Spring 2007

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FROM THE CHAIR

I have known for many years that the Department of Exercise Science has some of the best exercise science faculty and students in the country. We frequently have received recognition as one of the nation’s top exercise science programs and consistently have provided leadership to the field in research, teaching, and service. So I am very pleased, but not surprised, to tell you that our department has been named the No. 1 doctoral program in the country in kinesiology and exercise science. The ranking was announced this past January, when Academic Analytics released its Faculty Scholarly Productivity Index. The Index is a new measure of doctoral programs, and the first to be based entirely on objective criteria. Measures for assessing faculty productivity in research and publishing included the number of faculty publications, citations of faculty publications, research grants, and awards and honors. We were ranked No. 1, and Washington University, Louisiana State University, University of Wisconsin–Madison, and University of Florida are ranked Nos. 2-5, respectively.

Faculty are at the heart of this new ranking, and I cannot say enough about our outstanding faculty members. They are smart and talented and work extremely hard. They are doing cutting-edge research on some of the most important health topics of our day, including preventing obesity and diabetes, minimizing the effects of aging, investigating the role of exercise and physical activity in cancer prevention, studying the effects of sleep on health, maximizing exercise performance, reducing symptoms of HIV/AIDS, and better understanding the molecular, biochemical, and physiological mechanisms responsible for these positive health changes. They work with people of all ages and walks of life, from preschool children to senior adults, from women in African-American churches to homeless men with HIV/AIDS. They publish in the top journals in our field. And they are widely recognized across the country and around the world as leaders in physical activity, exercise science, and related fields. In addition, they are outstanding teachers. Although the Faculty Scholarly Productive Index does not rank teaching, there is no question that many of our top graduate students are drawn to our program because of outstanding research and teaching.

I am excited about what this ranking means for the future of our department. The University’s administration acknowledges that this is a significant honor for the Department, the Arnold School of Public Health, and the University of South Carolina. Both the Vice President for Research and Health Science, Dr. Harris Pastides, and the Dean of the Arnold School of Public Health, Dr. Donna Richter, have congratulated us and acknowledged our accomplishments. We are already attracting top-notch students and faculty, and the recognition generated by the release of the Index will put our program on the “radar screen” of every outstanding student and researcher in the country.

-J. Larry Durstine-
LOST ALUMNI

Unfortunately, these are only a few of the folks missing from our database. Please look the list over & help us out if you can. Send an email or send the last sheet of this newsletter to:

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Department of Exercise Science
USC Arnold School of Public Health
Columbia, SC 29208

Or you may call 803-777-5267, fax 803-777-8422, or e-mail docarswe@gwm.sc.edu.

Jonah O’Neal Amlett ’98
Bandon Mack Cain ’98
Emilie Marie Cousineau ’98
Todd Alexander Covington ’04
Will Crapps ?
Heidemarie Ursula Cruz ’99
Jeffey Paul Cuthbert ’00
Joseph Robert DeLuca ’00
Chantal Ann Depraeter ’01
Mike Desilva ?
Jadelyn Dillon ’01
Nicole Marie Dobrin ’03
Jonathan Donley ’05
Tyrea Sachet Dulaney ’06
Ronald K. Evans ’92
Denis Fedulov ’97
Floyd Galiano ’90
Scott Christopher Gams ’06
Margaret Garrett ’00
Alvin H. Ginn III ’90
Robert Graessle ’01
Kimberly Gromel ’99

The Activist

Spring 2007
The Activist is published biannually by the Department of Exercise Science, Norman J. Arnold School of Public Health, University of South Carolina, Columbia, SC 29208

Dorothy Carswell, Editor
Latoya Townes, Layout Design

CONGRATULATIONS FALL 2006 GRADUATES!

BS

Tineak Vermett Bovain
Toniea Shontae Denton
Sarah Cutler Dickey
Forest William Addison Dutton
Paul Matthew Edwards
Gary Clayton Flowers
Jonathan Griffin Hale
Tamarille Rashaun Jackson
Amanda Mary Jones
Stacey Shontell Kindall
Monica Paquite King

Alicia Shenee Kirkland
Carole Nicole Leidig
Mandelynn Hope Mabus
Alyssa Susan Marcinak
Mark Josphe O’Neill
Disha Parvatum
Rachel Zeadora Reeves
Lucas Davis Rizer
Terra Lynn Russ
Shreya Navinchandra Tailor
Kelly Anne Thompson

MS

Ryan Stephen Sacko

PhD

Wesley David Dudgeon
Diana Lynn Lattimore

Presentations Southeastern American College of Sports Medicine Meeting, Charlotte, NC, February 2007

Oral Presentations:

APOSTOSIS IN CATHETIC MOUSE SKELETAL MUSCLE
Kristen A. Baltgalvis, F.G. Berger, and J.A. Carson

CARDIAC ENLARGEMENT AND STAT3 SIGNALING IN A MOUSE MODEL OF CHRONIC INFLAMMATION AND CACHEXIA
Raymond W. Thompson, Kristen A. Baltgalvis, J. Larry Durstine (FACSM), J. Mark Davis (FACSM), Wayne E. Carver, James A. Carson

