Atomoxetine is a drug that could become a new treatment for individuals diagnosed with Mild Cognitive Impairment (MCI). This FDA-approved drug has historically been prescribed for treating symptoms associated with Attention Deficit Disorder (ADD). Researchers have made the exciting discovery that Atomoxetine also can improve working memory and attention in animal models. A good example of what we mean by working memory is the active “workspace” used in performing one’s daily activities. For a mouse, this might mean remembering which way to turn in a maze to reach a goal box filled with a food reward, whereas for humans, working memory enables us to remember where we parked our car in the supermarket parking lot, or what card our bridge partner led. At the Emory Alzheimer’s Disease Research Center (ADRC), we are attempting to determine whether Atomoxetine can improve working memory in individuals diagnosed with MCI.

In the summer of 2012, we began recruiting the first participants in a clinical trial to demonstrate the safety and efficacy of Atomoxetine for the treatment of MCI. Through the generous support of the Alzheimer’s Drug Discovery Foundation and an anonymous donor, we hope to enroll 40 participants in this trial. Unlike many clinical trials where participants are randomly assigned to study groups with a chance of receiving placebo ranging anywhere from 20% to 50%, our study is designed so that all participants will receive active drug at some point during the 12 months of study. This study design allows us to assess the effectiveness of Atomoxetine on biological markers of the disease in the blood, brain, and cerebrospinal fluid. We are happy to report that we have enrolled 10 participants, and that our Subject #1 will complete the study in September, 2013. All participants, to date, have tolerated the study drug, and we’ve had no drug-related serious adverse events.

The Atomoxetine trial is being led by Dr. Allan Levey, chair of the Department of Neurology and Director of the Emory ADRC, and as many as 14 staff members of the ADRC are playing an active role in the study. The enthusiastic participation of our research staff bespeaks our optimism that this drug will effectively slow the progress of cognitive decline.

We need participants for this research project. We are seeking people who have a diagnosis of MCI. All participants will be required to take the study drug daily, in addition to undergoing periodic tests to assess safety and to measure biological markers.
Brain Power: How Exercise Improves Cognitive Performance
By Joe Nocera, PhD

People over the age of 65 frequently have difficulty with planning, initiating, sequencing, and monitoring complex cognitive behaviors. As such, the ability to carry out essential tasks of daily living is compromised. Interestingly a growing body of research demonstrates that physical exercise can improve cognitive performance in older adults in an array of age-susceptible cognitive functions. Similarly, research demonstrates beneficial effects of computer-based cognitive training in later life to promote brain health. However, research has not yet investigated combining physical and cognitive exercise. The objective of a study underway at the VA and Emory is to identify the combined/synergists effects of cognitive training in conjunction with physical exercise on cognitive functions and mobility in sedentary older adults. To address this research question 60 older adults (age 65-89) will be randomized to two different types of exercise regimens. Each regimen will be followed by a popular commercially-available brain fitness program that has demonstrated specific cognitive improvements and high adherence. While it is plausible that physical exercise can potentiate and increase generalizability of cognitive training while concurrently benefiting physical health, this intervention approach has not been adequately studied in sedentary older adults. Ultimately, this investigation could substantially advance the development of treatments for cognitive impairment because these goals explore an intervention that may potentially have pervasive effects on patient quality of life from a cognitive as well as a physical standpoint.

If you want further information about this study, please contact Joe Nocera at joenocera@emory.edu.
Alzheimer’s disease (AD) is always devastating when it strikes, but when it occurs in people less than 60 years-old the devastation is brought into even sharper focus. This is because of the loss of work productivity and tremendous emotional and financial strain placed on other working family members and young children. Fortunately, young-onset AD represents about 1% of all people with the disease. Nevertheless, studying these individuals leads to vital discoveries about how AD occurs. We think there is much more to be learned by studying this often neglected group of AD patients.

Efforts to find the genetic basis of AD began in the 1980’s and focused on families that transmitted young-onset AD from one generation to the next. Even among those who are diagnosed with young-onset AD, these families are rare and represent about 10% of all young-onset AD. Subsequently, genetic studies with these families led to the discovery of AD-causing mutations in three genes:

1) amyloid precursor protein  
2) presenilin 1  
3) presenilin 2.

It is hard to overstate the importance of finding these mutations in AD research. These mutations have lent vital support to one view of how AD occurs, the amyloid hypothesis, and these mutations are the basis of nearly every model system of AD.

