



Physical 6 therapy for all







DENTISTRY • MEDICINE • NURSING • PHARMACY • PUBLIC HEALTH AND HEALTH PROFESSIONS • VETERINARY MEDICINE

On the Cover

Stephanie Barron cradles Brody, one of her twin sons born three-and-ahalf months premature. Twin Brayden passed away two days after birth, but Brody is getting better after overcoming obstacles in the neonatal intensive care unit at Shands at UF. Photo by Jesse S. Jones







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A fact-finding mission



S. Rep. Cliff Stearns embarked on a self-styled "listening tour" through the UF Health Science Center and Shands Critical Care Center in August, interviewing doctors who work on treatments to combat Alzheimer's disease and breast cancer, as well as physicians who work on the front lines of emergency care. "Health care is a prevalent concern in Congress," Stearns said. "There are large issues involved. Just using Alzheimer's disease as an example, what can be done to arrest the process when people start losing their cognitive ability?" For those answers, he interviewed Todd Golde, M.D., director of the Center for Translational Research in Neurodegenerative Diseases. He also met with emergency medicine resident Beth Nealon, M.D., (center) and Adrian Tyndall, M.D., (right) chair of emergency medicine, to discuss the challenges of providing emergency care. Stearns ended his tour with Stephen Grobmyer, M.D., an assistant professor of surgical oncology and endocrine surgery, and Brij M. Moudgil, a professor of materials science and engineering. The researchers are collaborating on ways to use nanoparticles for high-resolution imaging of cancer.

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CALLING ALL BOOKWORMS

What can \$1 buy? A used book, movie or CD at the Gator Bookworms Book and Media Sale, which will be held from 8 a.m. to 3 p.m. Oct. 6 at the west entrance lobby of the Dental Tower. All proceeds benefit the 2010 UF Campaign for Charities. Last year, the campaign raised more than \$1 million for 78 charitable organizations in the region that provide services such as child care, legal help and medical assistance. Donations for the sale can be brought to Michelle Watson in D9-6. To arrange a drop-off, call 352-273-5830.



YAY, SHANDS!

U.S. News & World Report has ranked Shands at UF in eight specialties in the 2010-11 edition of "America's Best Hospitals." Shands at UF had the highest national ranking among Florida hospitals in four specialties: heart and heart surgery, kidney disorders, pulmonology and urology. Shands at UF consistently ranks in the "America's Best Hospitals" list. The rankings weigh the reputation of each hospital, death rates and care-related factors such as nursing and patient services. Hospitals are scrutinized thoroughly before being ranked and considered a Best Hospital. The rankings are available online at www.usnews.com/besthospitals.

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EVEN ALBERT HAS A PASSPORT ...

Need a passport? Skip the lines and visit the UF Mail and Document Services Department, which has been designated a U.S. Passport Acceptance Facility. The office is open from 9 a.m. to 3 p.m. and is located at 715 Radio Road on the UF campus, across from the Lakeside Residence Hall. For more information about how to obtain your passport, visit **www.travel.state.gov**.

SIT, STAY, SAVE!

Next time you drop by the UF Veterinary Hospitals with Fido or Fluffy (or even Mister Ed) make sure to flash your Gator 1 card. The College of Veterinary Medicine is now offering UF employees a 10 percent discount on care at the small and large animal hospitals. The discount will only be honored upon presentation of a valid UF Gator 1 identification card. For more information about the UF Veterinary Hospitals, or to make an appointment, please call 352-392-2235 for small animals or 352-392-2229 for large animals, or visit **www.vethospitals.ufl.edu**.

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A good impression

By Karen Rhodenizer

hirty-five students from across Florida got an impression of what dental school is like on July 23 during the Third Annual Impressions Program, coordinated by the UF College of Dentistry chapter of the Student National Dental Association.

Impressions programs are designed to expose pre-dental students from under represented minority groups to careers in dentistry as well as the application and financial aid process for dental school. This allows them to learn about dental school and become stronger applicants.

Students, faculty and staff assisted with hands-on experiences for the participants as they learned to take alginate impressions and to pour and trim models and wax teeth. Olubisi Aina, D.M.D., an alumna of the college, volunteered that day, inspiring the participants by sharing her experience as a dental student and a practicing dentist.

"The program helps us continue to recruit the best and the brightest to our college and to expose students to dentistry in new and interesting ways. We need to continue to help all talented young people understand the profession of dentistry," said Teresa A. Dolan, D.D.S., M.P.H., a professor and dean of the college.

To see more photos from the program, visit the college's Facebook site: UF College of Dentistry. 🕑

Helping pets in need

New certificate program focused on shelter medicine

By Sarah Carey

F veterinary students now have a new opportunity to embark upon an intensive course of study designed to address a shortage of veterinarians trained in the special needs of veterinary care in animal shelters.

The Certificate in Shelter Medicine will expose students to a cross-section of opportunities in the field, including care of sheltered animals, animal disaster management and cruelty investigations and forensics, among others.

"Our initial program will be conducted at UF, but it's our hope to develop online offerings so that students at other veterinary schools have access via distance learning," said Julie Levy, D.V.M., Ph.D., director of Maddie's Shelter Medicine Program at UF.

Students can earn the certificate by completing 15 units of newly developed elective courses, clinical clerkships and externships focusing on shelter medicine topics. Certificate course offerings span all four years of the veterinary curriculum. Each participating student will be mentored by one of UF's five shelter medicine faculty members who will work with the student to tailor a study plan that matches the student's particular interests.

"When I decided I wanted to be a veterinarian, I did so because I wanted to be a shelter veterinarian," said Lauren Unger, a junior veterinary student who is president of UF's student chapter of the Association of Shelter Veterinarians. "I couldn't have started veterinary school at a more appropriate time. The shelter medicine program at UF offers an internship, a residency and now has options for a shelter medicine certificate, which credentials a specialty I am so passionate about."



JULIE LEVY, D.V.M., PH.D.

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Richard Snyder gave an overview of the new translational biotechnology master's degree program Sept. 1 at a kickoff luncheon, which was attended by the inaugural class (left).



THE BUSINESS OF **BIOTECHNOLOGY** New master's program pairs science and industry

By Czerne M. Reid

he UF College of Medicine, in collaboration with UF's Warrington College of Business Administration, has started a two-year master's program in translational biotechnology that will prepare graduates for management roles in industry and academia by equipping them with skills critical for developing new therapies.

The first of its kind in Florida, the program is supported by a three-year, \$700,000 grant from the National Science Foundation.

The program is especially timely because biotechnology is poised to be an important economic engine that will power growth for the state of Florida.

In addition to curricular and practical training in biomedical and laboratory science, students will receive intensive training in business administration. Graduates will earn a Master of Science degree in medical sciences, with a minor in business administration.

"They are going to really understand the science fundamentals, how products are developed, how business functions, what the main drivers of project management are, how projects and resources are budgeted, the types of timelines involved and the different kinds of expertise needed to develop new therapeutic products," said molecular genetics and microbiology associate professor Richard Snyder, Ph.D., the program director and director of Biotherapeutic Programs in the UF Office of Research.

Students entering the program typically have a strong background in chemistry and biology and will learn how to conduct advanced applied research. By the time they graduate from the program, they will also have a strong grounding in business management. The program presents additional career and re-training options in a high-skill, high-wage industry for many individuals, including traditional students and people who are underemployed or have been displaced. The two-year, thesis-optional program is research-intensive and includes a formal internship at a Florida biotechnology company. Industry leaders serve on the program's advisory board.

"Success in the biotechnology industry requires a combined skill-set — not just knowing the life sciences; you also need to have business knowledge in order to be effective in turning a science and technology project into a successful business venture," said Steve Lin, Ph.D., vice president of biologics research and development and chief technology officer of Gainesville-based Exactech Inc., a leader in orthopedic implant technology. Lin wrote to the NSF in support of the new program.

