels weren’t the sole determinant of whether someone gets Alzheimer’s; some Alzheimer’s patients had non-detectable levels of DDE and some healthy control samples had DDE levels that were relatively high (top third). The researchers say that genetic risk factors may combine with environmental exposures to drive disease development.

The research was supported by the National Institutes of Environmental Health Sciences (P30ES005022; T32ES07148, R01ES015991), the National Institute of Neurological Disorders and Stroke (R21NS072097), and the National Institute on Aging (P30AG012300, P50AG05681, P50AG025688). Reference: J.R. Richardson et al. Elevated serum levels of p,p’-DDE, the metabolite of the pesticide DDT, are associated with increased risk for Alzheimer’s disease. JAMA Neurology

Thank You from the Emory Alzheimer’s Disease Research Center

By Ken Hepburn, PhD

To all our research study participants:

We would like to take this opportunity to say a big THANK YOU to all of you. You are the face of research and the foundation of all of our work. Without your participation year after year we would not be able to make progress in finding ways to prevent and cure Alzheimer’s disease. For those who participate in the Honor Study, this longitudinal study is conducted at all of the other ADRCs throughout the country. The data from all these centers is collected to create a powerful database of information on how our bodies and brain change as we age. This information is so critical because it has been gathered over so many years. So when you ask, “Do I need to keep coming in year after year?” the answer is Yes!

Many of our Honor Study participants are also involved in our other research studies. These studies may involve the collection of blood samples or other fluid samples which help us in our early detection efforts. Some of these studies involve neuroimaging procedures (MRIs or PeT scans of the brain) that let us see the changes in the brain. Another study involves brain autopsy which lets us know what the brain tissue actually looks like and how that tissue relates to the data we have collected over time.

Regardless of the research study, you are greatly appreciated. Please let us know if there is anything we can do to improve your experience by emailing EmoryADRC@emory.edu.
The Registry for Remembrance (RfR) is an established community and academic partnership to better inform individuals, particularly minority elders, about cognitive disorders and the importance of clinical research participation to stop, slow or prevent Alzheimer’s disease. Focus groups with community members held from 2009—2010 revealed that more information about healthy aging, memory preservation, dementia and caregiving support was needed. With your input, the Emory ADRC and the Center for Health in Aging partnered with the RfR to create the Carter Center Forums. Your forum participation and subsequent study enrollment have resulted in a broader diversity of informed research volunteers. The National Institutes of Health (NIH) and other private supporters have awarded funds to Emory ADRC scientists for several studies on memory loss prevention and proactive aging.

We invite your continued support by participating in the 7th Forum, “Preventing Memory Loss and Dementia: Emory’s Current Research Agenda” on Tuesday, April 29, 2014 at the Carter Presidential Center. We will share relevant information about new treatment strategies to prevent memory loss and dementia. This forum will bring together more than 300 attendees and exhibitors to draw on the latest trends and discoveries in Alzheimer’s prevention. Despite the increase in emerging treatments and early detection, we still have challenges with Alzheimer’s disease.

We would like to express our appreciation to the Emory Center for Health in Aging, Fulton Dekalb Hospital Authority, the Atlanta Chapter of the Links, Incorporated, Assisted Choice, SimpleC and the Alzheimer’s Association for their financial support.

There is no charge for this event, however, space is limited. Registration is required. Visit https://7thforum.eventbrite.com or contact Cornelya Dorbin at 404-712-1416.

Museum Moments is a tour designed for people with mild cognitive impairment or dementia and is based on the successful Meet Me program that began at the Museum of Modern Art. Experiencing the art of the ancient world at the Carlos Museum can spark the imagination, trigger memories, and encourage a shared experience in a beautiful setting. Individuals with mild cognitive impairment, early Alzheimer’s or dementia are invited to attend Museum Moments tours with their family member or a caregiver. To schedule a time contact Julie Green at 404-727-2363.
This year's A Family Affair, benefiting the Emory Alzheimer's Disease Research Center (ADRC), was chaired by Sarah and Jim Kennedy, dedicated supporters of the Emory ADRC. The cause is an important one to the Kennedy family, as Sarah Kennedy's late father had Alzheimer's. This annual dinner brings together families and friends who have been touched by Alzheimer's and the scientists and doctors of the Emory ADRC who are battling the disease in their research labs and the clinic. This year's A Family Affair netted more than $800,000 to fund critical research needs – the largest amount raised from a one-night Emory event. The Emory ADRC extends our warmest gratitude to the Kennedy family, the Host Committee, sponsors, donors and volunteers who made the event such as success.

