

CENTER *on* AGING

www.musc.edu/aging

Spring 2015

Dear Readers,

The Center on Aging has had a busy winter with research conferences, grant submissions and community outreach projects.

In January, MUSC acted as the coordinating center in the submission of a very large grant to the National Institute on Aging, focused on biomarkers and biological mechanisms for Alzheimer's disease in Down Syndrome. See page 3 for details on this exciting opportunity.

We co-organized an education conference with the SC Chapter of the Alzheimer's Association in February, specifically for the African American community. The conference was very well attended and included four speakers, all who serve on the Center on Aging Executive Committee. A program summary can be found on page 2.

Finally, the 11th annual Aging Research Day was held on March 13th. This year, it was hosted by Clemson University and the overall theme was "Stress and Aging". This interdisciplinary annual conference was founded by the Center on Aging in 2004 and soon became a state-wide event. It is supported by all members of the South Carolina Aging Research Network (SCARN). The Aging Research Day usually draws

around 150 participants from all disciplines, including engineering, nutrition research, basic science, social work, and clinical research. We are excited to be hosting the 2016 conference at MUSC.

One of our happiest yearly events, the Senior Mentor Graduation Luncheon, is quickly approaching. Mentors with graduating medical students will bid them farewell on April 24th. They have no doubt had quite a journey watching their students progress from year 1 through year 4.

We are continuing to nurture the relationship with community organizations, and would like to expand educational efforts for vulnerable populations. If you know any organizations that could benefit from our outreach efforts, please contact our office. We are always available to set up speaking engagements to share information on healthy aging, age-related diseases or to participate in health fairs.

Have a healthy and happy spring!

Warm regards,

Lotta



Lotta Granholm, PhD/DDS
Director, Center on Aging



David Bachman, MD
Co-Director, Center on Aging



Alzheimer's Conference Summary

On Friday, February 20th, the Alzheimer's Association, MUSC, and Roper St. Francis hosted a public conference to educate the community on Alzheimer's disease in the African American population.

Growing evidence suggests that African Americans may be at higher risk to develop Alzheimer's and stroke-related dementia due to higher incidence of developing other medical conditions (including diabetes, high blood pressure and high cholesterol).

Top researchers and professionals from the Medical University of South Carolina and Roper St. Francis spoke to 80 attendees from all over the state about education, research, and current clinical trials that are taking place. Attendees learned how heart health impacts brain health, the importance of dental health, tips to reduce inflammation and more.

Topics that were discussed included:

- Healthy Brain, Imaging Exercise & Wellness, Dr. Anya Benitez (MUSC)
- Oral Health Sea Island, Diversity & Inflammation, Renata Leite (MUSC)
- Healthy Aging: What can you do?, Dr. Lotta Granholm (MUSC)
- Clinical Trials, Dr. Jacobo Mintzer (Roper St. Francis)



The Center on Aging was a proud hole sponsor for the **11th annual "Betty Cannon" Golf Tournament** to raise awareness and support for **Respite Care Charleston**, a local non-profit organization providing services and support for people with Alzheimer's disease and related dementias.



www.respitecarecharleston.org



Recent Podcasts

Listen to Dr. Granholm speak on **NeuroPod** with Kerri Smith on receptor design and with Jim Ptoplava on his podcast, **The Financial Sense Newshour**, to discuss aging and brain function- how it works, and what can be done to prevent neurodegeneration.

Listen online at www.musc.edu/aging. Links to the podcasts are on the home page!



Grant Opportunity: Biomarkers and Biological Mechanisms of Alzheimer's disease in Down Syndrome

The National Institute on Aging (NIA) released a request for applications this fall with the goal of the funding opportunity announcement to enable the identification of the longitudinal progression of Alzheimer's disease in adults with Down Syndrome using clinical, cognitive, imaging, genetic and blood biomarkers.

There are more than 250,000 individuals with DS in the US. The life expectancy of this population has increased during the last two decades; however, most individuals with DS develop dementia, with an incidence up to 80%.

This grant will award 1-2 funding opportunities for a total of \$5 million in fiscal year 2015 and would cover up to \$2.5 million per year in direct costs for 5 years.