"If I'm going to add staff, if there are two applicants that are equally talented in biotechnology I would choose the one who has training in business, because it is very important when planning or executing a technology project to understand the business requirements and resource and regulatory issues and laws, because that can affect the success of technical projects."

Traditionally, such skill combinations are found in industry settings, but more and more they are being nurtured in academic institutions, as clinical and translational science programs thrive and researchers investigate therapies for various diseases, including rare conditions that do not generally attract the interest of pharmaceutical companies.

"Graduates are expected to have a high impact on the growth of biotechnology companies in the state, but also on the expansion of the translational research enterprise at UF and other academic institutions," Snyder said.

For information about enrolling in UF's translational biotechnology master's program, contact Jessie Essex at 352-273-6850 or emmonsj@ufl.edu. P

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Volunteer Ashley Kennedy shows Yvette Headley exercises to alleviate her headaches.

Helping hands

students run free physical therapy clinic



By Shayna Brouker and Kim Libby

Vette Headley, 45, has two kids, but they are too old to qualify her for Medicaid. Her income does not afford her the luxury of health insurance. She suffers from piercing, persistent headaches.

With nowhere else to go, Headley comes to a small building downtown once a week to be tapped, twisted and stretched by young adults half her age.

"It's a blessing," she said with a smile. "I'd be hurting without this place."

This place is UF's Physical Therapy Equal Access Clinic, where physical therapy students and patients plagued by financial and bodily woes enjoy a mutually beneficial relationship.

UF has always provided ample opportunities for its students' education, but through the clinic, students also have found a way to give back to the community.

An affiliate of the College of Medicine's Equal Access Clinic, the clinic offers free physical therapy services to those in the Gainesville community unable to afford treatment elsewhere. Located at the Gainesville Community Ministry, the clinic welcomes walk-in appointments and is open from 6 p.m. to 8 p.m. every Thursday.

Students provide most of the care while faculty members and local clinicians supervise and offer guidance. Students founded the clinic in 2009 so they could apply classroom knowledge to actual patients.

Second-year physical therapy doctoral student Tony Lauretta has already seen the clinic benefit patients.

"They don't know why their back hurts or why they have pain at certain times of days," he said. "If we can help them with a treatment plan or point them to someone who can, they realize they can get better, which drastically improves their quality of life."

The work in the clinic is divided between students, who are assigned roles based on their level of education. The first-year students, for example, take vital signs and observe while the second- and third-year students examine patients, develop a therapy plan and offer sage advice to younger students.

It's the middle of the summer semester and Shannon Burton, a first-year student, is volunteering at the clinic for the second time. Although first-years' interactions with patients are usually limited, a third-year student instructs her to test a patient's reflexes by tapping below his kneecap with a tendon hammer.

"It has definitely changed my outlook on patient care," Burton said. "It teaches you to be more interactive and to build a trusting relationship with the patient."

This special dynamic, or "peer learning," is just what faculty adviser Mark Bishop, P.T., Ph.D., and his fellow faculty members hoped would spring from the clinic's cooperative environment.

"I think it is profoundly effective," he said. "If you look at the clinical literature, peer learning tends to be a strong way of conveying information because you're more likely to listen to a peer than to me. This group of students has exceeded my expectations."

The clinic has only two mat tables and the towels and bedsheets are donated from the physical therapy department. A first aid kit from Wal-Mart completes the setup. The lack of space and funding means a lower-tech facility, but it also forces students to be creative and make treatment tools out of common household items, Lauretta said. Despite its unsophisticated arrangement — and its clinicians' limited experience — the clinic has proved capable of serving its clients.

"We made the decision several years ago to recruit people that had both evidence of leadership and investment in service into the program," Bishop said. "I think this is reaping the benefits of that."

Shot of OR/HAITI

By Jill Pease

ithin days of the Jan. 12 earthquake, members of UF's "A Better Tomorrow for Haiti" team were on the ground providing medical care and supplies. But when the dust settled it was time to think about Haitians' long-term health needs.

"Once the immediate crisis was resolving we were concerned about outbreaks of infectious diseases that become more prevalent when water supplies are contaminated and people are in crowded living conditions," said Mary Peoples-Sheps, Dr.P.H., senior associate dean for public health in the College of Public Health and Health Professions.

What followed was months of coordination that involved the efforts of a multidisciplinary UF team, with the help of government agencies and charities, to bring an immunization program to Leogane and Gressier through L'Academie Chretienne de Macombre, sites of a UF public health initiative established in 2009. Team members' tasks included acquiring and arranging transportation for donated vaccines; obtaining permission from Haiti's Ministry of Health for the vaccines' delivery and administration; developing health and post-earthquake social history forms; coordinating with administrators and faculty of L'Academie Chretienne de Macombre; and sorting thousands of vitamins for children and pregnant women into Ziploc bags.

The Haiti vaccination program launched in June with a two-and-a-half-day clinic, in which more than 300 children and their families received diphtheria and tetanus



A new mom was among the 300 people who received diphtheria and tetanus vaccines.

vaccinations and another 300 were screened.

In addition to Peoples-Sheps, team members included Phillip Barkley, M.D., and Sheryl Heinicka, A.R.N.P., of the Student Health Care Center; Sally Bethart, A.R.N.P., from the College of Nursing; Slande Celeste, M.P.H., of the College of Public Health and Health Professions; and Jayne Redden, R.N., of Brooks San Marco Terrace Rehabilitation and Care. PHHP Dean Michael G. Perri and Edsel Redden, M.S., led the initiative. Sarah McKune of the School of Natural Resources and Environment collected funds to purchase the vitamins.

The UF team is now analyzing data collected from the health and social history forms to identify needs that will guide the development of future interventions in Haiti.

"This project really lends itself to multidisciplinary activity across all the Health

Science Center colleges," Peoples-Sheps said. "We know that the earthquake caused major upheavals in living situations, and that many of the survivors are dealing with disabilities. The tent communities have varying access to clean water, medical care and other services critical to healthy lifestyles. What we do not know is the proportion of people in these communities who are dealing with specific health-related problems. Our data will begin to illuminate these details. We expect to be able to identify needs for psychological interventions, occupational therapy, physical therapy, medical and nursing interventions, and prevention opportunities for acute and chronic health problems.

"There is a lot to be done and as time goes on many opportunities for collaboration in research, education and service will arise," she said. **P**

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PATIENT CARE

Sharingthe cure

Dr. Michael Lauzardo and his wife, Dr. Eileen Lauzardo (with children Sophia and Ryan), established the Keira Grace Foundation after their daughter Keira (left) lost her battle with an aggressive form of leukemia.

Foundation helps children with cancer in Dominican Republic

By Laura Mize

onditions are better than they once were for cancer patients at the Dominican Republic's national children's hospital.

Children rest in beds during chemotherapy treatments, instead of hard chairs. Reading lessons and toys help them play and learn at the hospital. New chairs offer seating in the once-bare waiting room. Hospital employees are learning the importance of hand washing.

But the most meaningful change is that more children are receiving treatment. And more are surviving.

There are "still a lot of things that shouldn't be," said UF assistant professor of medicine Michael Lauzardo, M.D., "but every year that goes by, we get a little bit better for them."

Lauzardo is president of the Keira Grace Foundation, a nonprofit organization that partners with Fundación Amigos Contra el Cáncer Infantil (Friends Against Childhood Cancer Foundation) to improve cancer treatment for children in the Dominican Republic.

"If there are not foundations like our sister foundation doing the things that they are ... it doesn't get done," said Lauzardo, who also serves as principal investigator at the Southeastern National Tuberculosis Center. "And these kids die, as they do in other countries right now."

Lauzardo and his wife, Eileen Lauzardo, M.D., founded the Keira Grace Foundation

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almost six years ago after their children both were diagnosed with leukemia in 2003.

