

## Senior Living Residences Supports the BU ADC

Senior Living Residences (SLR) is a local Boston-based company with a reputation for excellence in providing Alzheimer's disease (AD) care to Massachusetts seniors in its Compass Memory Support Neighborhoods®. Not only devoted to being a leader in dementia assisted-living care, SLR is committed to supporting research towards the better understanding and treatment of AD. SLR's forward-thinking approach to the development of treatment programs for Alzheimer's care led the organization to establish a formal affiliation with the Boston University Alzheimer's Disease Center (BU ADC). In demonstration of this commitment, SLR and its assisted-living communities recently made a donation to the BU ADC in support of ongoing research projects.

The financial contribution made to the BU ADC

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Members of the SLR team present the company's financial donation to the BU ADC. From left to right: Jamie McWilliam, Robert Larkin, Eric Steinberg, Tadd Clelland, Dr. Robert Stern, and Erin Whalen.

## Join Us at the 2011 Memory Fair

On Monday May 16, 2011, the Boston University Alzheimer's Disease Center (BU ADC) will join with community affiliate Carleton-Willard Village (CWV) to offer the 2011 "Building Better Brain Health" Memory Fair.

CWV is an accredited, non-profit continuing care retirement community for older adults that seeks to maintain and improve residents' quality of life. Located in Bedford, MA, CWV offers a continuum of care to over 350 residents, ranging from independent to assisted living options supported by skilled nursing and rehabilitation staffs. CWV has a strong commitment to providing specialized care for residents with Alzheimer's disease (AD) and related dementias.

A formal affiliation between the BU ADC and CWV was established in 2007. As part of this affiliation, BU ADC faculty and staff provide continuing education and in-service professional training to CWV staff. BU ADC experts also conduct seminars to educate residents and their family members about memory loss and opportunities to get involved in research programs. In addition, the BU ADC and CWV collaborate to sponsor educational events for the CWV and surrounding communities, including the upcoming Memory Fair.

The inaugural Memory Fair held in 2009 was both fun and successful. The event attracted over 150 residents from CWV and the surrounding area who showed up to learn about brain health and methods for sustaining healthy brain aging. The positive feedback from attendees inspired

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# International Neuropsychological Society Meeting

The 39th Annual International Neuropsychological Society (INS) meeting was held February 2nd–5th, 2011 in Boston, MA. Bringing together hundreds of neuropsychologists, neurologists, neuroradiologists, and allied experts, the INS meeting is a popular venue for presenting educational and scientific information on brain-behavior relationships to researchers and clinicians from around the world. The meeting offered four days filled with scientifically inspiring sessions in a wide range of disciplines, from cognitive neuroscience to translational and outcomes research; from pediatric to adult populations; and all spectrums of disease that affect the central nervous system. Presenters in more than forty sessions offered their cutting-edge research in both oral platform and poster formats.

At this year's meeting, several investigators and affiliates of the Boston University Alzheimer's Disease Center (BU ADC) attended and presented research. **Drs. Ann McKee** and **Robert Stern** were invited to lead a Continuing Education session on "Chronic Traumatic Encephalopathy: Long-term Consequences of Repetitive Brain Trauma." In conjunction with **Dr. Angela Jefferson** and **Dr. David Salat**, BU ADC research extern William Chapman was selected to present findings on his Undergraduate Research Opportunities Program project, "White Matter Integrity in the Entorhinal Cortex & Parahippocampal Region is Associated with Memory Performances in Individuals with Mild Cognitive Impairment (MCI)," during an oral presentation session.

**Drs. Robert Stern** and **Brandon Gavett** presented comparisons of the reliability, validity, and factor structure of self-reported emotions in patients with MCI and mild Alzheimer's disease. Additionally, **Dr. Angela Jefferson** and members of her laboratory participated in multiple poster sessions. Dr. Jefferson presented findings from her work with the Framingham Heart Study investigating the relation between the heart's ejection fraction and brain aging. Post-doctoral fellow **Dr. Katherine Gifford** presented the results of a meta-analysis investigating the effects of hypertension on cognitive functioning in older non-demented adults. **Dr. Erika Oleson**, a BU ADC post-doctoral geriatrics fellow, presented a comparison of clinician and informant-based assessments of instrumental activities of daily living in different subtypes of MCI. Research coordinator **Amanda Gentile** also presented neuropsychological outcomes for minimally invasive and traditional coronary artery bypass graft surgery performed at Boston Medical Center.

