

HHP TODAY

The Department of Health and Human Performance



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From the Chair

We have entered a new decade with new challenges and opportunities along with a renewed commitment to understanding, developing and promoting a healthy lifestyle. As professor and chair of HHP,



I am very proud of the department's strong educational programs and its research projects that provide a foundation of excellence to further our students' success.

In this spring issue of HHP Today, read about our student organizations and how important their work is to the UH and Houston communities. We have highlighted an alumnus and faculty member you may know. Also, learn about research that is growing bone outside of the body.

This semester, we continue to have opportunities for you to hear renowned NASA scientists speak in the System Physiology course; admission is free. Please feel free to attend any or all the lectures that interest you Wednesdays from 2:30 p.m.–5:30 p.m. in the conference room (104L) of the HHP main office suite. For more information and a schedule, visit <http://tinyurl.com/SystemPhysiologyLectures>.

Earlier, I mentioned new challenges and opportunities. You may be considering a graduate degree to further your career opportunities and we would love for you to consider our outstanding graduate programs. The rewards of a graduate degree will be one of the best investments you will ever make. Please feel free to contact me with any questions, comments or information about what you are doing at clayne2@uh.edu.

*Dr. Charles Layne,
HHP Department Chair*

HHP Student Organizations Reach Out

Joining an HHP student organization links you to other students who have similar interests and goals, and provides volunteer opportunities within the department and in the Houston community. Our Student organizations also disperse information about internships and graduate studies and assist students in networking with professionals in their field of interest.

HHP has two active student organizations: the HHP Honor's Society (HHPHS, formerly, HHP Majors Society), which is geared toward kinesiology, nutrition and health majors; and the Student Nutrition Association (SNA), which focuses on the needs of nutrition students. In the fall of 2009, HHPHS focused on informing the students of internships and volunteer opportunities in HHP grant projects such as BOUNCE and UH PEAK, as well as offering a Q-and-A session with graduate admissions counselor Todd Boutte.



HHPHS students walk for a cure.

"HHPHS offers a unique opportunity each semester by hosting an informal discussion with undergraduate students and myself," said Boutte.

These Q-and-A sessions give HHP students a chance to ask current master's and doctoral students questions about the programs, the admissions process and their experiences preparing for the GRE test required for these programs. In March, he would like to host a similar event featuring newly admitted HHP graduate students.

Last semester, the honor society organized monthly activities including group jogging, cycling and tennis. In November, members participated as runners and volunteers in the American Diabetes Association's StepOut event, a 5K walk at Minute Maid Park in downtown Houston.

The group also raises funds for St. Jude's Children's Hospital through bake sales and taco sales on campus. "We have chosen St. Jude's because they give treatment to all children regardless of their parents' ability to pay," said Marcela De La Garza, HHPHS president.

The SNA held its first meeting of the semester in February. Their agenda included discussing goals and organizing activities for the coming semester and a lecture from special guest, Beverly Gor, a sports dietician from the M. D. Anderson Cancer Center. This event is open to all interested students.

Among SNA's activities last semester were: bimonthly meetings featuring nutrition professionals, participation in the annual Juvenile Diabetes Research Foundation and American Heart Association's walks, and organizing and hosting a Dietetic Internship Fair. The fair gave students the opportunity to hear about the programs that are available throughout Texas schools as well as their application processes.

SNA members also volunteer for HHP grant projects, such as BOUNCE Lite and community service organizations including CAN DO Houston, which is currently assisting earthquake victims in Haiti. "Last fall, twice as many members joined compared to last year. We hope to achieve the same this semester," said SNA president, Frenny Sureja.

For more information regarding these organizations, visit their Web sites: HHPHS at <http://uh.edu/hhphs> and SNA at <http://www.coe.uh.edu/orgs/sna>.

FOCUS ON FACULTY

Dr. Daniel P. O'Connor



It is not often that you meet a native Houstonian who was born, raised, educated and still living in Houston, but Daniel P. O'Connor, HHP assistant professor in kinesiology, actually meets those criteria.

