

THE *Miracle* MAKERS

The staff at UF Health Reproductive Medicine – Springhill use advanced medical expertise to help people achieve their dreams of starting families.

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On the Cover

A team of physicians, nurses and staff members at UF Health is dedicated to the pursuit of one goal — helping people build families in the face of all obstacles. In this issue of The POST, we follow one couple's journey to becoming a family through fertility treatment from specialists at UF Health Reproductive Medicine – Springhill.

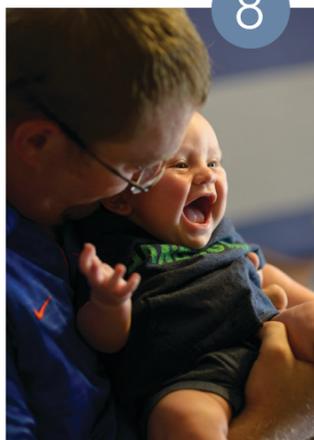


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UP FRONT



Under the sea

College of Pharmacy alumna and supporter Debbie DeSantis and Hendrik Luesch, Ph.D., an associate professor of medicinal chemistry, share a mutual interest in natural products. In May, the pair enjoyed a rare opportunity to connect in the Florida Keys to collect cyanobacteria, organisms that produce several medically important compounds that could be useful to treat cancer and other diseases. In the shallow waters off the coast, the pair spent the day snorkeling in search of the seaweed-like organisms. Once removed from the water, the cyanobacteria were stored in plastic bags, frozen and transported back to the laboratory where researchers will use solvents to tease out a mixture of different compounds that may one day be effective in treating various diseases. Visit The POST online at post.health.ufl.edu for a link to a video about their work. — *Matt Splett*



A free week of fitness

Looking to get fit? The UF Health Fitness and Wellness Center offers free seven-day trials to those who are interested in becoming members of the gym. To get your free week trial, speak to a staff member at the gym and let them know you are interested in becoming a member. Existing gym members also can get two free weeks for referring new members to the gym. For more information, call 352-733-0834 or visit the gym, which is located at 1310 SW 13th St.

College of Medicine receives continued accreditation

Following a two-year self-study and an intensive four-day site visit in February, the Liaison Committee on Medical Education has awarded the College of Medicine continued accreditation for a full eight-year term. The LCME is recognized by the U.S. Department of Education as the authority for the accreditation of medical education programs in the United States and Canada leading to the M.D. degree. The LCME report commends, among other things, the college's admissions process, which includes patient interviews of potential students.

Support for breastfeeding

August is National Breastfeeding Month, and as the state's only academic health facility to receive Baby-Friendly designation, UF Health offers numerous ways to support breastfeeding mothers. For more information about some of these resources and locations and times for breastfeeding clinics, visit UF Health's Center for Breastfeeding and Newborns' website at cbn.med.ufl.edu.



Talks that broke through

Earlier this year, TEDxUF 2015 showcased eight speakers and three performances from local and national public figures, including two from UF Health. TEDx is a program of local, self-organized events that bring people together to share an experience similar to that of the global TED conference, which usually includes live presenters giving short, thought-provoking lectures. The UF Health speakers included Jill Sonke, director of the Center for Arts in Medicine and assistant director of the UF Health Shands Arts in Medicine program.

Throughout her career, she has sought to explore the relationships

between creativity, meaning and health through programs that bring the arts to hospitals, in order to help people coping with serious medical illness. Chris Hass, Ph.D., a faculty member with the Center for Movement Disorders and Neurorestoration, also spoke at the event about the limitations of using drugs and surgery alone in the treatment of Parkinson's and introduced new, simpler treatments with minimal side effects and promising results. To view links to the videos, click on this story at post.health.ufl.edu. — *Marilee Griffin*

New director for Cancer Center

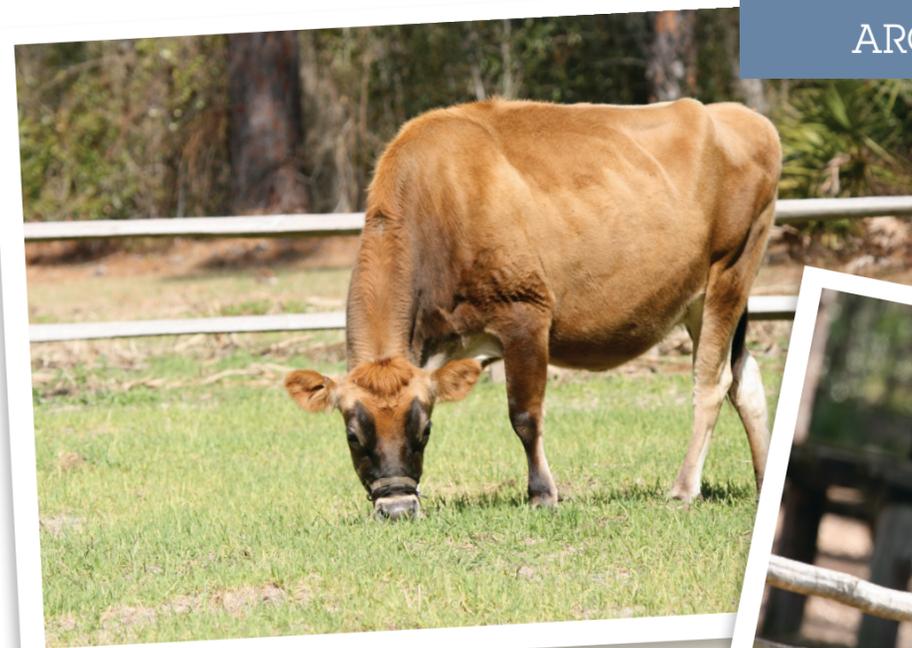
In June, an internationally known expert in blood cancer was appointed director of the UF Health Cancer Center, effective Oct. 1. Jonathan D. Licht, M.D., comes to UF Health from Northwestern University in Chicago and brings a \$2 million research portfolio that includes funding from the National Institutes of Health, the National Cancer Institute and national foundations such as the Leukemia and Lymphoma Society. His laboratory studies aberrant gene regulation as a cause of blood cancers and is developing treatment strategies to reverse abnormal, cancer-

causing gene functions. Licht currently serves as the associate director for clinical sciences at the Robert H. Lurie Comprehensive Cancer Center of Northwestern University. "We are very fortunate to have Dr. Licht join us as director of the UF Health Cancer Center. He is a world-class clinician-scientist and has vast experience in administering the clinical, research and educational missions of an academic cancer center," said David S. Guzik, M.D., Ph.D., UF senior vice president for health affairs and president of UF Health. — *Lindy Brounley*