Their son Ryan was diagnosed with acute lymphoblastic leukemia at age 4. Soon after, 9-month-old Keira was diagnosed with acute myeloid leukemia, a more aggressive cancer. The news sparked a whirlwind of emotions, treatments and tests.

"The surreal part of it was having both kids in the operating room at the same time having different tests, or having one at home with chemotherapy and one at the hospital in chemotherapy," Lauzardo said. "If I hadn't lived through it I would have trouble believing it."

Ryan endured three years of therapy and has been cancer-free for four years. Keira passed away at 17 months old.

Because of "the extraordinary circumstances we found ourselves in, we wanted to do something equally extraordinary in response," Lauzardo said. "We felt that, because of our faith, that suffering does not exist in a vacuum and that something should come out from suffering."

The Keira Grace Foundation began working with its sister organization to improve care for cancer patients at Hospital Infantil Dr. Robert Reid Cabral in late 2004. The foundation has increased access for all children with cancer but mostly focuses on children with ALL.

"That's the most common form of childhood cancer, and kids there were dying at very, very high rates from this," Lauzardo explained. "The one-year survival rate went from less than 40 percent to now ... over 90 percent," Lauzardo explained.

Lauzardo quickly acknowledges the Keira Grace Foundation isn't solely responsible. The government has increased the hospital's funding, for one thing.

"The idea of sharing the cure stimulated a lot of things that probably wouldn't have happened without us, but to take credit for all of it would be disingenuous," he said. "But the fact is that things are dramatically better over five years ago."

Once a year, the Lauzardos take a family trip to visit the hospital with 11-year-old Ryan, who's now healthy, and Sophia, 5.

The couple adopted Sophia from Guatemala in 2005. During visits to the hospital, she and Ryan talk with the kids and give them toys. Of course, the trips make the family think of Keira.

"That pain will never go away," he said, "but accompanying it, heightening the experience, is the potential ... to just be able to look at someone and say 'Your child's alive today, because my child was alive once.' I think that is a very powerful thing."

PATIENT CARE

CHIDREN'S PLACE Foundations help UF renovate pediatric cancer unit

By Shayna Brouker

n the race to cure cancer, NASCAR donated its winnings to a new pediatric cancer unit at Shands Children's Hospital.

Just before the Coke Zero 400 race weekend in Daytona Beach, the NASCAR Foundation and the V Foundation for Cancer Research presented a \$500,000 check and cut a ribbon to officially open Unit 42. The organizations each donated \$250,000 to fund the 18-bed unit.

Now fully operational, Unit 42 was designed to accommodate patients with immune systems most susceptible to infection.

Each room is equipped with a HEPA filter to ensure pristine air quality, as well as a 32-inch television set and Wii game console to encourage active play. The room also offers Internet access so bedridden patients — and their parents — can connect with peers and support groups. An activity room, funded by former quarterback Tim Tebow's First and 15 Foundation, offers a mental break from IVs and infusions with three 42-inch TVs hooked up with video game systems.

For 2-year-old Logan Cruce and his mom Natasha, the gift means a more comfortable home away from home while he completes his last round of chemotherapy. Doctors diagnosed Logan with acute myeloid leukemia in January, just a month after his new sister was born. He and his mom live in his hospital room while he undergoes treatment.

"All the kids have what he has, so we don't have to worry about him catching things from other kids," she said as Logan happily scooted his own toy car around the activity room, indifferent to the IV lines trailing behind him. "He already has his room picked out, just down the hall."

Behind the cheery furnishings of this kid- and family-friendly environment stands a staff dedicated to protecting and nurturing their most sensitive charges. Just as it's important to look under the hood of any good racecar to understand whether it's really going to be a winner, nurses are the core of Unit 42 and the key to its success, said William Slayton, M.D., interim chief of the department of pediatrics division of hematology/oncology.

Unit 42 is staffed with nurses who are specially trained to give infusions of medicine to children and to treat immunocompromised patients. Patients will have more direct access to their primary care physicians during treatment there, too.

Slayton also gave due credit to the two organizations that made the unit a reality.

"Most importantly, we need to thank the NASCAR Foundation





(Top) Logan Cruce, 2, explores the activity room as supporters and his doctor, Dr. Bill Slayton, look on. (Bottom) Patrons and HSC leaders usher in the new Unit 42 with a ribbon cutting.

and the V Foundation for trusting us with your hard-earned donations to renovate this unit," Slayton said. "Your support is already having a major impact on our community and the health of our children."

The gift is NASCAR's largest donation ever to a pediatric cancer unit.

The V Foundation is a charity founded in memory of Jim Valvano, legendary coach of the North Carolina State University championship basketball team during the 1980s. "Jimmy," as he was known, died from metastatic cancer in 1993. The \$250,000 check is its first donation to the construction of a children's cancer unit.

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Fertility a growing concern for young cancer patients

By April Frawley Birdwell

It's a question a 28-year-old woman might ask her doctor after learning she has been diagnosed with cancer. But a 13-year-old girl? She's more likely to worry about making it to eighth grade than how chemotherapy and radiation will affect her future fertility.

Still, it's something parents need to think about as they guide their children through the jagged terrain that is cancer, said Caprice Knapp, Ph.D., a University of Florida health economist. That's why Knapp and Moffitt Cancer Center researcher Gwendolyn Quinn, Ph.D., teamed to study how to better prepare parents and their adolescent daughters to grapple with and make decisions about fertility preservation. The issue is a growing concern because more young cancer patients are surviving today, Quinn said.

"It's not enough to focus on survival but on quality survival," Quinn said.

So far, the collaboration has yielded two sub-grants and four published papers examining everything from how to approach girls on the subject to what they really understand about it. One of the subgrants is part of a project dubbed the Oncofertility Consortium. UF is a study site in the consortium, and Knapp and Quinn are working with the reproductive endocrinologists who lead UF's fertility preservation program.

Alice Rhoton, M.D., a UF reproductive endocrinologist, says UF patients looking to preserve their fertility can store sperm and embryos. Patients who meet study criteria can also have strips of ovarian tissue frozen to preserve some of the eggs, and doctors are developing a protocol to freeze eggs, a delicate process that requires significant training. Medication options are available, too.

"Most people just want to survive, but if you never bring up the topic, they don't ever have the chance to make a decision for themselves," Rhoton said. 🖸



Institute on Aging opens new Health Promotion Center

By Czerne M. Reid

ucked behind ground floor corridors of the Dental Science Building is a spacious surprise — the new Health Promotion Center of the Institute on Aging. This new resource features more than 7,000 square feet where research study participants can walk on a 200-foot cushioned indoor track, balance on ballet-style bars set in a mirrorpaneled wall, receive health education or whip up easy meals in a demonstration kitchen.

The facility will help improve how aging research is carried out at UF and allow collaboration among departments interested in lifestyle intervention studies.

"The center provides a dedicated area for physical activity and health education interventions that doesn't have to be rearranged from day to day for other purposes," said Susan Nayfield, M.D., M.Sc., chief of the division of clinical research in the department of aging and geriatric research.

The center is now being used for the NIH-funded LIFE study — which seeks to determine whether physical activity or health education can prevent mobility disability in older adults, and the Task-Specific Exercise study, which compares the relative benefit of exercises that mimic daily life activities with exercises geared toward general fitness.

Set apart from suites where participants get tested for study outcomes, the center's location also helps improve data accuracy. That's because preventing assessment staff from seeing which intervention group a participant is in helps reduce measurement bias.

Researchers team to help kids walk



By Nancy Dohn

R olling over. Crawling. Taking a first step. This is the natural progression of development for most children. But not for Luke Adams. At 5 months of age, Luke became paralyzed literally overnight.

"We didn't know what to do so we went to the E.R., and by the time we arrived he had lost movement up to his neck, which compromised his breathing," Luke's mother said.