MOUSE TIBIALIS ANTERIOR MUSCLE MASS AND ANDROGEN RECEPTOR (AR) EXPRESSION WITH TESTOSTERONE MANIPULATION
James P. White, Raymond W. Thompson, Tyrone Washington, Kristen Baltgalvis, and James A. Carson

MYOSTATIN SIGNALING ALTERS ADAPTATION TO FUNCTIONAL OVERLOAD-INDUCED MUSCLE HYPERTROPHY
Tyrone A. Washington, J.A. Reecy, Kristen A. Baltgalvis, and James A. Carson

EFFECTS OF CAFFEINE AND CARBOHYDRATE INGESTION OF PHYSICAL/MENTAL FUNCTIONS DURING TEAM SPORTS EXERCISE
Stephen Chen, J. Mark Davis (FACSM), Elise Matthews, Patrick Crowley, Nicholas Greene, Marie Quig, April Wilson, Tamara Payn, G. William Lyerly, Suzanne Newall, Christopher Kline, Angela Murphy, Martin Carmichael

Poster Presentations:

THE EFFECT OF EXERCISE AND A HIGH FAT DIET ON WNT SIGNALING AND INFLAMMATION IN APCMIN/+ MICE
Manish J. Dave, Kristen Baltgalvis, F.G. Berger, and James A. Carson

(continued on page 3)

Marsha Dowda, Rod K. Dishman, Karin A. Pfeiffer, and Russell R. Pate, “Family support for physical activity in girls from 8th to 12th grade in South Carolina,” Preventive Medicine, 44, 153-159, 2006.


Pilot project uses physical therapy to treat spinal cord injury

(Printed in USC Times News & Headlines 10/06)

Can people with partial spinal cord injuries regain movement, balance, and perhaps even the ability to walk several steps through intensive physical therapy?

That’s the question Stacy Fritz hopes to answer through a new project funded by the S.C. Spinal Cord Injury Research Fund. Fritz, a clinical assistant professor in the Department of Exercise Science, plans to work with 16 clients during the next two years, most of whom have exhausted their regular insurance benefits for physical therapy related to their injuries.

“Most people with incomplete spinal cord injuries have something spared--some ability to stand for a short time or to sit up and move from bed to chair,” Fritz said. “What would happen if we bombard them with intensive therapy for several hours a day? Will it help them to regain some of what was lost?”

To join the program, clients must be able, with assistance, to stand for two minutes and walk 10 feet. Fritz and her team concentrate on improving gait, balance, and mobility by working with the clients for three hours a day for 10 days. The sessions, held in the Arnold School of Public Health’s new research center, put participants on a treadmill for hours, suspended in place by straps and simulating a walking motion to improve their sensations of gait and balance.

The therapy also works on improving simple transition movements--from bed to chair, for example--that might make it easier for participants and their caregivers to perform such tasks after the therapy concludes. Participants go home with the knowledge of new activities to continue to work on improving physical abilities.

“Our main goal is to get them upright. To be able to take a few steps is a huge improvement if you’re not able to take any at all,” Fritz said. “And by being upright, you might see major improvements in bone density and blood pressure regulation.”

If Fritz’s therapy program proves to be beneficial, she plans to apply to the Christopher Reeves Foundation for additional funding.

“The amount of therapy that insurance will pay for following spinal cord injury has gotten shorter, sometimes less than a month,” Fritz said. “So much of that therapy is compensatory--helping clients to find new ways of doing things to accommodate their injury. We’d like to focus more on recovery--actually helping patients regain what they’ve lost. That’s what this project hopes to do.”

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NEWS OF FACULTY

Gregory A. Hand has been named associate dean for academic affairs for the Arnold School of Public Health. He will continue his research in the Department of Exercise Science. James A. Carson will take over the Department’s Graduate Director position.

Shawn Youngstedt has been awarded a Research Career Development Award from the Department of Veteran’s Affairs.

Paul Beattie made a February 16th platform presentation at the Annual Combined Sections Meeting of the American Physical Therapy Association. His presentation was entitled “The Use of Magnetic Resonance Imaging to Quantify Diffusion of Water in Normal and Abnormal Intervertebral Discs”.


Dr. Blair was recently named Robert I. Levy Endowed Lecturer by the American Heart Association.

STUDENTS IN THE NEWS

Kristen Baltgalvis, doctoral candidate, has accepted a post-doctoral position at the University of Minnesota doing Muscular Dystrophy research.

Doctoral student Chris Kline, wife Carrie, and daughter Gabby welcomed Jonah Edward on January 18 at just under 7 pounds. And in March, Chris was awarded a student research grant from ACSM to study “Circadian Phase-Shifting Effects of Three Exercise Durations.”

Kerry McIver, doctoral candidate, has been given the Dean’s Award for Excellence in Graduate Study. The award was presented at the Graduate Student Day Awards Ceremony on April 4. This university-level recognition comes from the Dean of the Graduate School.