Top hospitals

UF Health Shands Hospital has been recognized among the nation's best hospitals in seven adult medical specialties, according to U.S. News & World Report's 2015-16 Best Hospitals rankings released July 21. U.S. News & World Report analyzed nearly 5,000 hospitals across the country to determine rankings in 16 adult medical specialties. Only 3 percent of these hospitals earned top-50 rankings in at least one specialty. The seven adult medical programs at UF Health Shands Hospital ranked among the top 50 in each specialty nationally include nephrology (13th), diabetes and endocrinology (28th), pulmonology (29th), urology (37th), neurology and neurosurgery (40th), cardiology and heart surgery (42nd) and cancer (46th). UF Health Shands Hospital also was listed as "high-performing" in five additional specialties, including gastroenterology and GI surgery, geriatrics, gynecology, orthopedics, and ear, nose and throat. UF Health Jacksonville was listed as high-performing in three specialties, including nephrology, neurology and neurosurgery, and urology. — *April Frawley Lacey*



Priceless Penny

Beloved cow undergoes successful surgery

By Sarah Carey

At the Living History Farm at Morningside Nature Center, Penny the cow is something of an icon. An integral part of the center's farm programs, 11-year-old Penny helps children and other visitors learn how bovines were an indispensable part of a late 1800s Florida farm — from milk production to garden fertilizer.

The beloved bovine is no stranger to UF veterinarians, who have seen her many times over the years, said Myriam Jimenez, D.V.M., a resident with UF's Food Animal Reproduction and Medicine Service, or FARMS.

"About a year ago, she was treated for mastitis on her right rear quarter, probably due to biting flies," Jimenez said. "She received treatment, including a teat amputation for her mastitis, but unfortunately the problem worsened into an abscess within her udder."

Jimenez said UF veterinarians tried to resolve Penny's infection with a variety of treatments that were not successful. Enter fourth-year veterinary student Carley Trcalek. "Carley came to FARMS for her last month of clinical

rotations and met Penny," Jimenez said. "At the time, we were discussing how we might proceed with an approach closer to surgery. Carley took it upon herself to take pictures, which she shared with Dr. David Freeman, chief of the UF large animal surgery service, as well as with our anesthesia team."

Trcalek said she took an instant liking to Penny after first meeting her.

"She's a very sweet cow with a lot of personality," Trcalek said. "Another reason I became so involved was the staff at Morningside. They are so dedicated to Penny and that was really inspiring. Their dedication and Penny's winning personality really motivated me to help her as much as I could."

After meeting Penny and realizing surgery was being considered, Trcalek consulted with various team members in surgery and anesthesia to get their opinions as to how well this option might work.

The UF team came up with a solid surgical and anesthesia plan and a cost proposal, which was then proposed to the Morningside staff. Morningside agreed to move forward and Penny was scheduled for her much-needed surgery on May 8.

The procedure, which took about two hours, was conducted by Valeria Albanese, D.V.M., a UF large animal surgeon.

Penny was able to go home May 10 and is now receiving antibiotic treatment. Thankfully, the beloved bovine is back on duty, eating apples and teaching children about farm life.



HAPPY BIRTHDAY, GATORADE

Fifty years ago, a College of Medicine professor and his research fellows undertook a new research problem. A coach on the football team wanted to know why players kept getting sick and never urinated during practice or play. Their research uncovered that players were losing electrolytes as well as water and led the scientists to develop what has become a multibillion-dollar industry and UF icon – Gatorade. Over the next few issues, we will honor the work of J. Robert Cade, M.D., and his research fellows Dana Shires, M.D., James Free, M.D., and Alejandro de Quesada, M.D., and celebrate Gatorade's contributions to UF Health and to research. Photos courtesy of the UF Digital Collections.

Aside from being a thirst quencher and launching the sports beverage industry, Gatorade also has one other important use – drenching coaches after wins at football games.



1965

In early summer of 1965, Gatorade was born in a lab here at UF.

1965

In September 1965, Cade and the fellows began testing Gatorade on freshmen football players.



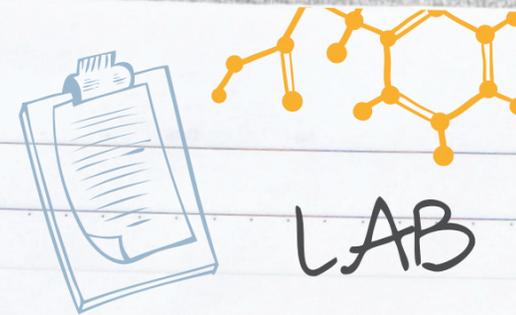
1967

Here, Cade is shown at a Gatorade stand at his home with one of his children. By 1967, Gatorade was on NFL sidelines.



2007

Although known chiefly for Gatorade, Cade was an innovator whose ideas spawned many other inventions during his career at UF. Cade passed away in 2007.



LAB NOTES

1) New hope for Pompe disease

Walking and breathing without mechanical assistance typically becomes a struggle for patients who have Pompe disease because of weakened, damaged muscles as they age. UF Health researchers have identified how prior to these devastating effects, hidden physiological changes occur in the body's neuromuscular junction, the part of the body where the nervous system connects to the musculoskeletal system. These negative changes that occur in the neuromuscular junction trigger the muscle weakness that causes the mobility and breathing challenges these patients face. With this understanding, the researchers also conducted early gene therapy studies in a Pompe disease mouse model using a virus delivery system that not only targets the muscle, but also reaches the nervous system. Early results in mice using gene therapy with adeno-associated virus 9, or AAV9 – which deftly shepherds a corrective gene into the body – show the therapy improved breathing function in diseased mice more than the current conventional therapy. The research was led by Darin Falk, Ph.D., and Barry Byrne, M.D., Ph.D. — April Frawley Lacey