Luke was diagnosed with transverse myelitis, a neurological disorder that causes an inflammation in the spinal cord. It is not known why this occurs, but the onset is rapid and can cause permanent or temporary paralysis. For Luke, the disorder left him unable to fully use his arms and hands, control his torso and learn how to walk.

That was in 2007. While Luke and his parents were

Luke Adams works with physical therapist Emily Fox as part of the Kids STEP study.

dealing with the debilitating effects of this disorder, they had no idea UF scientists were launching a study to conduct clinical research on the recovery of walking in children who have a chronic, severe, incomplete spinal cord injury.

The clinical research program, called the Kids STEP study at UF and Brooks Rehabilitation, is housed in a large, kid-friendly lab on the UF campus that contains pint-sized walkers, mobility balls and a high-tech treadmill. UF Clinical and Translational Science Institute researchers Dena Howland, Ph.D., and Andrea Behrman, Ph.D., P.T., head the Kids STEP study. Together they form a clinicaltranslational research team whose work demonstrates how more than two decades of spinal cord studies can benefit clinical practice.

Forming a collaborative team that connects basic research with clinical application may seem intuitive, but this wasn't always the case.

"Faculty was separate: neuroscience was here and physical therapy was over there. There was no bridge between them," said Behrman, a physical therapist and rehabilitation scientist at the College of Public Health and Health Professions and a research health scientist at the Malcom Randall Veterans Affairs Medical Center. "Now we have a partnership to work together to solve problems and to move forward as a translational team."

"While I was originally trained as a clinical occupational therapist, I had been in a basic science lab for more than 20 years," added Howland, a research scientist in the College of Medicine department of neuroscience and McKnight Brain Institute, and a research neurobiologist at the VAMC. "I felt like I had literally disappeared into basic science and what I was doing in the lab didn't have a real clinical impact on helping a person walk again until I partnered with Andrea Behrman."

Initially scientists believed the human spinal cord acted as a "conduit" between the brain and the body. When this connection was severed due to an injury, movement could no longer occur. Simply put, you would never walk again.

Research in the 1980s suggested the spinal cord might have its own "brain" in the form of spinal pattern generators and that they could be "trained" to take over some of the messaging the brain used to do. Now, scientists such as Howland and Behrman are testing this concept in individuals with severe spinal cord injuries.

In 2007, the researchers launched the Kids STEP study with funding from the Craig H. Neilsen Foundation. It was perfect timing for Luke Adams, who enrolled in the program in 2009 at age 3.

Emily Fox, a physical therapist and doctoral candidate in the College of Public Health and Health Professions' rehabilitation science program, recalls when she first met Luke and the strides he has made since then. He now has more control over his trunk, enabling him to better use his arms, and he is now able to initiate steps with assistance, Fox said.

This makes his mom very happy. "We have been on a hope and a prayer that this would work for him and get him stepping on his own." 🕑

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the world inside the neonatal intensive care unit

Story by April Frawley Birdwell Photos by Jesse S. Jones

Ava McLaughlin and her brother, Elliot, were born 10 weeks early in May 2009. Now 16 months old, they are thriving.

Designed for babies

He wriggles a ruddy hand and squirms. She beams.

He opens his eyes. She kisses his forehead, careful of the tubes taped to his face.

He sleeps. She gazes, cradling his 4-pound, 14-ounce body in her arms.

Stephanie Barron collects these moments as she sits an arm's length from a plastic incubator in the neonatal intensive care unit at Shands Children's Hospital at UF. Each memory with her baby boy Brody — changing his tiny diaper, tucking him into her shirt for "kangaroo care" — is precious to her. She almost didn't have many memories of him at all.

Brody and his twin brother, Brayden, were born by emergency Caesarean section at Shands Children's Hospital on June 17, about three-and-a-half months before they were due. Brody weighed just 1 pound, 9 ounces, and Brayden weighed just 4 ounces more.

"That first day, they told me there was only a 20 to 30 percent chance of either of them making it," Barron says, her voice wavering. "That was hard. I didn't believe them. "When you get pregnant this is not what you expect."

Brody Barron was born in June, weighing I pound, 9 ounces. Now almost 5 pounds, he has overcome several surgeries and is growing bigger every day in the Shands Children's Hospital neonatal intensive care unit.



The lights are low inside the Level III neonatal intensive care unit. Nurses bustle around plastic incubators called Isolettes where babies barely bigger than an ear of corn are hooked to ventilators, some causing tiny chests to quiver as they pump in 750 to 900 breaths a minute.

About 750 patients, from micro-preemies like the Barron twins to sick full-term babies, come through the Shands Children's Hospital NICU each year, including some from other Level III NICUs whose doctors send babies to UF after they have tried everything else, says David Burchfield, M.D., chief of neonatology in the College of Medicine department of pediatrics.

It's a place where the combination of medicine, technology and highly trained experts can save a baby's life.

It's also a place where mothers and fathers sometimes say goodbye to babies they never got to hold until after they were already gone.

"People always ask me 'Why do you work there? It must be sad,'" says Leslie Parker, Ph.D., A.R.N.P., an assistant professor in the College of Nursing and a nurse practitioner in the unit. "But the way I see it, these things are going to happen regardless of whether you are there or not. I didn't make the sad thing happen, but if we can make this experience better for the family then we have done a really good thing."

The smallest and sickest babies stay in the Level III NICU until they can be moved to the Level II NICU, known as the "feeding and growing" unit, a few doors down.

Here in the Level III unit, the staff — a team of nurse practitioners and a team of residents take care of the babies with staff nurses under the direction of faculty neonatologists — have a variety of weapons in their arsenal to take care of sick babies. Even the room, which was renovated in 2005, is designed to give babies the most womblike environment possible, with low lighting and hushed sound. Nurses try to handle the smallest babies as little as possible because they are still supposed to be floating in the womb, not held tightly.

Walking through the NICU, Shands nurse Melissa Huene, R.N., rattles off a list of machines they use to keep babies alive: Standard and highfrequency ventilators help babies breathe; monitors track babies' oxygen saturation, heart rate and other vital signs; IV pumps dispense aroundthe-clock medication to help control baby's blood pressure and treat respiratory distress; nitric oxide can improve oxygenation. And the list goes on.

"Some of the babies we take care of are so small, the total amount of blood in their bodies is three to four tablespoons," Burchfield says. "If an adult blood test requires two tablespoons of blood, we need equipment that allows us to do it with a 20th of a tablespoon."

The technology is vital, but it is the staff that keeps the Shands Children's Hospital NICU placed among the top 25 percent of units that belong to the Vermont Oxford Network, which collects and analyzes data from NICUs across the country, Burchfield says.

"The NICU has the lowest turnover rate for nurses in the hospital," he says. "They come here and they want to stay. We have a lot of electronic monitors, but nurses are the most important monitors. These nurses who have been here, they can just sense when a baby is not doing so well."

"Some of the babies we take care of are so small, the total amount of blood in their bodies is three to four tablespoons."

— David Burchfield, M.D.

continued on page 14

COVER STORY



Brandon Lok (left) spent six months in the NICU after he and twin Sophia were born 13 weeks early. Sophia came home three months before Brandon. This photo was taken when the siblings reunited at home in January.

Happy endings

C.J. Kereston knows she is probably in at least a few dozen baby books, having posed with countless babies during her 26 years as a nurse in the NICU. She tears up when she reflects on that time, on the teenagers who have come to visit years after being discharged and the families she's cried with after they lost their little ones.

She's seen the NICU from both sides. Twelve years ago, her daughter was a NICU baby, too.

"I had the luxury of already knowing everyone here, and I already had that trust," Kereston says. "Parents come in and don't know if they can trust you or not and they don't know what to expect."

No one thinks about having a baby attached to tubes and monitors and a ventilator when they get pregnant, says Julie Baines, M.D., a UF assistant professor of neonatology.

