From the Director

Dear Readers:

We are excited to be able to share with you some innovative technology that is available to seniors and their families to assist in healthy aging. As you probably know, there are many companies, as well as research centers, who devote their time to developing new tools to make life easier for individuals over 65, for both those that are healthy, and those with health problems. In this issue, you can read about two such companies, iBioMed and Live@Home Technologies, who have both opened up new frontiers in geriatric health care and independent living.

Another such entity is the state-wide SeniorSMART, a South Carolina Center for Economic Excellence that is being developed among three academic partners - Clemson University, the Medical University of South Carolina, and the University of South Carolina; and two hospital systems - Greenville Hospital System University Medical Center and Palmetto Health. SeniorSMART focuses on three critical areas of gerontology research: maintenance of brain health (SmartBRAIN); improved driving safety (SmartWHEELS); and independence in the home (SmartHOME), with special emphasis on technology development to improve independence in these areas.

Other areas we have also focused on in this issue are the newly formed translational research program on Parkinson’s disease here at MUSC. The Parkinson’s disease research group, lead by Drs. Gary Aston-Jones and Vanessa Hinson, has resulted in a major grant application to the NIH and involves both clinical and basic science researchers in several MUSC departments.

Thank you to the Senior Mentors with 2nd year students, who recently participated the inter-professional pharmacy assignment! This program is in keeping with the new strategic directive of MUSC related to interprofessional and inter-disciplinary work. Our students are co-taught by faculty from the College of Pharmacy and the College of Medicine for this particular assignment, which addresses poly-pharmacy and aging.

I hope that you enjoy your spring and congratulations to all of our graduating students at MUSC! I know you have received a first-class education as you enter the world outside the University.

From the Director

Lotta Granholm, PhD/DDS
Director, Center on Aging
MUSC

This Issue:

Technology for Aging
Aging News & Resources
MUSC ARCP
Udall Center for Parkinson’s
Neuropathology Laboratory
Senior Mentor Program News
Senior Mentor Program Spotlights
**iBioMed**

iBioMed is a Health Social Network & Organizer for any person or caregiver living with or managing a multi symptom health condition or person with special needs. If you have more than one doctor, therapist, medication or medical diagnosis, you may benefit from iBioMed.

It is a mobile application which eases the burden on users and caregivers by arming them with easy, efficient, portable and reliable record keeping, which in turn, simplifies management and sharing of health records and increases the user's quality of health care and education. It keeps all your providers and caregivers on the same page.

iBioMed can also be utilized by family members who live far away from senior patients so they can help keep track of doctor appointments, prescription refills, etc.

*For more senior resources visit:* www.musc.edu/aging

**Live@Home**

**TECHNOLOGIES**

As Baby Boomers emerge onto the scene, we will be forced to look to other alternatives to meet in-home care needs of the aging population. There is huge demand for an enabling technology for our decreasing numbers of caregivers.

Live @ Home Technologies is always exploring new frontiers in technology using the internet, television and wireless sensors to monitor wellness, motion, temperature, blood pressure cuff, weight scale, and more. Understanding the need of in-home care through technology offers alternative solutions for staying in the home safely and independently.

Technology can be anything from telephone check in, Personal Response Units, systems using the internet to monitor wellness, ADLs and activities, along with other customized variables according to the client’s individual needs. Technology is not one size fits all situations, therefore; an extensive home assessment should be done to assure that technology is right for the person aging at home, as well as for the family. Technology is not for everyone, nor should it used to replace the need for human touch and interaction.

The breakthrough in technology allows family and caregivers to virtually connect with loved ones by sending pictures, videos, reminders, e-mail, calendar appointments, messages and news & weather updates directly to a private channel on the loved one's television. The loved one needs no technical knowledge. Meanwhile, various smart sensors placed around the home can assure family members that their loved one is comfortable, happy, healthy and truly independent at home.

The Wellness aspect technology (biometrics) enables doctors to be aware of any changes in blood pressure, pulse, weight, and sugar levels. With technology, family and other caregivers can be wholly involved in the care of loved ones, whether they live across the street or across the country.

Furthermore, the use of technology can be used to be proactive in predicting possible incidences that may occur in the home. Other capabilities, are situations such as turning off a stove or microwave from cell phone, or turning up or down thermostat while sitting in your chair in California as parents are residing in South Carolina. As technology evolves, we are discovering more situations and innovative possibilities for using it in ways that are preferable to old models for caring for the aging.