2) Recovery after stroke

Time may heal all wounds, but in the case of stroke survivors, the key to better recovery is to spend more time in an intensive physical therapy program. After a stroke, the brain and body can start recovering immediately and can show improvement up to six months afterward, according to new research by Janis Daly, Ph.D. But this study, which was published in *The Archives of Physical Medicine and Rehabilitation*, focused on people who had persistent disability even a year or more after completing standard care. The study found that extensive physical therapy helped them recover motor function, even though they began the study treatment a year or more after stroke. — Morgan Sherburne

3) Gene therapy for GSD

UF Health researchers are working with a national rare-disease company to bring the first human gene therapy trials to patients with the most common form of glycogen storage disease. Once established, the clinical trials will take place at UF Health, where much of the underlying research has occurred. UF Health is also home to the world's largest clinical and research programs for glycogen storage disease. Glycogen storage disease type Ia is a rare condition, occurring in about one in 100,000 people worldwide. The condition affects how sugar is stored and processed in the body after eating. Currently, there are no pharmacological treatments for this condition. The only treatment is precise doses of cornstarch at specific times throughout the day. While the treatment works, it is not ideal for long-term care, said David Weinstein, M.D., director of UF's Glycogen Storage Disease Program. — April Frawley Lacey



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There is a team of physicians, nurses and staff members at UF Health dedicated to one goal — helping people become parents in the face of all obstacles. In this issue of The POST, we follow one couple's journey to becoming a family through fertility treatment at UF Health Reproductive Medicine — Springhill.

By Morgan Sherburne
Photos by Jesse S. Jones

“HE’S MY IVF BABY ...
I’M PROUD THAT HE IS,
BECAUSE THAT’S HOW
WE GOT HIM.”

- JESICA COX

Bryson seems like an exceptionally happy baby.

He wakes up from a nap with a smile and without protest. He sleeps 10 hours a night and, until recently, has been napping regularly during the day, although on this particular day, he sleeps without stirring until his mom decides to wake him.

At 3 months old, Bryson is equal to or ahead of all of the development markers. He can stiffen his legs and stand when his dad, Brad Cox, holds him with his hands cupped around the baby’s rib cage. If it weren’t for that pesky balance issue, Bryson would be ready to stand on his own.

“He’s my IVF baby,” says his mother, Jessica Cox, of Lake City. “I know it’s bad to label them like that, but I’m proud that he is, because that’s how we got him.”

Each day, at UF Health Reproductive Medicine – Springhill, nurses and doctors help people become parents.

Sometimes, that’s through in vitro fertilization, in which an egg and sperm

are joined outside the body, then implanted into a woman’s womb – which is the way Bryson was conceived.

The doctors and nurses begin the day with a huddle to discuss the day’s patients, combing through a stack of folders with health histories and needs.

“We’re thinking baby thoughts,” says Alice Rhoton-Vlasak, M.D., a physician and associate professor in the College of Medicine department of obstetrics and gynecology. “We’re looking for the best treatment options to help people build families, although we may not always be successful. Our goal is to help them on the fertility journey.”

The Springhill facility, which opened in 2013, houses UF Health’s reproductive endocrinology and infertility services. The team includes embryologists, lab technicians, clerical staff, nurses and nurse coordinators Sue DeGennaro, R.N., and Melinda Bestland, R.N. The team’s physicians are Rhoton-Vlasak, R. Stan Williams, M.D., chair of obstetrics and gynecology, and Gregory Christman, M.D., director of the division of reproductive endocrinology and infertility.

DeGennaro and Bestland help guide patients through treatment. Not every patient receives IVF, which is typically

reserved for individuals in whom all other fertility treatments have failed, or may not even be options. Other fertility services include egg donation, ovulation induction, intrauterine insemination, fertility-promoting surgery and fertility preservation, most commonly for patients with cancer.

“I was a surgical nurse for 15 years prior to this job, but I’ve been with this department for another 15 years and have done the full array of nursing,” DeGennaro said. “This job gives a lot of empowerment to really use your full skill range because you really are a patient advocate.”

Jessica, 32, has known for nearly a decade that a severe case of endometriosis would not allow her to become pregnant naturally.

In endometriosis, tissue that normally lines the inside of the uterus grows outside of it. Outside the uterus, the tissue can curl around other internal organs, most often involving the ovaries, bowel and the inside of the pelvis.

The tissue behaves just as it would if it were still in the uterus. It breaks down and bleeds along with the typical menstrual cycle. But, trapped inside of the body, the thickened tissue has no

place to exit. It can form fibrous cysts along the ovaries and fallopian tubes, which is what it did to Jessica’s reproductive organs.

That meant each serious relationship after she learned of her potential fertility problems involved a conversation about the future. That resulted in ending one relationship.

Then Jessica met Brad.

Just a few weeks into the relationship, Jessica built up the courage to tell him about her fertility issues.

“What I was hearing from her was that the doctor said she had to do a specific thing to have kids, not that she couldn’t have kids,” Brad says. “She said, ‘Yeah, but we’d have to do this, we’d have to do that, and it’s not guaranteed, and it’s not easy.’ And I said, ‘So what? It’s not a no.’”

That’s when Jessica knew Brad was the person she would marry.

Later, when the couple was ready to start a family, Jessica’s doctor evaluated whether endometrial tissue had blocked her fallopian tubes. If eggs become fertilized, they make a several-day journey down the fallopian tubes and implant in the walls of

the uterus. Her tubes were completely closed off.

After Jessica’s test results, the Coxes began treatment at UF Health. Because of the damage from her endometriosis, IVF was the couple’s only choice.

In IVF, a woman gives herself hormone injections to increase the number of eggs her ovaries produce each month. The eggs are retrieved and then fertilized with the father’s sperm outside of the womb. If the eggs become fertilized and begin to divide, the fertilized eggs, now called embryos, are placed back into the woman’s womb. Then, the parents have to wait two weeks to see whether the embryos have implanted in the mother’s womb, the start of a pregnancy. Each time a patient goes through this process is called a cycle.

While the Coxes were readying for their rounds of IVF, the infertility and reproductive endocrinology team reviewed their case to determine the best plan of care for Jessica.

“It’s a team approach,” Rhoton-Vlasak said. “It’s really a team approach because every provider is involved in a separate aspect of the cycles of every patient.”

The nurses schedule visits, teach patients about how to administer

medications to spur hormone production, help create schedules for the patients and help run the operating room at Springhill. In the operating room, women undergo egg retrievals and embryo transfers under ultrasound guidance. The physicians track patients’ treatment cycles to determine when eggs should be taken and to determine the best time to place the embryos back in the uterus.