"It's incredibly difficult and full of uncertainty," Baines says. "It is a lot of ups and downs, and I usually tell parents that from the get-go."

The department holds a reunion for babies who have gone home, giving families a chance to bring their growing children back for a visit ... and a chance for families with children in the NICU now to meet children who are home and thriving.

"I like keeping in touch with families," says Baines, who keeps baby photos tacked to a bulletin board in her office. "Here are these 1-, 2- and 3-years-olds out there thriving because of what happened in the NICU.

"These little babies can be so incredibly sick. To see them growing, laughing and playing is very special to all of us in this field."

But for parents whose babies are in the NICU, it can be hard to see past the tubes, the dings and beeps of the monitors, and the four plastic walls of the Isolette.

"It was hell. I don't even know how to describe it," says Jamie

McLaughlin, D.V.M., a Gainesville veterinarian whose twins, Ava and Elliot, were born 10 weeks early in May 2009. "You see people leaving with their big, healthy babies every time you walk to the NICU, and see your babies struggling ... It's a roller coaster."

After surgery to repair a heart condition called patent ductus arteriosus, McLaughlin's twins improved and came home about eight weeks after they were born. Now 16 months old, Elliot can walk and has caught up to other 1-year-olds in weight. Ava, who crawls across the floor at expert speed, is not far behind.

Brandon Lok's stay in the NICU lasted just a little longer. Born last July, Brandon and his twin sister, Sophia, spent six months apart after birth. Each weighed less than 2 pounds, but Brandon faced far more setbacks. His lungs were not as developed as his sister's and he developed pneumonia twice, says Laura Lok, who had the twins at 27 weeks' gestation after developing preeclampsia. Brandon was still in the Level III NICU when his sister came home from the hospital last October.

"With her, we at least saw one good change every week," Lok says. "Sometimes, it just seemed like he was never going to make it out of there."

But in January, he finally came home, weighing about 9 pounds.

"As soon as I brought Brandon home, I had them in the Pack N' Play and they were holding hands and laughing. They must have remembered each other from the womb," she says.

Brandon still has struggles — he is on a low level of oxygen and the family is working with a therapist to resolve feeding issues — but Lok is hopeful he will catch up to his peers by the time he is 2.

"I am just happy to see how far they have come and how much they have grown," Lok says. "When you are in there, it is hard to imagine your kids being 10 pounds. I am so appreciative to everyone over there." Stephanie Barron holds son Brody in the NICU.

Loss ... and hope

Two days after her twins were born, Barron and her husband, Jared, got the call. Brayden, who was hooked up to every possible machine in the NICU, was not doing well. He had a serious hemorrhage in his brain, his lungs were not mature enough and he wasn't responding to treatment.

He passed away while the couple was on their way to the NICU.

"We came and saw him, and I got to hold him," Barron says quietly. "As soon as Brayden passed away Brody started doing better. They say it is a twin bond. After he passed, all the energy he had left went to Brody."

Brody has faced his own struggles since then. He developed necrotizing enterocolitis, a common infection in the smallest premature babies that causes the bowels to stop functioning. Before he underwent surgery, Barron got to touch Brody for the first time. She placed her head on his little chest and sang. First "Jesus Loves Me," then "Jesus Loves the Little Children."

Surgeon David Kays, M.D., operated on Brody, connecting an ostomy bag to his abdomen to collect waste while he healed from the infection. Brody recently underwent surgery again to remove the ostomy bag and repair his intestines.

Barron has been by his side every day. Since returning to work, her husband visits on nights and weekends with Brody's older brother, Jordan.

"(Jordan) came every day all summer until school started," Barron says. "He would watch the monitors and tell me what Brody's heart rate and oxygen were."

Two days before the surgery was scheduled, Barron sat in the Level II NICU, peering at Brody in the Isolette as he underwent a blood transfusion. His pacifier popped out of his mouth, and she reached in to place it back. He looked pink ... and wiggly. Healthy.

"He's almost the size of a bag of sugar," she says with a smile. For now, her whole world is there, the tiny bundle in the Isolette. She hopes to take him home soon, but until then she travels from her home in Trenton, Fla., every day to be in that chair next to him.

It's the only place she wants to be. **P**

Neonatal update

In addition to taking care of babies in the NICU now, UF neonatal researchers are also finding better ways to take care of future patients. Here is a quick glance at just a few of the ways pediatrics researchers are improving care for babies:

- MICHAEL WEISS, M.D., recently established the Florida Neonatal Neurological Network to improve care for babies born with brain damage. The network will link NICUs around Florida to collect data and establish new treatment protocols, such as a cooling treatment to stave off brain damage in babies deprived of oxygen at birth.
- The work of **SANDRA SULLIVAN, M.D.**, has shown a link between exclusive breastfeeding of premature infants and a reduced risk of necrotizing enterocolitis. Sullivan's Center for Breastfeeding and Newborns has also received \$330,000 to support a breastfeeding medicine clinic, a lactation consultant in the NICU and professional education efforts to teach residents about infant feeding.
- Researcher JoseF NEU, M.D., is funded by the National Institutes of Health to study the cause of necrotizing enterocolitis. About 15 percent of preemies who develop this gastrointestinal complication die. UF has a bank of samples and Neu and his colleagues are using DNA sequencing to analyze the samples to try to pinpoint a cause.

NICU graduates Ava and Elliot-McLaughlin play with their mom, Jamie.



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Visit us online @ http://news.health.ufl.edu for the latest news and HSC events.

Dr. Roland Staud (center) has been working with Ashlyn Blocker (left photo) since 2004.



Ouch! Ouch. Ouch?

Scientists find genetic clues about pain sensitivity

By Czerne M. Reid

baby who rarely cries is many parents' idea of a "happy" baby. Ashlyn Blocker was that kind of baby.

She never cried at birth, when she was hungry, wet or teething. But when neither a severe diaper rash nor a cut on the surface of her eye caused the tiniest complaint, her parents, Tara and John Blocker, realized it wasn't happiness that kept her quiet.

Ashlyn could not feel pain in a normal way. Now, UF researchers have pinpointed a major clue about her condition, called congenital insensitivity to pain. They identified two genetic mutations that affect how strongly pain signals are sent to the brain.

"This is a gene that, depending on how it is modified, has the ability to affect pain sensitivity to a large degree," said Roland Staud, M.D., a pain expert and professor in the UF College of Medicine who led the study.

The findings shed light not just on the inability to feel pain, but also, at least potentially, on cases in which people feel unbearable or chronic pain. This knowledge ultimately could guide the development of novel and effective pain therapies.

The work was published in the European Journal of Pain.

Since 2004, Staud has collaborated with geneticists, neurologists, pediatricians and clinical psychologists to better understand Ashlyn's condition. They evaluated the Blocker family, who live in Patterson, Ga., and 10 other individuals who feel pain normally.

"When we found out what gene it was, we were so excited," Tara Blocker said. "It's really nice to be able to say, 'This is why.' It might be little, but to us it's huge. Finding out more about our daughter helps us take better care of her. "

The gene in question, called *SCN9A*, contains the "message" to produce a molecule that acts as a battery to power painsignaling nerve cells so they can fire impulses. Mutations that cause overactivity of that molecule lead to severe pain. Those that cause the molecule not to function lead to the inability to feel pain.

"If you don't have this gene it's like a faint whisper in the wind," Staud said. "Nothing much goes up the nerve, and you don't feel anything."

Ashlyn, now 11, has a condition between the two extremes. Whereas Ashlyn cannot feel what is normally a painful touch or heat or cold, she can sense warmth and feel someone's touch or tickle. But on rare occasions, in cases of very severe illness, she has said she hurts.

Sensations or pain come as a result of contact with an object or other stimulus such as heat, when a signal is generated and transmitted to the brain. Sometimes, as in Ashlyn's case, the signals don't get through.