“**This technology is just in time for Baby Boomers and their aging parents. In a series of focus groups with people age 50-65, the Center for Aging Services Technologies found that most participants are seeking a technology that allows them and their parents more freedom and the ability to stay independent. The studies show that those nearing retirement want technology that can enrich communication, alleviate the challenges of daily life and preserve social connectedness.**

*

Stacey M. Pierce  
Director of LIVE@HOME Technologies  
803-347-3003 www.yourpoma.com
Parkinson's Researchers Utilizing Gene Map of Human Brains to Locate Treatment Targets

The Allen Institute for Brain Science has mapped the genes of two human brains in order to aid researchers developing treatments for neurological disorders, such as Parkinson's and autism.

The facility will ultimately run at least 10 brains through the mapping process, using various technologies, including magnetic resonance imaging (MRI) and diffusion tensor imaging (DTI).

The interactive map that has been created shows where genes are activated in the human brain. Allan Jones, the CEO of the Allen Institute, says that understanding how the genome is triggered may help scientists discover the basis of some brain disorders.

American Society for Neural Therapy & Repair (ASNTR) hosted the 11th International Neural Transplantation & Repair (INTR) Meeting

ASNTR's 18th Annual Conference was held in conjunction with the 11th International Conference on Neural Therapy and Repair from May 4 – May 8, 2011 in Clearwater Beach, Florida. Dr. Lotta Granholm attended this international conference, which featured lead investigators from many different countries, and presented work related to a novel animal model for early Parkinson's disease, and data generated in the human brain bank at MUSC (The Carroll A. Campbell Jr. Neuropathology Laboratory).

ASNTR is a society composed of basic and clinical neuroscientists who utilize a variety of technologies to better understand the way the nervous system functions and establish new procedures for its repair in response to trauma or neurodegenerative disease. In this regard, member scientists employ the latest technology related to stem/neural cell transplantation, gene therapy, trophic factor and neuroprotective compound administration, and other approaches in a translational integration between different research groups.

The Facts About Stroke (From the CDC)

- Stroke is the third leading cause of death in the United States. Around 137,000 Americans die of stroke every year.
- A stroke occurs when a clot blocks the blood supply to the brain or when a blood vessel in the brain bursts.
- Someone in the United States has a stroke every 40 seconds. Every three to four minutes, someone dies of stroke.
- Stroke is a leading cause of death for both men and women. In 2006, 6 out of every 10 deaths due to stroke were in women.
- Every year, about 795,000 people in the United States have a stroke. About 610,000 of these are first or new strokes. About 185,000 people who survive a stroke eventually have another.
- Stroke is an important cause of disability. In 2005, nearly 1.1 million stroke survivors reported difficulty performing basic activities of daily life.

Common stroke warning signs and symptoms include—

- Sudden numbness or weakness of the face, arm, or leg—especially on one side of the body.
- Sudden confusion, trouble speaking or understanding.
- Sudden trouble seeing in one or both eyes.
- Sudden trouble walking, dizziness, loss of balance or coordination.
- Sudden severe headache with no known cause.

You can’t control some stroke risk factors, such as heredity, age, gender, and ethnicity. Some medical conditions, including high blood pressure, high cholesterol, heart disease, diabetes, overweight or obesity, and previous stroke or transient ischemic attack (TIA), can raise your stroke risk. Not smoking, not drinking excessively, and getting exercise are all choices you can make to reduce your risk.

Moderate Exercise Dramatically Improves Brain Blood Flow in Elderly Women

ScienceDaily — Research conducted at Texas Health Presbyterian Hospital’s Institute for Exercise and Environmental Medicine in Dallas suggests that it’s never too late for women to reap the benefits of moderate aerobic exercise. In a 3-month study of 16 women age 60 and older, brisk walking for 30-50 minutes three or four times per week improved blood flow through to the brain as much as 15%.

Call 911 if you or a loved one experiences these symptoms!
MUSC’s Alzheimer’s Research & Clinical Programs (ARCP)

MUSC-ARCP program was developed by MUSC Geriatric Psychiatry and the Department of Neurology to serve as a statewide resource for patients, families and physicians. The program provides access to comprehensive inpatient and outpatient diagnostic and treatment services, clinical drug trials and other types of research studies and educational opportunities.

Their team of professionals is committed to quality care for the aging in the areas of treatment, research, education, and consultation, with a focus in Alzheimer’s Disease and related disorders. Their group foundation is built on integrity, quality, teamwork, and the pursuit of knowledge.

A wide range of clinical drug trials and other types of research studies are offered for older adults with Alzheimer’s disease, other types of dementia, behavioral disturbances, depression and other psychiatric disorders. Cognitive testing, medical monitoring and study medicines are offered at no cost to qualified participants of clinical drug trials. Research staff members collaborate closely with the patients’ primary care physician. Research is conducted at the Alzheimer’s Research & Clinical Programs office, which is conveniently located off Interstate 26 in the North Charleston area.