Dr. O'Connor was born in the Texas Medical Center, he attended public schools here, earned his bachelor's degree in human performance and health sciences from Rice University, his master's in physical therapy from Texas Woman's University (Houston) and his doctorate in kinesiology as a Cougar from the University of Houston.

His primary expertise lies in the design and analysis of interventional studies that affect an individual's health and health-related quality of life with regard to how treatments and programs affect them.

Learn more about him:

HHP: Has being a licensed athletic trainer and physical therapist impacted your research?

DO: I think that my clinical experiences have helped me to focus on the patient as the direct beneficiary of research. While many of my colleagues study things on a cellular/tissue level or on a neighborhood/societal level, my primary research interests lie in how interventions and conditions affect individuals, particularly over periods of time such as occurs with progressive disease, recovery from injury or illness, and growth.

HHP: Give us an overview of the book you wrote with Dr. Louise Fincher, which is in its second edition: "Clinical Pathology for Athletic Trainers: Recognizing Systemic Disease."

DO: The book describes how to recognize illnesses and medical problems experienced by physically active people. It is used in many athletic training degree programs around the country. The second edition improves upon the teaching and learning aspects, which includes expanded material on medical condition topics and chapters concerning pharmacology, dermatology and otolaryngology (ear, nose and throat).

The second edition has more clinical examination procedures as well. We also provided explicit links between the material in the textbook and the competencies required

for certification in athletic training to assist students and instructors in their professional education and credentialing programs.

HHP: You have three Houston campus alma maters. I don't suppose you are willing to declare your allegiance to any one university, are you?

DO: I'm a native Houstonian through and through! Each university provided me unique and valuable opportunities and skills. It's hard to declare an exclusive allegiance for just one of my alma maters, but I will say that I have a lot of red in my wardrobe and UH is like home to me.

GO COOGS!



Dr. O'Connor at the 2009 Faculty Research Day.

ALUMNI SPOTLIGHT

Dwight Davis



It was one night in Philadelphia, playing for the Cleveland Cavaliers, that Dwight Davis had a perfect game, going 10 for 10 from the field and 1 for 1 at the free throw line — just one of the highlights among unbroken records in an illustrious NBA career. He left UH during his senior year when the Cleveland Cavaliers selected him in the first round of the 1972 NBA Draft.

The 6-foot-8-inch, 220-pound forward played for five successful seasons in the NBA for the Cavaliers (1972–75) and the Golden State Warriors (1975–77).

In 1977, Davis suffered a career-ending injury, which was followed by 15 years of drug and alcohol addiction. He says, "I did not allow myself to grieve properly for the game I loved so much, the game that was a blessing to my family and me." After serving six months in jail, he began the difficult road to recovery with the help of friends and faith.

He also returned to the unfinished business of earning his bachelor's in kinesiology at HHP ('00) and settled in the Seacoast community of New Hampshire where he is a real estate agent. Davis is also a tireless volunteer on behalf of children and youth and is chairman of the New Hampshire Workforce Opportunity Youth Council.

In November 2009, he received the Jobs for America's Graduates' (JAG) National Workforce Development Leadership Award in recognition of his extraordinary leadership in helping high-risk young people to succeed in school, as well as in pursuit of a career and/or a postsecondary education.

The UH Bauer School of Business inducted Davis into the "Circle of Honor" in 2006, which means a scholarship in his name is awarded annually to a student-athlete majoring in business.

HHP visited with him recently:

HHP: At what point did you decide to return to UH and finish your degree?

DD: The decision to finish my education was made the day I enrolled at UH as a freshman. It was a promise I not only made to Dr. Bloom and Dr. Richle, but to my mother and father who sacrificed so much to give me the opportunity. I was one of a few African-Americans at that time to get that opportunity. I grew up believing that it was my duty to be part of the manifestation of Dr. King's Dream.

After my struggles, it was a relief and an act of providence that Dr. Bloom was still there at UH, ready and willing to guide me academically. Dr. B. has helped literally hundreds of students by providing them with excellent classroom instructions and guidance.

DAVIS continued on page 3

One of the best ways to prevent a fracture is to stop bones from reaching the point where they are prone to breaking, but understanding the process of how bones form and mature has been a long-standing challenge. But now, HHP researchers have created a process that grows real human bone in tissue culture, which can be used to investigate how bones form and grow.