“Everything we do is based on how a woman’s body is responding to the treatment,” Rhoton-Vlasak says. “You have to do it when the body is in the right state. You can’t schedule it in advance like you can an elective surgical procedure.”

It just takes one.

One fertilized egg could turn into an embryo, and finally, a baby. That’s what Sue DeGennaro, the infertility nurse, told Jessica and Brad each time they became anxious about their chances.

In December 2013, Jessica’s fallopian tubes were removed, leaving her ovaries, in order to avoid further complications. After recovering from that surgery, she began the month-long process of fertility injections to

coax her ovaries into producing more eggs than their typical one per month.

Jesica produced five eggs, all of which were fertilized. After five days, Jesica and Brad had only one viable embryo, which Rhoton transferred to Jesica. Then, the wait began.

"Those two weeks are horrible," Jesica says.

At the end of the two weeks, Jesica went in for a blood test. They were to learn whether they were pregnant by 5 p.m. Then, they planned to text and call family and friends to tell them of the hopefully happy news.

"I had people texting me, saying 'Have you found out yet?' Then I got the phone call," Jesica says. "It didn't take."

The couple considered taking time off to recover from their disappointment, but Rhoton-Vlasak encouraged them to jump right back into trying.

So the Coxes started the process again, and when a nurse checked Jesica's ovaries, she found Jesica only had two underdeveloped follicles. The suggestion was to put off the process for another cycle.

"I cried all the way home, from Gainesville to Lake City," Jesica says.

After discussing the situation, Jesica and Brad decided to continue the treatment anyway. They had done a month of fertility injections. And, as the nurse reminded them, it does only take one.

This time around, the phone call brought much better news: Jesica was pregnant.

The Coxes were quick to realize that the fact that Jesica was pregnant did not end

their worrying.

Jesica started bleeding three days after they found out she was pregnant, and didn't stop for six weeks. The nurses assured her the bleeding was normal, and she and Brad were able to see Bryson's heartbeat at 8 weeks, when he was still the size of a sesame seed. Even so, she dreaded even going to the bathroom, fearing she would see more blood.

When Jesica was nearly 20 weeks pregnant – just before she was scheduled to learn her baby's gender – she began bleeding again. She drove herself to the hospital, where staff thought she was miscarrying.

After several minutes during which her nurses thought she would need a blood transfusion, they found the baby's heartbeat. He was healthy. A condition called placenta previa, in which the placenta partially covers the cervix, was causing the bleeding. Although the placenta was nearly completely covering her cervix, it moved within days. The bleeding halted again.

The nurses at UF Health Reproductive Medicine – Springhill are more than just infertility nurses.

They are coaches and listeners. They answer panicked questions from pregnant patients who had a tough road to pregnancy. Although the clinic also offers clinical psychologists and counselors for patients whose attempts at becoming pregnant aren't successful, the nurses are often the first people the patients think to contact.

"We do what I call almost a verbal

massage to our patients who are struggling emotionally," DeGennaro says. "Many of our patients are already in need of that emotional piece of this, because they're struggling to become pregnant for more than a year on average, if not more so."

But the payoff is good, Bestland says. "It's nice to follow your patients from start to finish," Bestland says. "I enjoy working with people who are essentially well. It's happy, most of the time. There's a good outcome a lot of the time. It's nice, too, when the patients come back to show you their babies."

It's a job that has no regular business hours. When a woman's body is ready to ovulate, the team must be ready to help her.

"Everything we do revolves around follicle size and ovulation," Rhoton-Vlasak says. "Just like having babies, you have to be there 365 days a year. Fertility is exactly the same."

"We're open 7 days a week," Bestland says.

"People ovulate 365 days a year. We're open 365 days a year," Rhoton-Vlasak adds.

Jesica was induced Feb. 25, on Bryson's due date. She labored for two days.

In the early morning of Feb. 27, over a period of six hours, Bobbie Patterson, Jesica's mom, watched the heart monitor flutter and fail. She and the nurses turned the monitor away from Jesica so she wouldn't focus on it.

Jesica told them she thought something was wrong. The doctor scheduled a Cesarean section.

When Bryson was born, his umbilical cord was knotted and wrapped around his



"THE DOCTOR SAID SHE HAD TO DO A SPECIFIC THING TO HAVE KIDS, NOT SHE COULDN'T HAVE KIDS,"

— BRAD COX

neck twice.

"If I had delivered him normally, he would have died," Jesica says.

"The nurse said he was a little miracle boy," Bobbie says.

From the beginning, the Coxes wanted to be as open as possible about their fertility journey.

Once they started the process, Jesica and Brad started hearing from many people undergoing the same fertility issues. Jesica met a childhood acquaintance in the waiting room of the UF Health fertility practice. Family members told them their daughter

had been conceived through IVF. In all, six people contacted Jesica to tell her of their IVF experiences.

"The more we got into this, the more I realized there are more people who go through it that I never even knew," Jesica says. "It opened a door."

"People don't talk about it," Brad adds. "We got some information about blogs where people talk about their experience, but it's not somebody you know, or someone you're ever going to see. We've even talked about starting a blog or some sort of support group

where people actually meet and talk about it. It would be a lot more therapeutic."

For right now, the Coxes are happy to get to know their new little boy, who Brad swears was born smiling.

"Thirty minutes after he was born, it was just the three of us in there," Brad says. "I told him, 'You gotta smile for the camera,' and just when I went to snap the thing, he turned and smiled."

The UF Health team approach

Behind the scenes of infertility treatment at UF Health Reproductive Medicine – Springhill, there is a careful choreography.

After assessing each patient's particular problem, the physicians decide which treatment each patient needs. In some cases, that treatment is IVF, the technique for which UF Health's reproductive endocrinology team is most well known.

"We consistently have excellent pregnancy rates, and are known for our individual patient care," says R. Stan Williams, M.D., the Harry

Prystowsky professor of reproductive medicine and chair of obstetrics and gynecology.

Gregory Christman, M.D., the J. Wayne Reitz chair of reproductive biology and the director of the division of reproductive endocrinology and infertility, says UF's infertility program tackles tough cases in which patients have been previously unsuccessful in undergoing IVF.

"We take on the difficult cases that other people won't take on," Christman said.