Please contact the ARCP at 843-740-1592 for further information on research studies. Participation in research studies is voluntary and at no cost.

5900 Core Road, Suite 203
North Charleston, South Carolina 29406
Telephone: (843) 740-1592

MUSC seeks Udall Center

A collaborative group of clinical and basic science investigators have been working diligently on a grant submission to bring the Morris K. Udall Parkinson’s Disease Centers of Excellence to MUSC. If funded, this opportunity would provide an incredible opportunity to collaborate on Parkinson’s disease research.

The mission of the National Institute of Neurological Disorders and Stroke (NINDS) is to reduce the burden of neurological disease—a burden borne by every age group, by every segment of society, and by people all over the world.

The NINDS Parkinson’s Disease Research Centers of Excellence program was developed in honor of former Congressman Morris K. Udall of Utah. Mr. Udall was elected to the U.S. House of Representatives in 1961. Representative Udall was diagnosed with PD in 1979; however, he remained active in Congress until his retirement in May 1991. He died in 1998 after a long battle with the disease. On November 13, 1997, the President of the United States signed the Morris K. Udall Parkinson’s Disease Research Act of 1997 into law (P.L. 105-78).

In 1997, the NINDS released a Request for Applications to establish the first Morris K. Udall Centers of Excellence in Parkinson’s Disease Research. Udall Centers utilize a multidisciplinary research approach to elucidate the fundamental causes of PD as well as to improve the diagnosis and treatment of patients with Parkinson’s and related neurodegenerative disorders.

The Parkinson’s disease research group at MUSC is focused on cognitive impairment, especially related to executive function and working memory deficits, which occur early in the disease. These cognitive symptoms can be debilitating for some patients with PD, and most are not treated by existing surgical or medical interventions.

It is the ultimate goal of the research group at MUSC to design treatment strategies specifically geared towards cognitive impairment in this disorder. The lead investigators for this Udall application are Dr. Gary Aston-Jones (Professor, Dept. Neurosciences) and Dr. Vanessa Hinson (Director, MUSC Movement Disorders Program), and the group is working with cognitive testing, MRI scanning, as well as with drug discovery and animal models for PD.

One especially important issue related to this neurological disease, is the ability to study disease mechanism in brain tissue from patients. The Carroll A. Campbell, Jr. Neuropathology Lab is actively enrolling donors, both with and without PD, in hopes of supplying tissue for research. (See adjacent page for donor information.)
Interested in learning more about how you can contribute to the ongoing research of neurological disorders, such as Alzheimer’s and Parkinson’s diseases?

Contact the MUSC Brain Bank Coordinator, Nicholas Gregory at 843.792.7867 or gregoryn@musc.edu

The Carroll A. Campbell Jr. Neuropathology Laboratory, MUSC’s human brain bank, continues to gain momentum in its goal to raise awareness about the importance of brain donation for the research of neurological disorders. By partnering with clinical programs at MUSC and expanding community outreach, we are hopeful that the number of registered donors will continue to grow throughout 2011.

In Other Words:
Testimonial of a Registered Donor

"I was diagnosed with Parkinson's disease five years ago. Fortunately, the progression of the disease is much slower in me than it is in friends and acquaintances of mine who also have PD. Even so, it is a disruption in my life and can become a burden to my family.

If the disease is to be conquered, more research on the actual changes in the tissues of healthy and PD affected brains must be conducted. This requires providing scientists with brain tissue to better understand the changes that neurological diseases make in that tissue.

My wife and I have both made the decision to donate our brains, after death, to the Carroll A. Campell, Jr. Neuropathology Laboratory at the Medical University of South Carolina. We encourage others to not only become organ donors, but also brain donors, so that further studies can be conducted on neurological diseases through the investigation of brain tissue.

We look forward to the day when the diagnosis of PD does not mean living with a disease that is progressive and has no cure.”

- Donor from Fair Play, SC

TRIDENT PARKINSON’S SUPPORT GROUP
Bon Secours, St. Francis Hospital, 2095 Henry Tecklenburg Drive,
Meetings: 2nd Sunday of the month (except July) at 2:30 pm
Support Group Leader: Gretchen Huff, 843-297-1122, ghuff@bellpartnersinc.com

We’re online now!
Visit our new website for program updates, donor forms and more!
www.musc.edu/brainbank

Thanks to All About Seniors magazine for featuring the Carroll Lab in their Summer edition!

Thanks to the generosity of SC donors, the Campbell Lab received its 25th brain in April 2011!
Congratulations to the 2011 recipients of the Paul “Put” Putman Award - Brandon Brown & Valarian Bruce (pictured below with their mentors)

Special thanks to the Putman family for their continued support and generosity!