“We have manufactured a structure that has no synthetic components,” according to Mark Clarke, associate professor and principal investigator. “It’s all made by the two cell types bones start with inside the body. What you end up with is a piece of material that is identical to newly-formed, human, trabecular bone, including its mineral components, its histology and its growth factor content.”

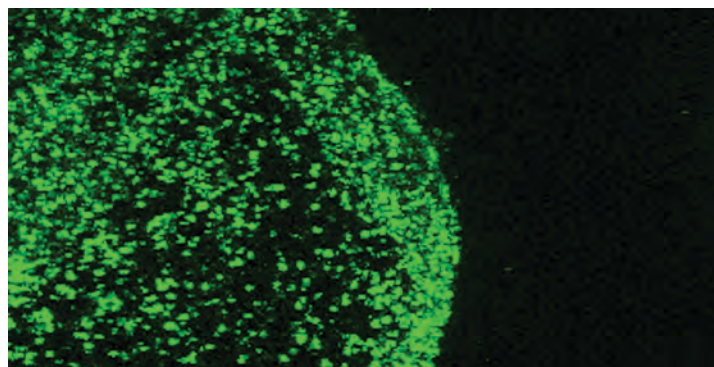
Being in a microgravity environment causes astronauts’ bodies to lose more bone mineral than they can replace, which makes them more vulnerable to fractures and breaks. After returning to Earth, an astronaut’s bone loss continues as their bodies slowly begin the process of replacing the bone mineral content.

The NASA-funded study, which included Clarke’s collaborators at NASA-Johnson Space Center, Dr. Neal Pellis and Dr. Alamelu Sundaresan, use human osteoblasts and osteoclasts, the two major cell types involved in the formation of and breaking down of bone. The 3-dimensional bone constructs allow for ideal conditions to investigate how bone forms and, more importantly, how bone is lost in environments such as space flight and conditions present in post-menopausal women and spinal cord patients.

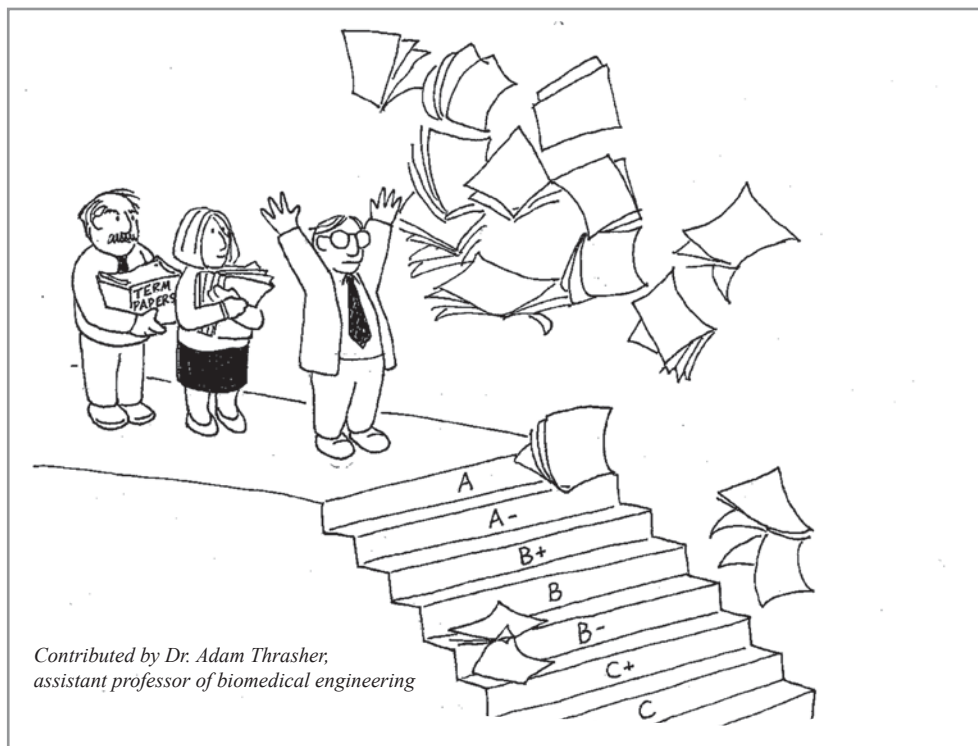
Clarke has worked with NASA on other bone loss studies. He served as principal investigator of micro-fabricated sweat patches for the analysis of biomarkers of bone loss, like calcium.