Considering the importance of young-onset Alzheimer’s disease, we were surprised that no one had seriously explored the genetic basis of the 90% of individuals young-onset AD without a family history of young-onset AD. Using national U.S. data, we found that those individuals likely inherit the disease in a recessive manner. In other words, they inherit two mutations that when combined cause AD. Considering how revolutionary the initial discoveries of mutations in amyloid precursor protein, presenilin 1, and presenilin 2 were to AD research, a new recessive genetic cause would likely have a similar impact. This is a new hypothesis, and one we are vigorously pursuing to identify new genetic causes of the disease.

To address the specific needs in Young Onset AD, a task force was formed to guide the implementation of programs and services for patients with early onset AD. This advisory group meets monthly to gather information, accelerate the research efforts and impact patients in a more profound way. If you are interested in learning more about our efforts call Natalie Disantis at 404-712-2084.

What is Lewy body dementia (LBD)?

Lewy body dementia (LBD) is a common progressive brain disease that affects thinking, movement, behavior and sleep. Approximately 1.3 million Americans have LBD, but may not be correctly diagnosed because many doctors are unfamiliar with LBD. Most people see multiple doctors before receiving the final diagnosis of Lewy body dementia, and it can often take a year or two to get to the proper diagnosis. The Lewy Body Dementia Association (LBDA) is a 501(c)(3) nonprofit organization dedicated to raising awareness of the Lewy body dementias (LBD), supporting patients, their families and caregivers, and promoting scientific advances. Through outreach, education and research, LBDA supports those affected by Lewy body dementias. LBDA helps to connect LBD caregivers to each other and to the most current information about LBD. Resources available to caregivers through LBDA include online discussion forums where caregivers meet and share their experiences, a national network of LBD support groups and the LBD Caregiver Link – 1-800-LEWYSOS – where caregivers can connect with LBDA volunteers who have personal experience with LBD.

Please consider getting involved with LBDA through the volunteer program or support group network, making a donation or spreading the word about LBD during October LBD Awareness Month, “A Month to Remember,” which started recruitment in May! To learn more about LBD and LBDA please visit www.lbda.org or call Elizabeth at 404-935-6444.

New Frontiers in Young Onset Alzheimer’s Disease
By Thomas Wingo, MD

Alzheimer’s disease (AD) is always devastating when it strikes, but when it occurs in people less than 60 years-old the devastation is brought into even sharper focus. This is because of the loss of work productivity and tremendous emotional and financial strain placed on other working family members and young children. Fortunately, young-onset AD represents about 1% of all people with the disease. Nevertheless, studying these individuals leads to vital discoveries about how AD occurs. We think there is much more to be learned by studying this often neglected group of AD patients.

Efforts to find the genetic basis of AD began in the 1980’s and focused on families that transmitted young-onset AD from one generation to the next. Even among those who are diagnosed with young-onset AD, these families are rare and represent about 10% of all young-onset AD. Subsequently, genetic studies with these families led to the discovery of AD-causing mutations in three genes:

1) amyloid precursor protein  
2) presenilin 1  
3) presenilin 2.

It is hard to overstate the importance of finding these mutations in AD research. These mutations have lent vital support to one view of how AD occurs, the amyloid hypothesis, and these mutations are the basis of nearly every model system of AD.

Considering the importance of young-onset Alzheimer’s disease, we were surprised that no one had seriously explored the genetic basis of the 90% of individuals young-onset AD without a family history of young-onset AD. Using national U.S. data, we found that those individuals likely inherit the disease in a recessive manner. In other words, they inherit two mutations that when combined cause AD. Considering how revolutionary the initial discoveries of mutations in amyloid precursor protein, presenilin 1, and presenilin 2 were to AD research, a new recessive genetic cause would likely have a similar impact. This is a new hypothesis, and one we are vigorously pursuing to identify new genetic causes of the disease.

To address the specific needs in Young Onset AD, a task force was formed to guide the implementation of programs and services for patients with early onset AD. This advisory group meets monthly to gather information, accelerate the research efforts and impact patients in a more profound way. If you are interested in learning more about our efforts call Natalie Disantis at 404-712-2084.

Volunteers needed for YOAD Taskforce
Call 404-712-2084
Thanks to the combined efforts of advocates such as the Alzheimer’s Association of Georgia, the Georgia Council on Aging, and the Coalition of Advocates for Georgia’s Elderly Georgia is moving toward the creation of a State Plan for Alzheimer’s Disease. Their testimony and that of numerous others who spoke of the personal costs of dementia were instrumental in garnering legislative support. Additionally, Drs. Levey and Lah of the Emory ADRC testified at the House and Senate hearings by providing legislators with in-depth information on Alzheimer’s disease, current research trends, and needs for the future.