Georgia Alzheimer’s and Related Dementias State Plan  
By Natalie Disantis, JD

The Georgia Alzheimer’s Disease Taskforce met throughout the Fall to discuss a broad range of issues surrounding Alzheimer’s disease from the delivery of dementia care, availability of services to state based research efforts. Leaders from both the Emory ADRC and the Emory Center on Health in Aging participated in the Taskforce committee meetings, providing critical data and medical recommendations. We thank Dr. Allan Levey, Dr. James Lah, Dr. Ken Hepburn, Dr. Kyle Steenland, Dr. Monica Parker and Dr. Ted Johnson for their efforts and recommendations. Based on the information presented at the meetings, the Taskforce made several legislative recommendations which successfully passed through the state legislature and are waiting for the Governor to sign. Senator Rene Unterman introduced legislation stemming from the ideas generated from the taskforce in the Senate and Representative Sharon Cooper introduced the House legislation. The first bill, SB 292 (later combined into HB 966), establishes an Alzheimer’s Disease Registry within the Department of Public Health to obtain more accurate statewide data on the incidence of dementia in Georgia; the state legislature allocated $110,000 in the budget to create the Registry. The second piece of legislation is SR 746 which expresses support for the State Plan. The Resolution urges all Georgia communities, the private sector, and state and local government agencies to support the State Plan pursuant to SB 14 which passed in 2013. The third piece of legislation, SR 828, creates a Joint Study Committee on Emergency Relocation of Abused Adults. A common problem facing the state and law enforcement is the temporary placement of adults with dementia that have been abused emotionally, financially and physically. Due to growing fraud and abuse in pop up personal care homes, the fourth bill, HB899, creates criminal penalties for owning or operating an unlicensed personal care home. We appreciate the hard work by the Taskforce and members of the state legislature to bring these ideas to fruition.

"A Family Affair" benefits Emory Alzheimer's Disease Research Center  
By Natalie Disantis, JD

This year’s A Family Affair, benefiting the Emory Alzheimer’s Disease Research Center (ADRC), was chaired by Sarah and Jim Kennedy, dedicated supporters of the Emory ADRC. The cause is an important one to the Kennedy family, as Sarah Kennedy’s late father had Alzheimer’s. This annual dinner brings together families and friends who have been touched by Alzheimer’s and the scientists and doctors of the Emory ADRC who are battling the disease in their research labs and the clinic. This year’s A Family Affair netted more than $800,000 to fund critical research needs – the largest amount raised from a one-night Emory event. The Emory ADRC extends our warmest gratitude to the Kennedy family, the Host Committee, sponsors, donors and volunteers who made the event such as success.

Make Your Contributions to Support the Emory Alzheimer's Disease Research Center

Enclosed is my tax deductible gift of $___________. Please note that this contribution is:

☐ In Memory of:  ☐ In Honor of:

Please send acknowledgement of this donation to:
Name: ____________________________
Address: __________________________
City: ___________ State: ______ Zip: ____________
Donor Name: ____________________________
Address: __________________________
City: ___________ State: ______ Zip: ____________

Please make checks payable to:
Emory Alzheimer’s Disease Research Center
c/o Emory Univ. Health Sciences Development
1440 Clifton Road, Suite 112
Atlanta, Georgia  30322
## Clinical Trials & Research Studies