If the physicians determine a patient needs IVF, she undergoes treatment to stimulate her ovaries to produce more eggs than she typically would. When these eggs are retrieved, the physician hands them off to either Joseph Kramer, Ph.D., director of the in vitro fertilization lab at the clinic, or embryologist Larissa Ali through a window in the wall of the clinic's operating room. The window passes into the IVF lab.

The IVF lab is designed to optimize conditions for growing

embryos, including controlling for light and temperature.

"We try to best mimic the surroundings of the womb," Kramer says.

Between the third and fifth day after fertilization, the physicians transfer the healthiest embryo back into the patient.

If the patient has a positive outcome, they stay with the program for about eight weeks and then graduate to their regular obstetrician-gynecologist. If the patient does not become

pregnant, the program has a clinical health psychologist on hand to help.

Collectively, Williams, Christman and Alice Rhoton-Vlasak, M.D., have 60 years of experience with IVF and infertility treatment.

Williams has been with UF since 1988, the year the clinic's first IVF babies – a set of twins – were born.

Other nurses and assistants have likewise been with the program for decades. Sue

DeGennaro, R.N., an infertility nurse specialist, has been in the obstetrics and gynecology department for 15 years. Melinda Bestland, R.N., a nurse for 29 years, has worked the gamut of obstetrics and gynecology, including neonatal intensive care and labor and delivery.

"Not in every clinic do the nurses meet up with every single individual patient as part of their care," Rhoton-Vlasak says. "But here, they do."



SPECIAL DELIVERY

UF Health Shands team transports ECMO patient using portable machine

By Sam Burroughs



Timothy Bantle, a respiratory care supervisor, and ECMO specialist Jeff Brown, are shown with the portable ECMO machine, known as the CARDIOHELP, which will allow critically ill patients to be more easily transported to UF Health Shands Hospital.

A patient needed to come to UF Health Shands Hospital for a transplant. The problem was the patient was surviving with the support of extracorporeal membrane oxygenation, or ECMO – a machine that pumps blood out of the body, oxygenates it and pumps it back in. The machine is complex, making it hard to move.

However, the team charged with transporting the patient – which included staff members from UF Health Shands Hospital and UF Health ShandsCair – had a new, compact ECMO machine called the CARDIOHELP system. Earlier this year, for the first time, the team was able to successfully transport a patient on ECMO from an outside facility to UF Health using the new system.

“We had drills and simulations to familiarize ourselves with the machine. It’s light and compact but all of the components of the machine are very similar to the machine we have,” said Timothy Bantle, R.R.T., a respiratory care supervisor, who was one of the ECMO specialists who worked with the patient in the ambulance. “We spent a year working on the device to become familiar with it. After about a year, we felt ready.”

ECMO provides intensive care to patients with severe heart and lung problems. It’s used as a last-resort life support measure.

The ability to transport patients successfully using the compact system means a greater capacity for UF Health to serve critically ill patients. Although the new system may not be

a fit for all cases, it expands UF Health’s ability to help patients in need.

“It’s a strong step forward for UF Health in further defining itself as a resource for the most complex patients. This device helps us on that larger mission,” said David Kays, M.D., the medical director of the UF Health ECMO program and associate chief of pediatric surgery, who was also part of the team.

Mark Bleiweis, M.D., director of the UF Health Congenital Heart Center, added, “I could very well see situations where there are sick children and adults who are placed on ECMO and need to be transported here for the kind of support we can provide with our teams’ experience with all sorts of critical diseases and problems.”

The CARDIOHELP system is 20 pounds and is the size of a small microwave, while the ECMO machine in the hospital is a couple hundred pounds and is the size of a professional stove, Bantle said.

UF Health ShandsCair provides all of the clinical staff, except the ECMO specialist, and all of the transportation, said Staccie Allen, M.S.N., ARNP, EMTP, CFRN, program director for ShandsCair.

When it comes to transporting patients, the teams are built according to the patient’s needs, she said.

“We’re training additional ECMO (specialists) so that we have greater availability for when these requests come in,” Allen said. “As far as limitations, the CARDIOHELP machine is a dedicated platform for ECMO transport.”

The goal now, according to Bantle, is to acquire more capability to transport patients on short notice.

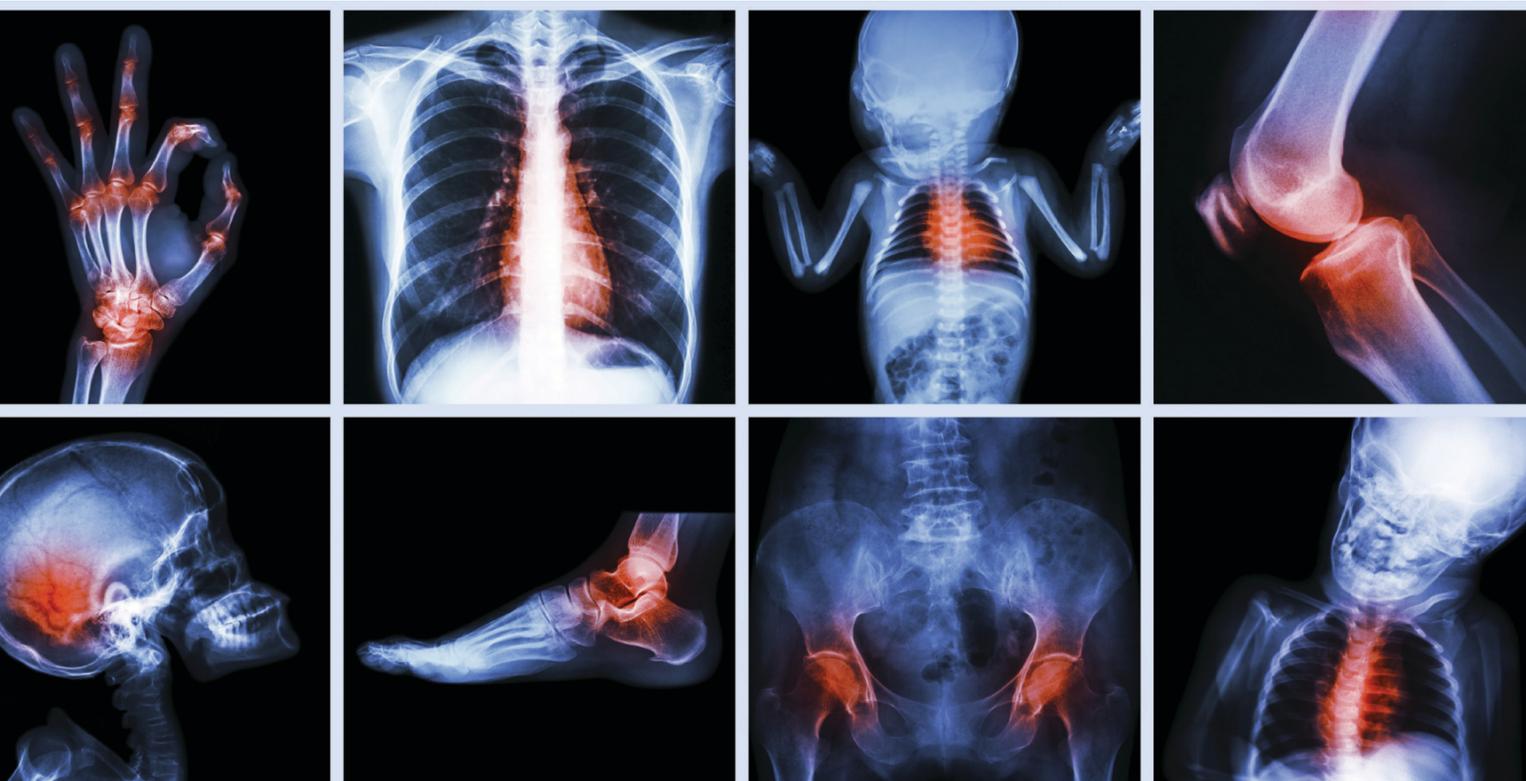
“We are working toward growth and development,” Bantle said. “We’re in the learning stages now. We are working toward a larger team and having more equipment available.”