MUSC acted as the coordinating center for this multi-site grant, including 10 institutions in the US, as well as two sites in Europe (San Pau in Barcelona and Karolinska Institutet in Stockholm). Researchers from the University of Kentucky, Harvard University, Brigham Women and Children's Hospital, Banner Health, New York University, Barrow Neurological Institute, the University of Colorado, University of California Los Angeles, and the University of Wisconsin are all collaborating on this effort.

Alzheimer's disease in those with Down Syndrome:

- Adults with DS are at extremely high risk for developing AD
- Most individuals with DS develop the pathological hallmarks of AD by their 30's and 40's
- Up to 80% eventually develop clinical dementia as they age into their 50's - 60's

The overall proposed goal is to generate and bank high quality biological research samples, linked to clinical data, from both national and international cohorts and develop an internationally accepted neuropathological staging protocol associated with the onset of dementia in DS. Biological samples will be collected from participating clinical centers across the U.S. including the biorepositories in our consortium, and will include samples from children, teenagers and adults with DS of all ages as well as non-DS siblings as controls. Samples will be coded with a Global Unique Identifier (GUID), allowing for linkage across databases and registries for sharing with both national and international research groups.

We hope to detect early biomarkers for dementia in subjects with DS, in order to design better preventive and intervention treatment options. While there are more than 100 clinical trials for those with Alzheimer's disease in the general population, only three are available for those with DS.

We are anxious to hear back from NIA with a decision on the proposal this summer!

- Development of AD in DS is linked to the triplication of the amyloid precursor protein (APP) gene on chromosome 21 that results in 50% greater levels of both APP mRNA and amyloid beta
- Due to pre-existing cognitive issues, the standard cognitive instruments used in AD detection/progression make early-stage dementia detection difficult.



Healthy Men & Women: Normal Swallow Study

If you are at least 60 years old, you may be qualified for a research study for normal swallowing. You will drink liquid and eat food while we record x-rays on video.

Study is a 1 time visit lasting about 30 minutes. Compensation for time and travel may be provided.

For more information call 843.792.6953 or email focht@musc.edu

IRB Number: Pro00011566

We are seeking volunteers as one of 280 participants for a research study conducted at the Medical University of South Carolina (MUSC). We are seeking relatively healthy males over the age of 40 and females over the age of 60.

This research is sponsored by the MUSC Department of Otolaryngology-Head & Neck Surgery (IRB Pro00011566). The purpose of this study is to establish how normal swallowing measures differ by age, gender and/or race-ethnicity.

Previous research has shown changes in structures related to swallowing occur in the normal aging population, which can affect swallowing function. Men and women also have differences in their swallow function in addition to normal age-related changes.

Understanding how swallowing

function changes over the adult lifespan is beneficial in predicting factors that may place an individual at increased risk for swallowing problems, particularly after illness, disease and/or trauma.

Participants in this study will undergo a videofluoroscopic (radiographic imaging) study of their swallowing function. This is a way of looking at the structures involved in swallowing using a continuous X-ray that records the swallow.

The examination is conducted by an experienced clinical speech-language pathologist who serves as a collaborator on this study. During this examination, you will be asked to swallow a variety of volumes and textures. We record this study digitally, which will be reviewed in greater detail by the research team at a later time.

Additionally, you will be asked to fill out 2 short questionnaires related to your overall health and current swallowing function.

The principal investigator in charge of this study is Kendrea L. Focht, PhD, CScD, CCC-SLP, CBIS.



Carroll A. Campbell, Jr. Neuropathology Lab: Brain Bank

The MUSC Brain Bank strives to generate a collection of well defined brain tissue from individuals with neurological disorders such as Alzheimer's disease, Parkinson's disease, cancer, stroke, AS WELL AS age-matched healthy brains in order to provide valuable information about rate and cause for these disorders in South Carolina compared to other regions and serve as a link between basic scientists and clinicians to generate translational research.