As a result, the General Assembly passed and Governor Deal signed Senate Bill 14, sponsored by Senator Renee Unterman of Buford. It creates the Georgia Alzheimer’s and Related Dementias Task Force, chaired by Director of Division of Aging Services Dr. James Bulot, who will be joined by Unterman, Representatives Tommie Benton and Sharon Cooper, and Commissioners from the Departments of Public Health and Community Health. They will meet with advisors from a variety of fields to address the incidence of dementia, costs, research, existing infrastructure, and caregiver support services. Their mission is to recommend a State Plan which can allow Georgia to set priorities, budget incrementally, and coordinate efforts among state and federal agencies as well as the private sector, non-profit, and faith-based community to combat diseases which afflict a reported 120,000 Georgians.

In 2012 the federal government released the first National Alzheimer’s Disease Plan, to coordinate national efforts, public and private, to address the health crisis. Twenty-four states have such plans in place while another six have appointed task forces or commissions. The Georgia Task Force will be holding public hearings on September 26, October 24, November 21, and December 19 at locations to be announced. For further information, please call 404-463-1368.

The Emory Alzheimer’s Disease Research Center and the Registry for Remembrance presented the fifth community forum: Navigating the Complex Role of the Caregiver at the Carter Presidential Center on April 30th. The forum drew nearly 300 participants and offered opportunities to learn the latest research and information for caregivers of Alzheimer’s patients. Attendees heard from the top researchers, social workers and clinicians on how to provide the best care for people with Alzheimer’s disease and related dementias.

The format included lectures, expert panel discussions and interactive question and answer sessions. Presenters provided updates on proper management of the disease and practical tips to help individuals ease the burden of caregiving. The following is a quote from an attendee: “The content was engaging and met my specific needs by sharing real-world solutions that make living with Alzheimer’s disease less challenging.”

Sponsors for the forum included the Emory Center for Health in Aging, Fulton Dekalb Hospital Authority, Gentiva, Alzheimer’s Association, The Links Incorporated—Atlanta Chapter and Caravita Home Care. The next forum is scheduled for October 29, 2013. There is no charge for this event however space is limited. Registration is required and can be accessed by visiting http://6thforum.eventbrite.com. For more information contact Cornelya Dorbin at 404-712-1416.
Inaugural *Hope on the Horizon* Luncheon

By Natalie Disantis, JD

On May 16, 2013 the Alzheimer’s Society of Atlanta and the Alzheimer’s Drug Discovery Foundation launched the first annual *Hope on the Horizon*, a symposium and luncheon to raise funds for and awareness of Alzheimer’s disease research and treatment. The event, co-hosted by Leonard A. Lauder, Alzheimer’s Drug Discovery Foundation chairman, chairman emeritus of the Estée Lauder Companies, and Mary Rose Taylor, founding member of the Alzheimer’s Society of Atlanta highlighted the tremendous progress that’s being made to find treatments to detect, prevent, and cure Alzheimer’s and related dementias. The event raised over $200,000 with 100% of the funds going to support groundbreaking Alzheimer’s drug research at the Emory Alzheimer’s Disease Research Center (ADRC). During the luncheon, nationally ac-

 claimed interior designer Dan Carithers received the inaugural Horizon Award for Innovation and Design. Dan’s public acknowledge-

ment of his diagnosis of Alzheimer’s disease has opened the hearts and minds of those more reticent about discussing the disease. The ADRC is grateful to both the Alzheimer’s Society of Atlanta and the Alzheimer’s Drug Discovery Foundation for launching this very important event.

Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative

By Ken Hepburn, PhD

In April, President Obama announced the BRAIN initiative; Brain Research through Advancing Innovative Neurotechnologies. This is a fifteen-year, $100 Billion dollar project aimed at developing the technical capacity to observe the activity of individual neurons and the interaction between neurons in the brain. This year, the initiative will be launched with a $100 Million dollar investment to plan the overall strategy for the initiative. This is an exciting venture. Its scope dwarfs that of the Human Genome Project that has already begun to yield benefits in the area of personalized medicine. The mission - to understand how the brain works at its most fundamental levels -- is breathtaking. And it provides hope for all of us engaged in seeking the cure for Alzheimer’s.