Physical Therapy doctoral student Tabitha Washington has been chosen as a recipient of the American Physical Therapy Association’s (APTA) esteemed 2007 Minority Scholarship Award for Academic Excellence. She has been invited to receive her award certificate at the Association’s Annual Conference & Exposition in Denver, CO.
WHERE ARE THEY NOW?


We always enjoy reading about some of our friends from USC, so Dorothy and I are happy to share our adventure since we left USC. Dorothy and I are now in our 18th year of marriage and simultaneously 18th year away from USC. It has been a great ride so far and we are looking forward to many more great years. After leaving USC, we moved away from the warm Southeast, to St. Louis where I had an NIH Post-Doctoral Fellowship studying glucose transport in rats under John Holloszy. Dorothy worked at Washington University also, studying transcriptional control of CRF (corticotropin releasing factor). Next we moved to Omaha, Nebraska, an even colder environment (which Dorothy--being from South Carolina--did not care much for). I was an assistant professor at Creighton University teaching and doing some research on the acute effects of exercise intensity on glucose tolerance and insulin sensitivity. Dorothy worked at University of Nebraska in Omaha where the group worked on teasing out the functions of the dual receptor manose-6-phosphate/IGF 1 receptor.

It was in Omaha, in 1993, that Hanna was born. It is amazing how having a child can help you clearly answer for the first time, the question: “What is important in life?” All this time we thought life was about Exercise Physiology!!! In 1995, we moved to Durham, North Carolina, and soon after Mitchell was born (1997). Both kids are quite happy and doing well.

After 3 1/2 years in Omaha, we moved back to the Southeast in 1995, where we stayed. I worked at Duke University on a study about exercise and congestive heart failure and Dorothy went to work at Duke University also, working with a team that was studying oncogenes in Leukemia of downs syndrome. After her boss’ administrative duties took over his life, Dorothy went to work for Bill Kraus studying muscle growth and differentiation (regeneration) in microgravity. Among other things, Dorothy worked on a technique for growing 3-dimensional muscles (instead of 2-D ones grown on top of a plate) and she took micrographs (with an electron microscope) of these muscles. It was really neat because we could see all of the parts of the muscle that we had studied when we were at USC (Z-lines, I-zones, A-zones H-bands, etc...-does that sound familiar to anyone??). Unfortunately, the NASA funding was not renewed, but Dorothy is still working with muscles at Duke, but now she works with Debbie Muoio. Their work is focused on the metabolic changes in muscle with obesity and diabetes using molecular biology and tissue culture models to address factors involved in lipotoxicity--i.e. why/how do excess lipids cause damage in the cell. Recently one of the pictures from an experiment that Dorothy was doing was featured on the cover of CELL Metabolism (Oct -- 2005).

Dorothy is not having all the fun though as I have also been very fortunate to be involved in some exciting research here at Duke. I was extremely lucky to have the opportunity to work with Bill Kraus on a large randomized controlled study of the effects of different amount and intensities of exercise on CVD risk factors. The study is called STRRIDE (Studies Targeting Risk Reduction Interventions through Defined Exercise) and we, along with Joe Houmard’s group at East Carolina University, have been lucky enough to have published 12 papers from this study so far with five more under review. We were especially excited when we got one of our papers accepted in the New England Journal of Medicine (2002) and later another in Archives of Internal Medicine (2004). Recently, we were honored to be invited to write a review in Exercise & Sport Sciences Reviews (Jan 2007) on findings from STRRIDE emphasizing the many detrimental effects of continued inactivity in sedentary overweight individuals. Life is good!

Dorothy and I still exercise regularly. One of the exciting aspects of our lives right now is that Dorothy is training for some upcoming 20K racewalking events. She has racewalked a 10K at about an 8:40 per mile pace (a sub 55 min pace) and hope to race at the Pan American Cup Trials on March 17th. If she does well, she could qualify for the Olympic Trials and also for the National 20K Women’s Racewalking championship. Last year Dorothy won the 2006 US National Masters track and field championship in the Women’s 10K racewalk and had earlier won the Southeast regional Masters 5K championship. She also runs and recently placed 2nd in a really large half marathon race.

The many opportunities that have come our way would not have been possible without our education, experiences and colleagues at USC. We definitely want to thank our professors and our fellow graduate students for the fantastic experience that USC was. We would love to hear from any of the USC gang. Dorothy can be reached at dorothy.slentz@duke.edu and I can be reached at cris.slentz@duke.edu.
KEEP US INFORMED
Alumni Information Update
Please take a moment to send us information about your personal and professional activities, job changes, honors, research, etc. Send, fax, or e-mail your information to:

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Address _________________________________________________________________
City ___________________________ State _____ Zip ____________
Phone (____) ______________ Year of Graduation _______ Degree ____________
E-mail Address: _________________________________________________________
Employer ______________________________________________________________
What’s new with you? Job change? Job title or position? Personal events? _________
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