## New Faculty Member



Dr. Tsuneya Ikezu

The Boston University Alzheimer's Disease Center (BU ADC) is pleased to welcome Tsuneya Ikezu, MD, PhD as a new research affiliate of the BU ADC. Dr. Ikezu joined the Boston University School of Medicine faculty in 2010 with joint appointments as Professor in the Department of Pharmacology & Experimental Therapeutics and the Department of Neurology. He is also leading the Laboratory of Molecular NeuroTherapeutics.

Dr. Ikezu completed his undergraduate education at the University of Tokyo's School of Science in Tokyo, Japan. He continued his graduate studies at the University of Tokyo's School of Medicine, earning joint MD and PhD degrees. Dr. Ikezu is a past recipient of the Vada Oldfield Alzheimer's Research Award in 2000, University of Nebraska Medical Center Distinguished Scientist Award in 2009, and UNeMed Research Innovation Award in 2009. He also serves on the editorial boards of several peer-reviewed journals, including *PLoS One*.

Dr. Ikezu's research primarily focuses on neuroimmunology and how inflammation in the central nervous system influences the pathology and progression of neurodegenerative disorders like Alzheimer's disease (AD) and HIV-associated dementia. More recently, he has expanded his research interests to include the study of inflammation in chronic traumatic encephalopathy and encephalomyelopathy in conjunction with BU ADC researchers at the Center for the Study of Traumatic Encephalopathy. Dr. Ikezu and his team are exploring pharmacological means to suppress the brain's natural immune response with the goal of enhancing protection of brain cells and minimizing damage. Further, his laboratory will be investigating enzymes that induce phosphorylation and aggregation of proteins associated with AD, HIV-associated dementia, and frontotemporal dementia.

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was raised at SLR's six Compass Memory Support communities by associates, family members, and professional referral sources. Noting the importance of being part of AD research, Robert Larkin, president of SLR, stated, "Our commitment to innovative treatment and care for people with AD extends beyond our own assisted living communities. We are continuously looking for ways to promote research towards better treatment and ultimately a cure for this disease. Our contribution to the BU ADC is part of this important work." He added, "The families we work with have told us that being a part of finding a cure has empowered them and given them a positive way to combat the sense of loss felt in loving someone with Alzheimer's."

The affiliation between SLR and the BU ADC brings state-of-the-art treatments for AD and related cognitive impairments straight from the clinical research setting to SLR's assisted-living communities. SLR residents are informed about opportunities to participate in a variety of clinical research studies, including new treatment trials, brain imaging, risk factors for abnormal brain aging, and safe driving methods. There are also opportunities for family members and care providers to receive support and participate in studies. In addition to research opportunities, seminars and lectures by BU ADC faculty are available to educate family members about memory loss, dementia, prevention, treatment and patient care.

"I view SLR as one of the most innovative and expert senior living and Alzheimer's care organizations around the country and am proud to be affiliated with them," says Dr. Robert Stern, Director of the BU ADC Clinical Core. "Through our affiliation," he explains, "SLR residents have access to leading clinicians, researchers, and other personnel from the Boston University School of Medicine and benefit from on-site memory screenings, a comprehensive clinical consultation program, regularly scheduled workshops and lectures, and participation in the BU ADC's state-of-the-art research studies."

To learn more about SLR's independent and assisted living facilities or additional support services for patients and families, please visit [www.seniorlivingresidences.com](http://www.seniorlivingresidences.com).

< *Memory Fair continued from page 1*

CWV and the BU ADC to offer this exciting event again this spring.

This year's Memory Fair will focus on the underlying theme of "Building Better Brain Health." The event will feature a variety of information tables about clinical research opportunities for advancing knowledge about healthy brain aging as well as practical tips and demonstrations on how to prevent memory loss by keeping your brain healthy and strong. Topics include: links between heart health and brain health; genetics associated with abnormal memory loss with age; nutrition; exercise; vision problems; and understanding false memories. Information on driving safety and the newest clinical drug trials will also be made available. Attendees interested in becoming involved in research can learn more about opportunities at the BU ADC and other participating organizations. This year's event will also offer something different – Laughter Yoga! Laughter Yoga is an exciting and fun way to reduce stress, increase fitness, and best of all, you can do it in the comfort of your home.