It is important to bring perspective to bear on the initiative. First of all, it is encouraging to see this kind of federal investment in brain science. But answers will not come quickly. The BRAIN Initiative will -- eventually -- benefit all who suffer from disorders associated with the brain and the central nervous system. The initiative will benefit those with traumatic brain injuries (like wounded warriors returning from distant conflicts), or persons with Parkinson’s or Downs syndrome -- or persons with Alzheimer’s disease. Those kinds of results may still be years away. In the meantime, the BRAIN initiative will support the development of new and very sensitive ways to examine how the brain works. Some of these innova-

![Image](image_url)

*Approximate investment to give scientists the tools they need to gain a dynamic picture of the brain and better understand how it works, learn, and remember.*

![Image](image_url)

*Inaugural Hope on the Horizon Luncheon* by Natalie Disantis, JD

*Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative* by Ken Hepburn, PhD

From left, event co-chair Mary Rose Taylor, Honoree Dan Carithers with his wife Nancy Carithers, Nancy Corzine, chair of the Alzheimer's Drug Discovery Foundation, and Leonard Lauder, founder of the ADDF.
<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  
 Raven Lee  
 404-728-4780  
 rclee2@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 |
| **Alzheimer’s Disease Neuroimaging Initiative – 2 (ADNI-2)** | • 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 | Lavezza Zanders  
 404-728-6392  
 lzander@emory.edu |
| **Caregiver Study (COOL-AD)** | • For people of African American heritage  
 • For Caregivers of a loved one with Alzheimer's  
 • Willing to participate in a group | Maryam Robinson  
 Mrobi3@emory.edu  
 404-727-8481 |
| **Cognitive Rehabilitation of Memory in Mild Cognitive Impairment (MCI)** | • Diagnosis of MCI  
 • Willing to undergo functional MRI  
 •  | Casey Bowden  
 404-712-4321  
 ebowden@emory.edu  
 Justin Hartley  
 404-712-0936  
 Jhartl3@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 |
Donors

Donations to the Emory University Alzheimer’s Disease Research Center — January 1, 2013 — May 1, 2013

To make a gift contact Katie Dozier, Associate Director of Development at 404.712.2211 or katie.dozier@emory.edu

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: __________

Contributions to support the Emory Alzheimer’s Disease Research Center

As a 501(c)(3) not-for-profit organization, the Emory Alzheimer’s Disease Research Center serves patients, families and communities throughout the Southeast region with the generous support of your individual and corporate donations.

THANK YOU!

Emory Alzheimer’s Disease Research Center

Emory University
### Memory Assessment Clinics

<table>
<thead>
<tr>
<th>Class</th>
<th>Dates</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Early Memory Loss Group</strong>*</td>
<td>An 8 Week class that meets:</td>
<td>Wesley Woods Health Center</td>
</tr>
<tr>
<td><em>(Co-sponsored by the Alzheimer’s Association, Georgia Chapter)</em></td>
<td>Fridays: 11:00 – 12:30</td>
<td>1841 Clifton Rd, NE, Atlanta, GA 30329</td>
</tr>
<tr>
<td></td>
<td>September 6&lt;sup&gt;th&lt;/sup&gt; – October 25&lt;sup&gt;th&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td><strong>Savvy Caregiver Class</strong>*</td>
<td>A six week class that meets:</td>
<td>* 3&lt;sup&gt;rd&lt;/sup&gt; Floor Conference Room</td>
</tr>
<tr>
<td><em>(Sponsored in part by a grant from the Wesley Woods Foundation)</em></td>
<td>Fridays: 10:30-12:30</td>
<td>** 4&lt;sup&gt;th&lt;/sup&gt; Floor Conference Room</td>
</tr>
<tr>
<td></td>
<td>November 1, 8, 15, 22 and December 6 &amp; 13</td>
<td>*** 5&lt;sup&gt;th&lt;/sup&gt; Floor Conference Room</td>
</tr>
<tr>
<td><strong>Late Stage Alzheimer’s Disease</strong></td>
<td>A 3 Week class that meets:</td>
<td></td>
</tr>
<tr>
<td><em>(Sponsored in part by a grant from the Wesley Woods Foundation)</em></td>
<td>Fridays: 11:00 – 12:30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>January 10 – January 24</td>
<td></td>
</tr>
<tr>
<td><strong>Caregiver Support Group</strong></td>
<td>Meets every other Friday 10:30-12:00</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Frontotemporal Dementia Caregiver Support Group</strong></td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; Tuesday of every month 6:30-8:00 pm</td>
<td>Wesley Woods Geriatric Hospital</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AV Conference Room, 1821 Clifton Rd., Atlanta, GA 30329</td>
</tr>
</tbody>
</table>