A PAIN THAT NEVER ENDS?

Researchers to study patient pain post surgery

By Marilee Griffin



Most patients undergoing surgery expect some pain and discomfort after the procedure. For a surprising number of people, however, the pain never really goes away.

With the help of a federal grant, researchers are studying how postoperative pain can change days and months after surgery – and how certain factors affect the way patients experience this pain. Their study also will examine how this data may predict the development of chronic postoperative pain, which is generally defined as pain persisting for more than three months.

Chronic postoperative pain is a recognized complication of many common procedures, and contributes substantially to chronic pain's annual price tag of \$600 billion, said Patrick Tighe, M.D. M.S., an assistant professor of anesthesiology in the College of Medicine and principal investigator of the grant.

"Up to 50 percent of patients can develop lifelong pain after certain types of surgery," he said. "That's an important risk for certain patient populations, since most of us generally enter into surgery with the hope of eventually feeling better."

The five-year, \$2.5 million grant from the National Institute of General Medical Sciences will allow Tighe's team to assess 500 surgical patients immediately after surgery and six months into recovery.

In recent years, the pain research community has been looking closely at how different patients experience different sensations as painful, Tighe said. While it's often expected that a patient's pain will gradually decrease during the first week after surgery, recent research suggests that this is not always the case, with up to one-third of patients experiencing the same amount or more pain during the first postoperative week.

"Some people will have a surgery and after five to seven days, most of the pain from that surgery goes away," Tighe said. "Other patients have increasing pain for seven days and may stabilize to have chronic pain that stays for the rest of their lives."

To track the participants' pain for the first week after surgery, the researchers will measure pain three different ways: first, every few minutes via a computerized pump called the patient-

controlled analgesia device, which allows patients to control their pain using IV pain medication; second, every few hours with an evaluation by a medical professional; and third, every day through two well-known questionnaires that will allow patients to rate their pain.

Patients will again be queried six months after surgery to determine the presence and extent of any postoperative pain. Those findings, combined with previously collected data – including sociodemographic information, clinical data on patient activity and survey results evaluating how patients think about pain – will be used to give the results context.

Tighe and his team have three specific goals in collecting the data.

The first is to look at variations in patients' pain measurements throughout the day during the first week after surgery to see if patterns can be identified. Next, the team will review clinical, biological, psychological and social variables that may contribute to these patterns. Finally, the researchers will use this information to determine whether there's an association between these patterns and patients' risk of developing chronic postsurgical pain.

"If we can stop pain from developing into a chronic condition, we can help ameliorate a significant public health issue that impacts many facets of society," Tighe said.

Participant enrollment for the study is anticipated to begin in late summer.

"We are very fortunate to have such a great opportunity to study this issue," Tighe said. "We have a simply awesome team from a wide range of disciplines, allowing us to examine this problem from several new and exciting perspectives."

Tighe's cross-disciplinary team includes Roger Fillingim, Ph.D., a professor in the College of Dentistry and director of the UF Pain Research and Intervention Center of Excellence; Parisa Rashidi, Ph.D., an assistant professor of biomedical engineering in the College of Engineering; Margaret Wallace, Ph.D., a professor of molecular genetics and microbiology in the College of Medicine; and Baiming Zou, Ph.D., an assistant professor of biostatistics in the colleges of Medicine and Public Health and Health Professions.

"Some people will have a surgery and after five to seven days, most of the pain from that surgery goes away ... Other patients have increasing pain for seven days and may stabilize to have chronic pain that stays for the rest of their lives."

-Patrick Tighe, M.D., M.S.



The unusual benefit of MULTITASKING

New research shows multitasking may help your workouts

By Jill Pease

Who says you can't do two things at once and do them both well?

A new study challenges the notion that multitasking causes one or both activities to suffer. In an analysis of older adults who completed cognitive tasks while cycling on a stationary bike, UF researchers found that participants' cycling speed improved while multitasking, with no cost to their cognitive performance.

Results of the study, which was supported by a grant from the National Institute on Aging, were published in the journal PLOS ONE.

The discovery was a surprise finding for investigators Lori Altmann, Ph.D., an associate professor of speech, language, and hearing sciences in the College of Public Health and Health Professions, and Chris Hass, Ph.D., an associate professor of applied physiology and kinesiology in the College of Health and Human Performance. They originally set out to determine the degree to which dual task performance suffers in patients with Parkinson's disease. To do this, the researchers had a group of patients with Parkinson's and a group of healthy older adults complete a series of increasingly difficult cognitive tests while cycling.