Throughout the morning, the BU ADC will conduct a limited number of 20-minute individual memory screenings overseen by BU ADC faculty member and licensed psychologist Dr. Angela Jefferson. Individuals with memory concerns can undergo the brief screening, which involves completion of paper and pencil tests of memory and other thinking abilities. Afterward, each participant receives feedback regarding the screening results.

The event will conclude with a keynote presentation by Dr. Robert Stern, Director of the BU ADC Clinical Core. Dr. Stern will speak about the latest research on aging and methods to prevent and treat memory loss. He will be joined by Meg Curtis, an activist in AD who is committed to educating the community about memory loss and dementia. Ms. Curtis will share her personal experiences caring for a loved one with AD.

The 2011 Memory Fair is being offered free of charge, but pre-registration is highly encouraged. Light refreshments will be available for all attendees. The event will be held on May 16, 2011 from 9:00am – 1:00pm at the CWV, located at 100 Old Billerica Road, Bedford, MA, 01730. For more information, including directions, please visit [www.cwvillage.org](http://www.cwvillage.org) or call 781-275-8700.



## Actively Recruiting Studies

### Study Type Study Title Study Description

<b>BU ADC Research Registry</b>	Health Outreach Program for the Elderly (HOPE)	This longitudinal study examines age-related changes in memory and thinking. It serves as the Boston University Alzheimer's Disease Center (BU ADC) research registry, where participants agree to be contacted about other BU ADC-approved studies. HOPE participants are encouraged to participate in the actively recruiting studies summarized below.
<b>Caregiving Support</b>	Health Pathways	This study looks at how caring for a person with dementia affects one's physical and emotional health. Participants attend four yearly face-to-face interviews where they will be asked questions about their health and about the person they care for, along with some lab work.
<b>Early Detection</b>	RETINA Study	This study uses routine ophthalmological tests to detect biomarkers that predict the onset of Alzheimer's disease (AD). The study includes one visit to the Massachusetts Eye and Ear Infirmary. Participants must be 50 years of age or older and enrolled in the HOPE Study. Participants will need a study partner who can accompany them to study visits.
<b>Education</b>	PAIRS Program	This program pairs first-year Boston University medical students with patients who have early-stage AD. The program educates medical students about the care and support related issues faced by patients with AD, and provides patients with the opportunity to mentor students. Student-patient pairs meet monthly to participate in social activities throughout the academic year.
<b>Evaluation of Daily Living</b>	Activities of Daily Living (ADL) Assessment	This study investigates the relationship between office-based cognitive tests and independent functioning in the home. Adults age 60 or older with mild to severe dementia, living in the community or independently in a continuing care retirement center, are eligible to participate. Participants will need a study partner to provide information about the participant's day-to-day functioning.
	SAFE Drivers	This study aims to develop a brief, office-based evaluation of driving safety for older drivers that accurately predicts on-road driving performance. Two study visits involve office-based cognitive tests and an on-the-road driving evaluation conducted by a certified driving instructor. Study participation is open to adults 55-95 years of age who drive at least one time per week.
<b>Memory &amp; Cognition</b>	False Memory in AD	This study seeks to understand why patients with AD and other dementias frequently remember things that never happened. The goal of this study is to provide ways to reduce false memories in patients with dementia. Study participation is open to cognitively normal adults age 50 years or older and adults with AD age 65-85.
	Vision & Cognition	This study examines the relationship between vision and thinking abilities in normal aging and AD. Participants perform tests of vision, cognition, and daily functions, and a free eye exam is included. Study participation is for adults age 55 or older.
<b>Neuro-imaging</b>	Alzheimer's Disease Neuroimaging Initiative (ADNI)	This study uses different kinds of imaging to determine whether imaging of the brain can help predict the onset of cognitive changes and monitor such changes. Researchers are looking for persons 55-90 years of age and who are in good general health but have memory problems or concerns.
	Heart & Brain Aging	This study uses heart and brain imaging and memory tests to better understand relations between heart and brain health among aging adults with mild memory loss, particularly those individuals who have been diagnosed with mild cognitive impairment. Participants receive feedback about heart and brain health, and results are shared with the participant's physicians.