For Ashlyn, that has meant many injuries over the years. She has bitten the skin off her finger, chewed her bottom lip, gotten second-degree burns on her hand and broken her ankle in a bicycle accident without feeling any of it.

Her parents have had to watch her closely to make sure she doesn't injure herself. They have also taught her how to look over her body for signs of injury.

While scientists potentially could manipulate genes to allow Ashlyn and others like her to feel pain more readily, they have to weigh the possibility that they might, in the process, set off other conditions or hypersensitivity to pain.

For now, UF researchers are focusing on identifying functional abnormalities associated with the genetic mutations, and ways in which the body compensates.

"It's kind of an experiment of nature that we're observing here," Staud said. P

RESEARCH

Understanding emotion

Flat emotions misleading in Alzheimer's patients

By Shayna Brouker

ratching a loved one struggle with Alzheimer's disease can be a painful process, but for the patient, the experience may be a muted one. Alzheimer's patients can appear withdrawn and apathetic, symptoms often attributed to memory problems or difficulty finding the words to communicate.

A new UF study found that they may also have a decreased ability to experience emotions; that is, they do not feel emotions as deeply as their healthy peers. This finding in a small group of patients may be useful for doctors assessing whether Alzheimer's patients are clinically depressed.

The study, published in the spring issue of the Journal of Neuropsychiatry & Clinical Neurosciences, suggests that when Alzheimer's patients are asked to place an emotional value on pictures, they measure the pleasant images as less pleasant and the negative scenes as less negative. This emotional flatness could be incorrectly interpreted as a symptom of depression.

"We found that the Alzheimer's patients as a rule tend to go more toward the middle," said Kenneth Heilman, M.D., senior author of the paper and a professor of neurology at the College of Medicine and UF's McKnight Brain Institute. "They don't feel as positive toward the positive pictures or as negative toward the negative ones. They're not depressed, but their emotional experience appears to be flattened."

Further research is needed, but the findings could be valuable for clinicians trying to learn whether a patient is depressed as well as for families concerned about a loved one's apparent indifference.



Answers in an *instant* Device packs power to analyze genes, proteins at bedside

LYLE L. MOLDAWER, PH.D.



By Laura Mize

F researchers have helped develop a device that quickly identifies genes and proteins in body fluids — a technique that could make a vital difference to the trauma patients doctors treat.

In a study published in the September issue of *Nature Medicine*, scientists describe how they developed and tested a new way to isolate cells from patient samples and analyze them to help predict outcomes after severe trauma. The technology, called a microfluidic cassette, allows precise analysis of very small volumes of fluids and can be used to study patients' genes and proteins. Previous devices required 4 to 8 milliliters of fluids, the work of a highly skilled technician and several hours to complete analysis.

"What's so powerful about this technique is that you can isolate any cell population quickly and efficiently at the bedside," said Lyle L. Moldawer, Ph.D., vice chair of research in the UF College of Medicine's department of surgery and a co-author of the paper. "In this case we isolated blood neutrophils, but we've also isolated T cells, mixed leukocytes and monocytes. Theoretically, you can isolate any cell population, under any disease, and rapidly get nucleic acids to produce a genomic signature."

Knowing the genomic signature of a cell population can help doctors diagnose diseases and may allow them to predict how individual patients will respond to trauma and what treatments to order. The approach also could be used with patients who have cancer or other conditions.

The device was constructed by a team at Massachusetts General Hospital and sent to UF for initial testing, spearheaded by Elizabeth Warner, M.D., a surgical resident researcher and a co-author of the paper. P



By John Pastor

enetic investigators say the partnership between people and the ancestors of today's donkeys was sealed not by monarchs trying to establish kingdoms, but by mobile, pastoral people who had to recruit animals to help them survive the harsh Saharan landscape in northern Africa more than 5,000 years ago.

The findings, reported by an international research team in Proceedings of the Royal Society B, paint a surprising picture of what small, isolated groups of people were able to accomplish when confronted with unpredictable storms and expanding desert.

"It says those early people were quite innovative, more so than many people today give them credit for," said senior author Connie J. Mulligan, Ph.D., an associate professor of anthropology and associate director of the UF Genetics Institute. "The domestication of a wild animal was quite an intellectual breakthrough, and we have provided solid evidence that donkey domestication happened first in northern Africa and happened there more than once."

Sorting through the most comprehensive sampling of mitochondrial DNA ever assembled from ancient, historic and living specimens, scientists determined that the critically endangered African wild ass is the living ancestor of the modern donkey.

What's more, researchers found evidence to suggest that a subspecies called the Nubian wild ass, presumed vanished late in the 20th century, is not only a direct ancestor of the donkey — it may still exist.

If any Nubian survivors are found, the possibility remains that the animals could be bred and reintroduced into the wild.

"The whole idea behind conservation is the need to maintain genetic variation," Mulligan said. "We don't know which elements are more or less important, but we think the whole range of diversity is important to the health of the species. Knowing the genetic makeup of the animals is essential to protect that diversity."

EARCH С Ш 2 2 0 POTLIGH

Ahh, memories

A UF study has linked the production of new nerve cells in the human brain to learning and memory. Published in the journal Brain, the findings provide clues about processes involved in age- and health-related memory loss and reveal potential cellular targets for drug therapy. "The findings suggest that if we can increase the regeneration of nerve cells in the hippocampus we can alleviate or prevent memory loss in humans," said **Florian** Siebzehnrubl, Ph.D., a postdoctoral researcher in neuroscience and co-first author of the study.

Taxes save lives

Adjusting the alcohol tax in Florida to account for inflation could prevent 600 to 800 deaths each year, UF epidemiologists say. Conducted by Mildred M. Maldonado-Molina, Ph.D., and Alexander C. Wagenaar, Ph.D., the new study analyzed death rate and tax data. "Previous studies conducted in the United States and other countries have clearly shown that increasing alcohol taxes is associated with reduced overall consumption of alcohol as well as reduced heavy drinking," Maldonado-Molina said. "This new study shows that increasing taxes on alcohol also influences the death rate from liver cirrhosis, pancreatitis, gastric diseases, some cancers, and cardiovascular diseases caused by heavy alcohol use."



Mildred M Maldonado-Molina







By Kandra Albury

President's Day 2009 was so beautiful that Elizabeth Tullis decided to open the windows and do some spring cleaning.

Shortly after she started her chores, Tullis received a call from her daughter's school saying her 3-year-old was running a fever. She checked her daughter Tabitha out of school and brought her home.

Once home, Tabitha went upstairs to grab her blanket to watch a movie with her parents. While upstairs, she went to her bedroom window to talk to her sisters playing outside. As she leaned against the screen, it fell out of the window and Tabitha plummeted 15 feet onto the driveway.

"I didn't think anything of the window being slightly open," Tullis said. "It was only open a few inches."

Tullis told her husband that she heard someone crying but he thought it was one of the neighborhood kids.

"Our neighbor happened to be outside at that time and he was the first to call 9-1-1," Tullis said.

Tabitha was immediately rushed via ambulance from their Clay County home to the trauma center at Shands Jacksonville.

During the ride to the hospital, Tullis sat

on the floor talking to Tabitha, hoping to keep her alert. Tabitha started vomiting and staring into her mother's eyes, but she didn't say a word.

"She didn't respond at first but after repeating myself several times, she squeezed my hand," Tullis said. "Then I knew everything would be OK, even if it was going to be a long road ahead of us."

From the outside Tabitha looked fine — no sign of physical injury — but her mother worried about internal injuries.

When they arrived at Shands Jacksonville, Tabitha was immediately stabilized and underwent several tests and CT scans. Tabitha was placed in the pediatric intensive care unit for close observation.

"She sustained a skull fracture and intracranial bleeding," said Joseph Tepas, M.D., a UF College of Medicine-Jacksonville professor and chief of pediatric surgery.

He said window falls are very common in the toddler age range and can sometimes be fatal. He added that what a child hits on the way down, how they land and the material upon which they land all play a role in the severity of the injuries.