His research on bone formation is also proving to be market-ready, as a newly formed start-up company, OsteoSphere Inc., examines ways the breakthrough research can be used in a clinical setting for applications such as spinal fusions, facial reconstructions following bomb blasts or the re-growing of an individual bone outside of the patient.

UH has now licensed the technology to OsteoSphere Inc. which is looking at ways to commercialize the technology in a clinical setting, including culturing an individual’s own bone for subsequent transplantation back into the patient, developing other products for use in orthopedic reconstruction or using the technology as a screening tool for development of pharmaceuticals for combating bone loss or stimulating bone regeneration.



A 21-day-old living OsteoSphere imaged using confocal microscopy. Human osteoclast cells (labeled with Cell Tracker-Green™ fluorescent marker prior to mixing/culturing with human osteoblasts) arrange themselves on the outer surface of the living OsteoSphere.



Contributed by Dr. Adam Thrasher, assistant professor of biomedical engineering

▶ DAVIS continued from page 2

He is an asset, an undeclared treasure of UH and its students.

HHP: When did you develop your passion for helping youth?

DD: I did not develop it. I inherited it from my father and my mother. They modeled a passion for caring and helping. My father was the community “go to guy” for good counsel.

HHP: How has your degree influenced your current life?

DD: There is a term used in sports that everyone is familiar with, that term is “finish.” You hear it applied to teams as in “this team has a great ability to finish.” The journey I took to complete my degree is a constant reminder to me that in order to have a chance to win, to succeed or to have a positive influence on your community and a satisfying life, you have to finish. ■



Find all HHP updates on our RSS feeds at <http://hhp.uh.edu>.



See pics of HHP faculty and staff-Chevron Houston Marathon runners!



Check out Houston Dynamo player, Eddie Robinson’s promo for HHP!

Visit HHP Current Events
at <http://hhp.uh.edu/Currentevents>

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HHP TODAY

The Department of Health and Human Performance

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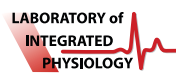
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Breast Cancer Quality of Life Study



HHP associate professor, Dr. Jenny Yi, was the principal investigator of the Journey of the Asian American Diversified Education (JAADE) research project. The two-year pilot program was designed to help newly diagnosed Asian American breast cancer patients with limited English skills navigate through diagnosis, treatment and available resources.

The project was funded by Susan G. Komen for the Cure®, the world's largest breast cancer organization, and specifically targeted Chinese and Vietnamese women diagnosed with breast cancer age 18 and older, living in Houston.

Its overall goal was to improve the quality of life among Asian American women after a breast cancer diagnosis. Currently, there is a limited amount of research investigating the impact of breast cancer experiences of Asian American women.

In the study, the research team investigated factors associated with the quality of life among low literate Asian American breast cancer survivors. After treatment, cancer patients may continue to experience challenges

associated with the disease, which can be particularly difficult for less acculturated and low income Asian Americans.

The study provides the foundation for a long-term research program for understanding cancer survivorship among Asian Americans. In addition, intervention will be developed to enhance the quality of life by addressing their unique needs.

Four booklets, written in English, Chinese and Vietnamese, were developed to address topics such as diet and exercise, pain management, emotional health—intimacy and sexuality, and how to talk with one's physician.

The JAADE team of researchers are currently assessing the data collected during the study, which concluded in January 2010. A summary of the research team's results and educational materials developed as a part of this project will be disseminated to the Asian American community.



The results will also be presented in conferences and publications in order to meet the needs of Asian American breast cancer patients and to improve their quality of life.

Visit www.komen.org to learn more about the Susan G. Komen for the Cure® organization and to discover ways you can make a difference in the battle against breast cancer.