For more information about brain donation, please contact Laura Columbo or Kelly Dillon:
(843) 792-7867 or columbol@musc.edu
www.musc.edu/brainbank

Aging Research Day

March 13, 2015, Clemson University

"Stress and Aging"

Clemson University was this year's host for the conference and Cheryl Dye, of the CU Institute for Engaged Aging, was the event organizer. Dr. Dye developed this year's theme, "Stress and Aging," in response to the research that has proven how stress is directly related to health and aging. "Years ago people believed that exercise was a good idea, but it was too hard to find the time to do it. Now we know that it is a necessity for health. As science shows us the negative effects of stress, we see that stress management needs to be an integral part of our daily routine, just like exercise. We are working with Complimentary and Alternative Medicine (CAM) to help alleviate the effects of stress on the aging process."

Opening remarks were made by Senator Thomas C. Alexander on the relevance of these kinds of conferences and the work that researchers and clinicians are doing to improve the health of older South Carolinians. He also reported on the work he is doing in conjunction with the Lieutenant Governor's Office on Aging to bring affordable health care and services to SC seniors and veterans.

Invited speakers covered the following topics during the day-long conference:

- Reducing the Stress of Age-related Changes Through Assistive Robotics, Dr. Jenay M. Beer (USC)
 - How Can We Tell When the Cow is Leaving the Barn? Detecting Preclinical Alzheimer's Disease, Dr. David G. Clark (MUSC)
 - Older Adults in Disasters: Factors Associated with Risk and Resiliency, Dr. Ron Acierno (MUSC)
- These discussions covered the effects of chronic stress including inflammation, hypertension and neurodegeneration as well as ways to combat it with a wide variety of methods from new drug and supplement discoveries to yoga and meditation.
- Congratulations to this year's poster abstract winners, both from MUSC! The winning abstracts were:
- Increased glutamate release in the dorsal striatum of a mitochondrial model of Parkinson's disease
by: Heather Boger, Ariana Farrand, Rebecca Gregory, Cristina Backman, Kris Helke
- Elevated serum BDNF after exercise in healthy elderly volunteers
by: Aurélie Ledreau, Krister Håkansson, Laura Columbo, Abdul Kadir Mohammed, Lotta Granholm
- The 2016 Aging Research Day will be hosted by MUSC, and we are already excited to be in the planning process. We have a growing list of distinguished speakers that will be invited and the theme will be "Sensory Systems and Aging." We look forward to this opportunity to highlight the novel work being done here in the lowcountry and around the state!



Senator, Thomas C. Alexander with opening remarks



Poster Abstracts for review



Learning about research in the state



Dr. Granholm speaking about the CCNL Brain Bank



Visit www.SCARN.org

for more information on past and upcoming events!

Senior Mentor Program

BECOME A SENIOR MENTOR

The Senior Mentor Program is a volunteer program that connects medical students from the Medical University of South Carolina with people aged 65 years and older living in the greater Charleston, SC area. This program aims to encourage medical students to have positive attitudes about caring for older adults. It also focuses on helping reduce stereotypes about aging while striving to improve the way future doctors care for older persons.

To sign up or to find out more about the Senior Mentor Program please visit musc.edu/senior or call (843) 792-0460.



Meet Lolita Reilly

My name is Lolita Reilly and I have been happily married to Robert Reilly for 49 years. We moved to Mt. Pleasant 20 years ago when my husband retired. He was an English professor at Rider University in New Jersey and I was the Coordinator of Student Health Services for the University which included Westminster Choir College.

When we arrived here, I worked for 3 years at the Citadel as a college health nurse and then decided to retire so I could be more involved in church and community activities. I feel like I'm busier now than before! Most of

my activities are based at Christ Our King Catholic Church where I facilitate the method of Centering Prayer as well as a Bible class and a class for those interested in becoming Catholic.

I don't really have any hobbies except I love being outside doing yard work any time I can.

We have two children, a son and his family, who live on a 17 acre farm outside of Tulsa, OK. They have 9 children, the oldest is married and has a son, so we are great grandparents! Our daughter lives in Sonoma, CA with her partner and 3 dogs.

When we heard about the mentoring program while attending our weekly Center for Creative Retirement meeting, we were excited about the concept and wanted to see how it worked. We have been impressed with the assignments and have really enjoyed our time together. My congratulations to MUSC for their commitment to this mentoring program.