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## Actively Recruiting Studies < continued from page 4

### Study Type   Study Title   Study Description

<b>Treatment</b>	Bapi Study	This multi-center treatment trial will evaluate whether a new medication, Bapineuzumab, increases the clearance of Abeta from the brain. Abeta is believed to be the initial cause of AD. This treatment study is for adults 50-89 years of age with an AD diagnosis. Participants will need a study partner to accompany them to study visits.
	Nutritional Supplements Combination Therapy	This study will determine whether nutritional supplements are well tolerated and safe for cognitively normal older adults and whether the supplements have an effect on brain health. The study requires three visits over nine months. Participants must be 60-90 years of age, be willing to take nutritional supplement pills, and agree to lab work.
	Vitamin E and Memantine in AD	This multi-center clinical trial will evaluate the combination of memantine and Vitamin E in the treatment of mild to moderate AD. Memantine has been shown to improve function and cognition in late stages of AD, while Vitamin E has been found to delay the progression of AD. The study is only open to veterans with a diagnosis of mild or moderate AD. Participants need a caregiver to accompany them to all visits.

**For more information, please contact the BU ADC Outreach & Recruitment Coordinator, Silvia Serrano, at 617-414-1078 or [sserrano@bu.edu](mailto:sserrano@bu.edu)**

## BU ADC Happenings

### Welcome

The Boston University Alzheimer's Disease Center (BU ADC) extends a warm welcome to new staff member **Daniella DiNizo**, research assistant for clinical trials and coordinator for the BU ADC Memory Clinic.

### Congratulations

**Dr. Carmela Abraham** was awarded a \$200,000 Investigator-Initiated Research grant from the Alzheimer's Association. The study entitled "Modulators of APP Dimerization as Novel Therapeutics for Alzheimer's Disease" uses an entirely innovative idea to prevent the formation of the toxic amyloid protein known to destroy neurons and synapses in the brains of Alzheimer's disease patients.

**Dr. Angela Jefferson** received a \$2,750,000 National Institute on Aging R01 grant entitled "Cardiac function as a mechanism for maladaptive brain aging." Preliminary data suggest cardiac function may be an unrecognized risk factor for abnormal brain aging. The funded project will examine the association between heart function and brain aging, and generate evidence to support the development of novel strategies for delaying dementia onset and progression.

The BU ADC would like to congratulate **Dr. Ann McKee** on her recent promotion to Professor of Neurology and Pathology.

### Goodbyes

Many thanks and best wishes to ADC staff members who have recently left: **Jamie Frederick**, who completed a master's degree at the Boston University School of Public Health and has taken a position in Kenya, Africa; and **Adrienne Robinson**, who also completed a master's degree at the Boston University School of Public Health and left the BU ADC to pursue a public health position in California.

Thank you and best wishes to our recent student trainee **Maria Badaracco**, a medical student who completed a research project on blood pressure and cognition with Dr. Angela Jefferson supported by a Medical Student Training in Aging Research Program award from the American Federation on Aging Research. Maria is currently completing her second year at Boston University School of Medicine.

## Research Updates

### Anti-Aging Protein *Klotho*

In March, **Dr. Carmela Abraham** was an invited speaker at the 10th International Congress on Alzheimer's and Parkinson's Disease in Barcelona, Spain, where she presented on "Klotho Enhancers as Novel Neuroprotective Therapeutics for Alzheimer's Disease and White Matter Degeneration." Later in March, at the 42nd annual meeting of the American Society for Neurochemistry in St. Louis, Missouri, she also gave a presentation entitled "The Anti-Aging Protein Klotho Affects Oligodendrocyte Differentiation." Both presentations focused on the protective, anti-aging properties of Klotho and the signaling pathways by which the protein exerts its protective effects in the brain.

### Cerebral Blood Flow in Older Adults

In a recent article published in *Neuroimage*, **Dr. David Salat** and colleagues demonstrated regional patterns of reduced blood flow in the brains of older adults. The team also demonstrated that this change in blood flow was distinct from age-associated regional atrophy in the brain. Future studies will examine the biological factors that contribute to changes in neurovascular function with aging and how such changes contribute to cognitive decline in older adults.