"Every dual-task study that I'm aware of shows when people are doing two things at once they get worse," Altmann said. "Everybody has experienced walking somewhere in a hurry when the person in front of them pulls out a phone, and that person just slows to a crawl. Frankly, that's what we were expecting."

Participants' cycling speed was about 25 percent faster while doing the easiest cognitive tasks but became slower as the cognitive tasks became more difficult. Yet, the hardest tasks only brought participants back to the speeds at which they were cycling before beginning the cognitive tasks. The findings suggest that combining the easier cognitive tasks with physical activity may be a way to get people to exercise more vigorously. The researchers plan to make this a topic for future research.

"As participants were doing the easy tasks, they were really going to town on the bikes, and they didn't even realize

it," Altmann said. "It was as if the cognitive tasks took their minds off the fact that they were pedaling."

During the study, 28 participants with Parkinson's disease and 20 healthy older adults completed 12 cognitive tasks while sitting in a quiet room and again while cycling. Tasks ranged in difficulty from saying the word 'go' when a blue star was shown on a projection screen to repeating increasingly long lists of numbers in reverse order of presentation. A video motion capture system recorded participants' cycling speed.

Their cycling speed was faster while performing the cognitive tasks, with the most improvement during the six easiest cognitive tasks. Cognitive performance while cycling was similar to the baseline across all tasks.

The reasons for participants' multitasking success most likely include multiple factors, the researchers say, but they hypothesize that one explanation could be the cognitive arousal that happens when people anticipate completing a difficult cognitive task. Similarly, exercise increases arousal in regions of the brain that control movement. Arousal increases the release of neurotransmitters that improve speed and efficiency of the brain, particularly the frontal lobes, thus improving performance in motor and cognitive tasks.

"What arousal does is give you more attention to focus on a task," Altmann said. "When the tasks were really easy, we saw the effect of that attention as people cycled very fast. As the cognitive tasks got harder, they started impinging on the amount of attention available to perform both tasks, so participants didn't cycle quite so fast."

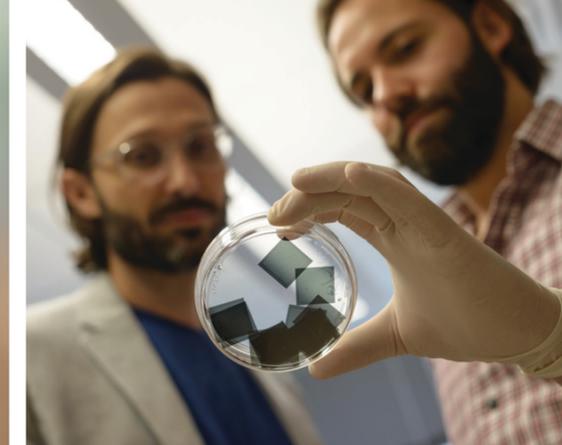
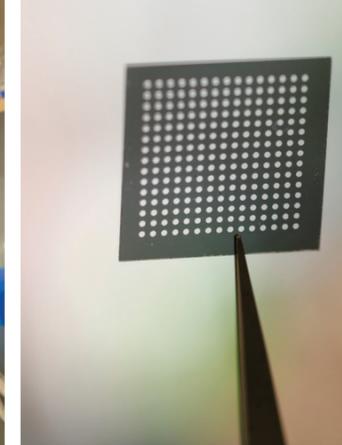
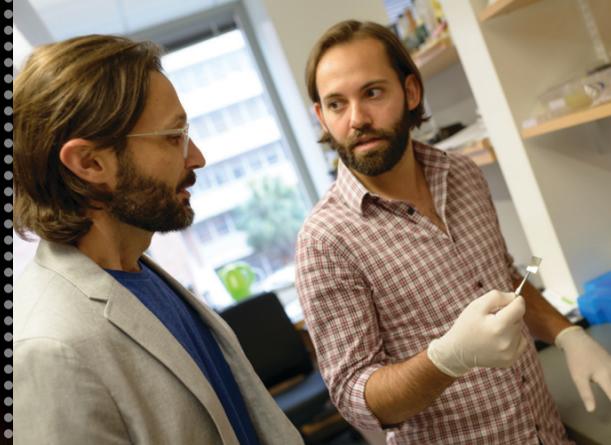
Study participants with Parkinson's disease cycled slower overall and didn't speed up as much as the healthy older adults. That could be because arousal that stems from cognitive and physical exercise is dependent on dopamine and other neurotransmitters, which are impaired in people with Parkinson's.

Altmann and Hass are currently studying whether multitasking benefits will extend to other types of exercise, including use of an elliptical trainer. They hope to eventually examine whether pairing mental tasks with exercise can lead to both cognitive and fitness improvements in older adults.

Big hope IN A TINY GRID

Researchers develop microarray that could change how chemotherapy is prescribed.

By Doug Bennett



Researchers Benjamin G. Keselowsky and Matthew R. Carstens developed a microarray to make chemotherapy treatments more personalized, efficient and affordable.

A new device no larger than a quarter could end up having an outsized effect on chemotherapy treatments.

The miniaturized platform, known as a microarray, was recently developed by two UF researchers. It offers a potential breakthrough in personalized medicine: No longer would physicians have to try various doses and combinations of chemotherapy drugs directly on patients. Instead, a patient's cancer cells could be harvested and tested with various chemotherapy drug combinations directly on the microarray.

The device's breakthrough capability – its ability to work with a smaller number of cancer stem cells – is especially crucial because such cells are particularly rare. Cancer stem cells comprise about 1 percent of a typical tumor, and other drug-testing methods require larger amounts of cells.

The device was invented by Benjamin G. Keselowsky, an associate professor in the J. Crayton Pruitt Family department of biomedical engineering, and Matthew R. Carstens, Ph.D., a postdoctoral associate in Keselowsky's laboratory. Researchers from the Cleveland Clinic and University of California collaborated on the research, which was published June 29 in the Proceedings of the National Academy of Sciences. It has yet to be tested in a clinical setting or undergo regulatory review.

The microarray is a piece of square glass that can hold a tiny grid of several hundred polymer "islands." The "islands" are first loaded with various combinations and doses of chemotherapy drugs. Cancer cells are then added, and the cells' interaction with the drugs is observed to determine which combinations work best, Carstens said.