We hope we have helped our students in understanding the changes that take place as we age. I believe both Lauren and Colin, my two students, have profited from this added program and it has been fun for us to interact with them.

SAVE THE DATE

Graduation Luncheon
for Mentors with
4th Year Students

April 24, 2015

Spring 2015 Assignment Schedule

Class	Assignment	Due
2018 (1st Year)	Relationship/Intimacy Review & Medical History	March 27, 2015
2017 (2nd Year)	Pharmacology	April 25, 2015
2016 (3rd Year)	Fall Risk Assessment	End of Internal Medicine Rotation*
2016 (3rd Year)	Life Review	End of Psychiatric Rotation*

* This date will vary depending on each student's rotation schedule.

SMP Spotlights



Meet Lauren Wingo

My name is Lauren Wingo and I was born and raised in Columbia, SC by my dad, a program manager, my mother, a nurse supervisor, my older brother, and an energetic dachshund. I grew up playing soccer, gardening with my dad, and spending time at the lake. Unfortunately, my brother and I experienced loss early in life, when our ordinarily very healthy mom was diagnosed with leukemia and ultimately lost the battle at age 40. I am thankful, however, that the ten years I spent with her were enough for her to instill in me her kindness, confidence, and passion for making a difference in the world. My dad, a Jack-of-all-trades and adventurous soul, introduced me to the world of travel at a young age and sparked my curiosity of different cultures, foods, and lifestyles.

I attended University of North Carolina at Asheville to play Division 1 soccer and pursue a career in healthcare. During college, my passion to experience the world took me to a semester abroad in New Zealand, a summer volunteering with an HIV education program in Malawi, a spring break rebuilding post-Katrina

New Orleans, a volunteer medical trip to Bolivia, and a semester of work in politics during the Presidential campaign. Along the way I decided to pursue medicine as a career, but wanted to learn medical sciences in the context of international public health and humanism, thus leading me to complete my Masters of Public Health in global health at the George Washington University prior to starting medical school. After spending a semester in Bangladesh, a semester in Kenya, and completing my degree I returned to my home state for medical school at MUSC. In a couple short months I will be graduating from MUSC and going to complete residency in Emergency Medicine with hopes of pursuing a fellowship in International Medicine. After all of these years I still love to spend my free time on the soccer field, gardening, and playing with my pup.

My experience with the Senior Mentor Program has been an essential part of my medical training. Prior to medical school my only real experience with the geriatric population was from delivering Meals on Wheels, which really only exposes you to one side of the story. I was mostly visiting elderly folks struggling with multiple social, health, and financial problems, desperately trying to maintain their independence and dignity. The Senior Mentor Program, however, showed me a different story to aging. My mentor has shown me that caring for your body and mind, surrounding yourself with love from friends and family, and planning for the future can lead to a very healthy and graceful aging process. I have been able to differentiate the inevitable tolls that time take on the body from the multiple preventable illnesses and ailments that much of the geriatric population endures. Additionally, discussions with classmates about their senior mentors have helped me understand the range of experiences and challenges of aging.

My mentor has taught me many valuable

lessons over the past four years. But the two most valuable things I have learned about graceful aging is that building a support structure of friends, family, and community will serve you very well both physically and mentally throughout your life, and that when it comes to aging 'you gotta use it or you'll lose it.' She is very adamant about doing most of her own cooking, housework, and yard maintenance, maintaining her spirituality and mental wellness, staying physically fit, and keeping her social life active.

As a future medical provider, the most valuable lesson I have come to realize through this program is that taking time to build rapport and just stop and listen to your patient is worth the extra time you spend a million times over.

I would like to advise future students participating in the Senior Mentor Program to approach this as an opportunity rather than an assignment. Be open, share your own life stories, and be vulnerable; after all that is exactly what you are asking your mentor to do. Build a friendship with your mentor and ask more than the mandatory questions required by the assignment. Lastly, use this program as an opportunity to make mistakes, get over the awkwardness of navigating through the most intimate areas of another person's life story, and don't forget to take advantage of the wisdom your mentor can offer you.





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