### Clinical Trial of a Home Safety Intervention for AD

**Drs. Kathy Horvath** and **Scott Trudeau** conducted a randomized clinical trial to test a new multi-modal educational intervention, the Home Safety Toolkit, designed to improve a caregiver's ability to create a safer home for a person living with Alzheimer's disease (AD). Findings revealed that caregivers who participated in the educational intervention improved more than caregivers who did not participate in the intervention for all outcome variables, including caregiver self-efficacy and overall home safety. Similarly, there was a lower incidence in AD patient risky behaviors and accidents among the households of caregivers who participated in the educational intervention compared to those caregivers who did not. The study was recently presented during a plenary session at the Annual Meeting of VA Health Services Research and Development.

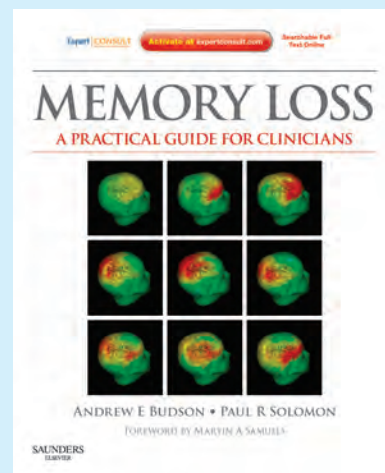
### Plasma Amyloid- $\beta$ Levels Linked to Brain Volume

**Dr. Wendy Qiu** and her research team recently reported findings on the relationship between blood amyloid- $\beta$  peptide ( $A\beta$ ), which is the major component of AD pathology, and brain volumes in the *International Journal of Geriatric Psychiatry*. Using a homebound elderly population, the study found that low plasma  $A\beta_{42}$  levels were linked with smaller amygdala and hippocampus volumes, both brain structures involved in memory and emotion. The study also found an association between low plasma  $A\beta_{42}$  and depression in individuals with mild cognitive impairment. Since depression is either a risk factor of AD or a prodromal stage of the disease, these findings suggest using a combination of plasma  $A\beta$  measurement and neuroimaging could detect a pre-clinical stage of AD.

## Memory Loss Guide for Clinicians

**Dr. Andrew Budson** co-authored the recently published book, *Memory Loss: A Practical Guide for Clinicians*. The practical, clinically oriented guide for interacting with a patient complaining of memory loss is designed for healthcare providers, such as primary care providers, nurses, psychologists, and students. Specialists, such as neurologists, neuropsychologists, and geriatricians, can find a wealth

of up-to-date information regarding the latest diagnostic tools and treatments for patients. Paper and electronic copies of the guide will be available for purchase through Amazon.com starting this July.



# Honorary and Memorial Contributions

The Boston University Alzheimer's Disease Center (BU ADC) is involved in a variety of clinical, research, and educational activities. These activities are funded by grants awarded from the National Institutes of Health and non-profit organizations. Often, research study participants, families, or community leaders wish to contribute to the fight against Alzheimer's disease (AD), and these private donations are equally important to advancing the BU ADC's mission. The BU ADC welcomes honorary and memorial donations, as these gifts are an excellent way to pay tribute to a family member or friend while making a contribution to the advancement of research in the field of AD. Please call Harriet Kornfeld at 617-638-5676 or visit us online at [www.bu.edu/alzresearch](http://www.bu.edu/alzresearch) if you would like to make a donation.

The BU ADC would like to recognize the following private donors for their greatly appreciated contributions:

## **In honor of Joan Cohen**

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Robert Yacubian

## **In memory of Doreen A. Croke**

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# Alzheimer's Disease Center Leadership

The Boston University Alzheimer's Disease Center (BU ADC) is primarily supported through a grant from the National Institute on Aging. The BU ADC supports cutting-edge research and provides education and clinical care to individuals and families affected by Alzheimer's disease. Its leadership is listed below, alphabetically by Center Core.

**Neil Kowall, MD**, *Center Director and Administrative Core Director*

**Andrew Budson, MD**, *Center Associate Director of Research*

**Richard Fine, PhD**, *Pilot Grant Program Director*

**Robert Stern, PhD**, *Clinical Core Director*

**Christine Chaisson, MPH**, *Data Management & Statistics Core Director*

**Angela Jefferson, PhD**, *Education & Information Transfer Core Director*

**Ann McKee, MD**, *Neuropathology Core Director*

**Alpaslan Dedeoglu, MD, PhD**, *Translational Animal Core Associate Director*

**Lee Goldstein, MD, PhD**, *Translational Animal Core Director*

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