JACKSONVILLE

"Falls of this nature may cause abnormal functioning such as sleepiness, seizures and vomiting," Tepas said.

After receiving around-the-clock care for five days, Tabitha was discharged.

Her brain is still healing from the fall and she continues to have regularly scheduled checkups with her neurosurgeon, the pediatrician and her eye doctor.

The Tullis family said they are grateful for the care their daughter received while at Shands Jacksonville.

"Tabitha received amazing care while in the PICU," Tullis said. "We loved the pet therapy, art therapy, clowns and all the special love she got while there."

Today, the blue-eyed 4-year-old is still adventurous and starts kindergarten in the fall. She spends much of her time outside on her Power Wheels Jeep and playing with her older sisters.

"An average person would never know she took a 15-foot fall a little over a year ago," Tullis said. "Thank goodness our faith, friends, family and the awesome and caring staff at Shands got us through that difficult time."

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GRANTS



College of Medicine researchers (left to right) Alfred Lewin, David Bloom and Sonal Tuli have teamed up to investigate a potential new therapy to prevent the recurrence of herpes.

Refreshing RESEARCH

Voters choose UF project for Pepsi award

By Laura Mize

Researchers from UF's College of Medicine have received \$50,000 in funding to continue work that may lead to a drug used to prevent recurrent outbreaks of herpes in people who have the disease. The award came from a somewhat unusual source: soft drink giant PepsiCo.

The UF research team, led by principal investigator David C. Bloom, Ph.D., a professor of molecular genetics and microbiology, registered the research project with the Pepsi Refresh Project. The Pepsi Refresh Project is an online program that allows people to vote for their favorite goodwill ideas. Each month, Pepsi awards a total of \$1.3 million to the organizers of the most popular projects.

The herpes research project received enough votes in June to land in the top 10 projects for the month and receive \$50,000.

The research will focus on a ribozyme known to block infections of herpes simplex virus 1, which causes ocular herpes and cold sores. Bloom and his team will investigate whether the ribozyme can be used to stop recurrent outbreaks in patients who already have the disease.

"I think the thing that makes this research so promising is that it is a new approach to herpes treatment and has the potential to be effective even in cases where a patient has a drug-resistant strain of the virus," Bloom said.

Other members of the research team include faculty members Gregory Schultz, Ph.D., Alfred S. Lewin, Ph.D., and Sonal Tuli, M.D.; and doctoral students Levi Watson and Dan Gibson.

The Herpes Cure Coalition, an organization dedicated to raising money to support herpes research, also gave the team \$9,000 to support its work.



Genetics researcher gets grant to study personalized medicine

By Linda Homewood

UF genetics researcher has received \$10.62 million to further a national effort of using genetic data to more effectively pinpoint what medications and treatments are best for individual patients.

Julie A. Johnson, Pharm.D., a UF professor and chair of pharmacotherapy and translational research in the College of Pharmacy, is one of



JULIE A. JOHNSON, PHARM.D.

14 researchers and five resource development groups named as part of the NIH's Pharmacogenomics Research Network.

With an eye to the future of personalized medicine, the NIH's National Institute of General Medical Sciences has invested more than \$160 million in these investigators to study responses to medicines for cancer, heart disease, asthma, nicotine addiction and more.

"Through these studies we are moving closer to the goal of using genetic information to help prescribe the safest, most effective medicine for each patient," said NIH Director Francis S. Collins, M.D., Ph.D.

Johnson, who directs the UF Center for Pharmacogenomics, said the award makes it possible to continue her work to discover the genes that result in different responses to blood pressure medications.

The genetic makeup of humans is about 99.9 percent identical, but it is that 0.1 percent that might explain differences in disease risk or response to medications. Johnson's lab is looking at places in the genetic code that differ between individuals and how these differences might affect response to blood pressure medication

About 75 million people in the United States have high blood pressure, said Johnson, a professor of cardiovascular medicine. "Our goal is to find the best medicine for a person from the beginning," she said. "Evidence shows that the sooner blood pressure is controlled, the less risk there is for other diseases such as heart attack, stroke and kidney failure."

JACKSONVILLE

ANDREW M. KAUNITZ,

M.D., a professor and associate chair of obstetrics and gynecology, was installed as president of the Florida Obstetric and Gynecologic Society at the group's annual



meeting held in August in Miami. The Florida Obstetric and Gynecologic Society is a nonprofit medical society that represents more than 900 physician and resident members and provides continuing education to advance patient care in the area of women's health.

ROBERT A. PELAIA,

J.D., senior university counsel for health affairs, is the co-project leader of the newly published Deciphering Codes: Fraud & Abuse for Coders and Coding Insights for Healthcare Lawyers. This unique publication



is designed to help coders and attorneys understand and navigate health-care coding and the law. The manual discusses the nuances of coding, why proper coding is vital for health-care facilities and professionals, and the legal implications of improper coding. Pelaia is certified as a health-care law specialist and has been a certified professional coder since 1999.



How the dean spent her summer

Teresa A. Dolan, D.D.S., M.P.H., dean of the UF College of Dentistry, graduated from the Bryn Mawr Summer Institute. A 35-year partnership between Bryn Mawr College and Higher Education Resource Services, or HERS, the summer institute is a residential professional development program dedicated to advancing women leaders in higher education administration. The 72 participants selected for this year's summer institute represented 59 institutions from 23 states across the United States.



And the apple goes to ...

Michael Tuccelli, Ed.D., a senior lecturer in the department of speech, language and hearing sciences, was named the 2010 College of Public Health and Health Professions' Teacher of the Year. A member of the UF faculty since 1995, Tuccelli teaches American Sign Language I, II and III, and he developed the university's first American Sign Language courses offered for credit. Dean Michael G. Perri, Ph.D., presented the award to Tuccelli at the college's commencement ceremony in May. "Dr. Tuccelli's extraordinary talents as a teacher are fundamentally based on his own excitement for teaching," Perri said.

COLLEGE OF MEDICINE

TETSUO ASHIZAWA,

M.D., chair of the department of neurology, has been named the new executive director of the Evelyn F. and William L. McKnight Brain Institute. Ashizawa replaces Dennis Steindler, Ph.D., a



Tetsuo Ashizawa

professor of neuroscience and authority in the field of regenerative medicine, who stepped down after six years in the post. The Brain Institute began in the early 1990s as a campuswide initiative to harness UF's research, clinical care and educational skills to confront brain disorders.

MAUREEN M. GOODENOW,

Ph.D., the Stephany W. Holloway university chair in AIDS research and a professor of pathology, immunology and laboratory medicine, chaired a pre-meeting workshop at the 28th



International AIDS Conference in Vienna, Austria in July. The meeting and the workshop, focusing on HIV reservoirs that elude therapy, brought together researchers from around the world who study HIV from a variety of perspectives, including molecular biology, phylogenetic analysis, behavioral science and clinical research. A month earlier, Goodenow participated in a National Institutes of Health Office of AIDS Research-sponsored workshop in St. Petersburg, Russia.

STEVEN J. HUGHES,

M.D., has been named the new chief of general surgery in the department of surgery. Hughes, who previously served as an associate professor of surgery in the University of Pittsburgh's School of



Medicine and as chief of gastrointestinal surgery at the institution's medical center, began his new job at UF Aug. 2.

AMY SMITH, M.D., an assistant professor of pediatrics and director of the UF Pediatric Brain Tumor Program, received a \$125,000 infrastructure grant from Alex's Lemonade Stand Foundation to help fund an innovative therapy



program that will provide treatment options for young patients with rare forms of cancer or whose families have exhausted all traditional treatment options.