**Emory Alzheimer’s Disease Research Center**

*Wesley Woods Health Center, 1841 Clifton Rd., Atlanta, GA 30329*

*Grady Neurology Clinic, 80 Jesse Hill Jr. Drive SE, Atlanta, GA 30303*

**404-728-6950**  [http://med.emory.edu/ADRC/](http://med.emory.edu/ADRC/)

<table>
<thead>
<tr>
<th>RESEARCH STUDY</th>
<th>ELIGIBILITY</th>
<th>CONTACT PERSON</th>
</tr>
</thead>
</table>
| **Atomoxetine Clinical Trial:** for people with Mild Cognitive Impairment (MCI) | • Diagnosis of Mild Cognitive Impairment  
• Stable on Medications for 3 months  
• Study partner who can attend all visits | Lavezza Zanders  
404-728-6392  
lzander@emory.edu |
| **BAN2401: A 18 month infusion study to slow Alzheimer's disease (AD) progression** | • Diagnosis of MCI due to AD or mild AD  
• 50-90 yrs old  
• Study partner available for all visits  
• Willing to undergo MRI & PET scans | Gail Schwartz  
404-728-6395  
gschwar@emory.edu |
| **Honor Research Registry:** Longitudinal study of changes in memory and other cognitive skills | • Aging people with no memory problems  
• People of any age with MCI, Alzheimer's disease or other forms of dementia  
• Willing to participate in additional research studies, Study partner available to participate in visits | Letheshia Husbands  
404-728-6950  
lhusban@emory.edu |
| **EPOCH: A clinical trial testing a new treatment for Alzheimer's disease (AD)** | • Diagnosis of mild to moderate AD  
• 55-85 year old  
• Study partner available for all visits  
• Willing to have dilated eye exams and MRIs | Phyllis Vaughn  
404-728-6567  
pvaughn@emory.edu |
| **Registry for Remembrance: An initiative to increase awareness & participation in neurology research** | • Ethnic individuals of African Ancestry  
• Aging people over 60 with no memory problems, People of any age with mild cognitive impairment, Alzheimer's disease or other forms of dementia  
• Study partner available to for all visits | Letheshia Husbands  
404-728-6950  
lhusban@emory.edu |
| **ASCEND: 3-year study of cardiovascular influences on AD** | • 45-65 years old  
• Family history of AD  
• Cognitively normal | Whitney Wharton  
404-728-6918  
w_wharton@emory.edu |
| **CALIBREX: 1-year study of the relationship between high blood pressure and AD** | • Cognitively normal  
• Older than 60 years of age  
• Hypertensive | Ihab Hajjar  
ihabhajjar@emory.edu |
| **TOMMORROW: 5-year prevention trial** | • Cognitively normal  
• 65-83 years old  
• Study partner available for all study visits | Deborah Westover  
404-712-6807  
dwestov@emory.edu  
Kyle Jennette  
404-728-6307  
kyle.j.jennette@emory.edu |
| **Memory and Aging in African Americans and Caucasians** | • Age 55 – 90 with no memory problems or MCI or mild Alzheimer's  
• Study partner available for all study visits  
• Willing to have imaging & lumbar puncture | William Hu  
404-727-4174  
wthu@emory.edu  
Monica Parker  
404-728-6950  
mparke2@emory.edu |
To register for a class call Susan Peterson-Hazan at speter2@emory.edu or 404-728-6273.

<table>
<thead>
<tr>
<th>Class</th>
<th>Dates - 2014</th>
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<tbody>
<tr>
<td>Early Memory Loss Group</td>
<td>An 8 week class that meets: Fridays: 11:00 – 12:30</td>
<td>Wesley Woods Health Center</td>
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<tr>
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<td>September 12 – October 31</td>
<td>1841 Clifton Rd, NE, Atlanta, GA 30329</td>
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<tr>
<td>Savvy Caregiver Class</td>
<td>A six week class that meets: Fridays: 10:30-12:30</td>
<td>Wesly Woods Geriatric Hospital AV Conference</td>
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<td>April 11 – May 16</td>
<td>Rm 1821 Clifton Rd., Atlanta, GA 30329</td>
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<td>Caregiver Support Group</td>
<td>Meets every other Friday 10:30-12:00</td>
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<td>Frontotemporal Dementia Care-</td>
<td>2nd Tuesday of every month 6:30-8:00 pm</td>
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