Celebrating our graduating College of Medicine Students!

We had a wonderful time with all of the students and mentors at the Class of 2011 Graduation Luncheon. It was held at the Holiday Inn, Mount Pleasant on March 16th. We were so fortunate to have Missy Johnson as this year’s guest speaker. As owner and editor of All About Seniors magazine, as well as a partner in Striped Rock, LLC - a marketing and media solutions company, she has become a major advocate for SC seniors. She is also the dynamic co-host of the Prime of Life TV show, a weekly show airing in SC.

We would also like to thank Dr. Raymond Greenberg, MUSC President and Dr. Donna Kern, Associate Dean, Clinical Science Curriculum Integration and Implementation for attending.

Lastly, we are immensely grateful to all of the Senior Mentors who have volunteered their time over the last four years!

Have a great summer! The students look forward to seeing you next fall!

We are currently recruiting new Senior Mentors for the incoming Class of 2015. If you are interested in signing up for new students, please call 843.792.0712 or go online for an application!

“The whole purpose of education is to turn mirrors into windows.” - Sydney J. Harris
Billie Renee Sutton  
Senior Mentor  
“I am originally from Greensboro, NC. I came to Charleston because I had visited several times and, loved it here. I went to Elon College for my bachelor of arts degree and afterwards did 8 years in the military, mainly for extended education. During my Air Force career, I designed my own costumes and entertained. After the Air Force, I went to New York where I remained for 8 years. I attended Trap Hagen for design. I had a shop in the Village and a tremendous clientèle. I modeled and designed fantastic outfits and entertained tremendously large crowds. I married and left New York to move to Arkansas, where I attended the University of Arkansas Extension for two years. My interests are so varied it would take pages and pages to enumerate. I love to write - including 8 novels and a book of poetry and short stories. I enjoy concerts, theatre and symphonies. I love life and all it has to offer. I like fairs and circuses, shows, music, to sketch and paint. I love to dance and sing and just simply enjoy life. I love beaches and mountains and historic places also interest me. In view of the fact that I like helping others, I was enrolled in the Senior Mentor Program. I must tell you, my experience with the students has been most wonderful. I have already had 6 students. They all seem to love me and we get along really well. I look forward to their coming to see me. My advice would be to always be honest and truthful with others. Be cooperative and positive. Be sincere and never doubt your abilities. Trust God! I would just like to add that while my eight years of education is mind boggling, I have what is equal to a masters degree, but I feel that education helps the masses. I never presume to know more than others, but it helps to assist others. A doctor friend once told me, “One’s standing in life never makes him better than another. We are all in this boat together for better or worse. God sees each of us as individuals.”

Katie Spinks  
4th Year Medical Student  
“I am from Georgetown, South Carolina. I graduated from Furman University with a major in Biology. I decided to study medicine because I wanted human interaction on a daily basis but also wanted to use my love of science. I will begin a residency in Internal Medicine and Pediatrics at LSU School of Medicine in New Orleans this summer. I decided on Combined Internal Medicine and Pediatrics because I want to practice primary care for both children and adults. I also enjoy the challenge of managing complex disease processes. I look forward to developing productive relationships with my patients in the future.

From the Senior Mentor Program, I have learned how being active and caring for others often facilitates better health for older adults.

The Senior Mentor Program has demonstrated to me the importance of developing a relationship with your patients prior to discussing difficult issues.

My advice for others for getting the most out of the program would be to spend a few extra minutes with your Senior Mentor at each visit; they have a great deal of wisdom to share with you.”

Jeffrey Tutman  
2nd Year Medical Student  
“I am originally from Boulder, Colorado, and I graduated from Wheaton College (IL) with a degree in Geology.

I had been interested in science and medicine from a young age, and although I always end up doing something in healthcare, I made the decision to pursue becoming a physician near the end of high school. There are a variety of things that attracted me to medicine, but the major reason was the fact that I could combine my passion for science and learning with my desire to care for others. I currently am interested in pediatrics and would guess that I will probably end up specializing in that field.

The most valuable thing that Ms. Sutton has taught me this year is that life is full of adventures, and that you should live life to the fullest regardless of what stage of the journey you are in.

The Senior Mentor Program has changed my thinking in a variety of ways. Older patients have different needs and desires, and all of these things need to be taken into account when caring for them.

My advice to those entering the program is to go into it with an open mind and to learn as much as you can about your mentor, and not just from a medical perspective. Although we are in medical school and probably tend to have tunnel vision when it comes to that, the mentors have a lot to teach you about life in general.”
NEW! We have launched the new Carroll A. Campbell, Jr. Neuropathology Laboratory web site!

www.musc.edu/brainbank