COLLEGE OF PHARMACY

HARTMUT

DERENDORF, Ph.D., a distinguished professor of pharmacy, has been named the 2010 American College of Clinical Pharmacology Distinguished Investigator. This prestigious annual



Hartmut Derendorf

award recognizes superior scientific expertise and accomplishments by a senior investigator whose work in basic or clinical pharmacology is internationally renowned. Derendorf was honored Sept. 12 at the 39th annual ACCP meeting in Baltimore for his outstanding research on the pharmacokinetics and pharmacodynamics of corticosteroids, analgesics and antibiotics, and also for drug interactions.

COLLEGE OF PUBLIC HEALTH AND HEALTH PROFESSIONS

RONALD ROZENSKY,

Ph.D., associate dean for international affairs and a professor in the department of clinical and health psychology, received the Joseph Matarazzo Award for Distinguished



Ronald Rozensky

Visit us online @ http://news.health.ufl.edu for the latest news and HSC events.





Disaster strikes, he responds

John Haven, the UF College of Veterinary Medicine's director of medical/health administration, was honored with the Distinguished Service Award during the Florida Governor's Hurricane Conference for his work with disaster relief and response efforts on behalf of the college and the state. Haven's award was given "for his significant contributions to the state disaster preparedness and response efforts involving the rescue and care of large and small animals."

Contributions to Psychology in Academic Health Centers from the Association of Psychologists in Academic Health Centers. The award recognizes exceptional senior psychologists who have made substantial contributions to psychology in academic health centers.

MICHELLE TROCHE,

Ph.D., CCC-SLP, a clinical assistant professor in the department of speech, language and hearing sciences, presented her dissertation work, titled "Attentional Resource Allocation and Swallow



Function in Parkinson's Disease," at the

Integrative Neural Systems Underlying Vital Aerodigestive Tract Functions Conference in Madison, Wis., in June. She received a merit-based minority travel scholarship to support her research.

LAURA ZAHODNE, a doctoral student in the department of clinical and health psychology, received the Walter G.

McMillen Memorial Award for Parkinson's Disease Research from the American



Psychological Association's Division of Adult Development and Aging. She was recognized at the association's annual convention in San Diego in August. It is the second time in three years that a UF clinical and health psychology graduate student has been selected for the award. Ania Mikos received the first McMillen award in 2008.

COLLEGE OF VETERINARY MEDICINE

TARA CREEL ANDERSON, D.V.M., M.P.H., a graduate student in the college, has received the Outstanding Alumnus Award from the UF College of Public Health and Health Professions department of epidemiology and biostatistics. The award was made in honor of Anderson's



professional practice and exceptional leadership in the advancement of the health professions. Anderson will be honored Oct. 16 during PHHP's reunion activities.

PAUL GIBBS, B.V.Sc.,

Ph.D., a veterinarian and virologist in the department of infectious diseases and pathology, has been named associate dean for students and instruction at the



Paul Gibbs

college. Gibbs has served as a member of UF's veterinary faculty since 1979, when he became a founding member. He has been a full professor in the college since 1981 and also holds joint appointments with the College of Medicine's department of molecular genetics and microbiology as well as with the College of Public Health and Health Professions' department of environmental and global health.

Remembering a beloved supporter

Jerry Davis (left) is shown here with wife, Judy, and Dr. Jay Lynch.

erry Davis, a generous donor who was committed to advancing cancer research and care for everyone, passed away Aug. 20 after a long battle with cancer. He was 66.

"Jerry Davis believed passionately in UF and Shands and supported our college in so many ways, with his time and dedicated service, with his leadership talents, and his personal resources," said Michael L. Good, M.D., dean of the College of Medicine. "At UF and Shands, we are determined to find cures for cancer, and if we do, we will do so because Jerry Davis believed in us. Those of us who knew him are better human beings because of our friendship with him and his family."

Last year Davis and his wife, Judith, made a \$21 million gift to the UF Shands Cancer Center to advance research efforts and patient-care initiatives and to support construction of the \$388 million Shands Cancer Hospital at UF.

The Davises' support of the college began 12 years ago when they helped jump-start the cancer program with a \$5 million gift in 1998. Their contributions have provided dozens of researchers with the latest tools needed to understand the disease. The outpatient care component of the cancer center was named the Jerry W. and Judith S. Davis Cancer Pavilion in recognition of their support.

He is survived by his wife, Judith; their son Jerry Jr. and his wife, Candice; their two sons Cameron and Colin; their son Troy and his wife, Julianne, and their son, Jake, and daughter, Rylianne; and his brother, Gene. — Karen Dooley

Summer in Cumbodia

CAMBODIA



Nursing professor teaches, touches lives in poor country

By Shayna Brouker

Gulf or

he little Vietnamese boy in the yellow shirt was not born in the harsh environment of a Cambodian prison but arrived with his mother when she was arrested for drug trafficking. Just 5, he was thrown into a world of violence and fear. But for just a few minutes, he is enveloped in the grace and bright smile of a tall American woman as she balances his feet on hers, grasping his small hands in a playful dance.

The Vietnamese boy is a "prison child," just one of the many young charges touched by Karen Reed, R.N., a clinical assistant professor in the College of Nursing, during her third trip to Cambodia this summer. She visited in 2005 and 2007 to learn about the country and teach nurses about rehabilitation.

When she had the opportunity to return this summer, she jumped at the chance. This time, her mission was to teach Cambodian undergraduate nursing students. For six weeks, she battled extreme heat, daunting language barriers and a lack of fundamental understanding to instruct her "hatchlings" on everything from metabolism to alcoholism.

Reed's dynamic teaching techniques were a refreshing change from the traditional style of teaching in Cambodia: Faculty sit at a desk and read from their lectures, which often contain obsolete information due to their own insufficient education.

Instead, she used team projects, relay

races, flashcards and colored pencils to rouse all the senses, enhance understanding and break through language barriers. For many of the terms she taught, there is no Khmai (Cambodian language) equivalent.

"I was constantly having to filter their responses: Are they understanding, not understanding, how do I make them understand?" she said. "So I used stories. Cambodians love stories. They will sit for hours to listen to a good story."

She also had to come up with examples that translated without words, like using a light switch to explain how the thyroid gland switches metabolism on and off.

On top of the language barrier, she taught her students a basic understanding of anatomy and physiology — as well as biology, pathology, pharmacy and nursing.

And then, of course, there was the heat. "I never knew I could produce that much sweat. I'm teaching endocrine and fluid and electrolytes, and there would be a disease where profuse perspiration was one of the symptoms, and the students would go, 'Dr. Karen, do you have this disease?'" she recalled, laughing. "No, I'm just 52 and menopausal. That's the cruel joke."

Despite the difficulties, Reed is committed to educating her "hatchlings" on nursing management of diseases, collaboration with pharmacists and physicians and the role of the nurse as a patient advocate. Such concepts are alien in Cambodia, which lacks an accredited nursing program — as well as transplants, outpatient dialysis and MRIs. Patients receive treatment primarily from no-cost missionary and church-run hospitals.

On weekends, Reed traveled to these remote health-care havens to offer her expert care. In addition to the rampant malnutrition and lack of dental care she witnessed, she is especially concerned with caring for Cambodia's elderly. The Khmer Rouge genocide during the 1970s nearly decimated a generation. Among the almost 15 million people in Cambodia, fewer than 50,000 are over 70.

She plans to return next year to witness her students' progress in nursing school.

"They're some of the bravest people I know because of the personal sacrifices they make over a long period of time," Reed said. "Who am I to hold back and not give freely of my knowledge, my time and my talent? Failure to do so is to fail an entire country. And I'm just not willing to let them down."

Reed kept a detailed blog of her experience. Visit www.cambodianrn.wordpress.com. P

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SEE YA!

Shands occupational therapists Naomi Edwards (left) and Heather Simpson play paddleball using physical therapy equipment during Rehabilitation Awareness Day in August.



Master of Public Health student Yu Ling discusses







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The College of Medicine class of 2014 makes silly poses before their official group picture during orientation Aug. 9.