The new array uses less than 6 percent of the cancer stem cells that are typically needed for such testing. Extracting elusive and rare cancer stem cells from patients is time-consuming and expensive, and the new technique makes the process more efficient and cost-effective, Carstens said. The process has been granted a patent, although clinical trials may likely be required before it could be put to widespread use in clinics and laboratories, according to Keselowsky.

While the microarray was tested on colorectal stem cells, Keselowsky said the approach could be used to test the efficacy of chemotherapy drugs on virtually any kind of cancer that involves

a solid tumor. Chemotherapy for colorectal cancer is often a combination of two drugs, and researchers tested the interaction of nutlin-3a and camptothecin on cancer stem cells. The cells were taken from a 70-year-old, stage IV cancer patient and a 60-year-old patient with stage III colorectal cancer. The microarrays were seeded with approximately 200 cells per "island" – 16 times fewer cells than other chemotherapy testing methods use.

The new array's efficient use of rare cells means that a patient could undergo a biopsy and the cancer stem cells could be tested with combinations of chemotherapy drugs more efficiently. That would deliver the best treatment regimen to the patient in a timelier manner.

"Because it requires far fewer cells, there would be a quicker turnover time. That makes it possible to personalize the chemotherapy regimen much sooner," Keselowsky said.

Currently, physicians try various drug combinations directly on patients – a process the new microarray may someday replace.

"The potential for treatment is that we can do a lot of testing and know what will work in the patient. The ability to test multiple chemotherapy treatments with fewer cancer cells is a big advancement," said Emina H. Huang, M.D., a colorectal surgeon at the Cleveland Clinic, professor of surgery at the Clinic's Lerner College of Medicine at Case Western Reserve University and vice chair of the Clinic's department of stem cell biology and regenerative medicine.

In addition to potentially needing clinical trials, bringing the new microarray into widespread use would likely require a company to invest in further research and possibly production, Keselowsky said. Still, the invention is a significant advance in personalized medicine for cancer patients, he said.

"It's a combination of having a novel device that works on colon cancer stem cells, which is an important cancer biology topic right now," he said.

Other members of the research team are Robert C. Fisher, Ph.D., a project scientist at the Cleveland Clinic; Abhinav P. Acharya, Ph.D., a postdoctoral fellow now at the University of Pittsburgh; Elizabeth A. Butterworth, who worked in Huang's lab while in a doctoral program; and Edward Scott, Ph.D., a professor in the department of molecular genetics and microbiology in the UF College of Medicine.

A DAY OF DISCOVERIES



UF researchers and researchers in training revealed their latest work during annual research day celebrations this spring.



COLLEGE OF DENTISTRY

Poster Presentation

Ph.D./Postdoctoral/Graduate division:
First place: Giancarlo Cuadra
Second place: Christina Graves

M.S./Resident division:

First place: David Kellogg
Second place: Andrew Murray

D.M.D. division

First place: Kelli Rike
Second place: Andy Alvarez

Oral Presentation

Ph.D./Postdoctoral/Graduate division:
First place: Adrienne Gauna
Second place: JoAnn Roberts

M.S./Resident division:

First place: Mauricio Castellanos
Second place: Molly Smith

D.M.D. division:

First place: Taylor Capassop
Second place: Amanda Francis

COLLEGE OF MEDICINE

Medical Guild Graduate Research Awards

Gold: Douglas Bennion
Silver: Rony Francois, Geoffrey Rogers
Bronze: Fatma Ayhan, Shweta Kailasan, Regina Martuscello

Advancement to Candidacy Awards

Brian Mahon, Brittney Newby, Dane Phelan, Brittany Rife

Doctoral Mentoring Awards

David Bloom, Ph.D., Robert McKenna, Ph.D.

COLLEGE OF MEDICINE - JACKSONVILLE

Poster Presentation

First place: Lydia Engwenyu, M.D.
Second place: Kamaldeep Singh, D.O.
Third Place: Danish Vaiyana, M.D.

Platform Presentation

First Place: Melissa McGuire, M.D.
Second Place: Jared Roeckner, M.D.
Third Place: Katherine Puckett Parikh, D.O.

COLLEGE OF NURSING

Undergraduate recipients

First place: Jessica Withers
Second place: Ashley Johnson, Madison Arnold, Kaley Loewendick

Doctor of Nursing Practice recipients

First place: Christopher Weiss
Second place: Alyssa Liguori Macca
Second place: Cassidy Jacobs

Ph.D. recipients

First place: Brittany Gannon
Second place: Tanika Vivien
Second place: Elaine Zapata

COLLEGE OF PHARMACY

Oral Competition

Senior division: Mohamed Shahin
Junior Division: Fatma Al-Awadhi
Levitt division: Nakyung Jeon

Poster Competition

Professional student division: Gena Burch, Lindsey Osterfeld
Graduate student division: Neha Bhise, Ghadeer Dawwas, Ahmed Samir Elshikha, Oyunbileg Magvanjav, Anandharajan Rathinasabapathy, Lei Wang

Postdoctoral fellow division:

Stephan Jahn

COLLEGE OF PUBLIC HEALTH AND HEALTH PROFESSIONS

Highest ranking abstract

Alison Barnard, Helena Chapman, Dominique DuBose

Top abstracts

Harneet Arora, Elizabeth Kacel, Chukwuemeka Okafor, Thomas Alex Weppelmann

Travel awards

Alexandra Brandimore, Genevieve Harris, Yun Shen, Erin Trifilio, Eliza Warren

COLLEGE OF VETERINARY MEDICINE

Phi Zeta Graduate Awards

Charles F. Simpson Memorial Scholarship Award: Shannon Roff
Excellence in Doctoral Studies: Galaxia Cortes-Hinojosa
Excellence in Master's Studies: Stephen Jones
Excellence in Basic Science Research: Johanny Perez-Baez
Excellence in Clinical Science Research: Ashley Barratclough

Phi Zeta Faculty Awards

Zoetis Award for Veterinary Research Excellence: Rosanna Marsella, D.V.M.
FVMA Clinical Investigator Award: Brad Case, D.V.M.
C. E. Cornelius Young Investigator Award: Klubs Galvao, D.V.M.



Superior ACCOMPLISHMENT

UF Health team members honored at universitywide ceremony

By Sam Burroughs



BRIAN KARCINSKI

KRISTY RADEKER

DINA MICHAELS

Dina Michaels, a senior biological scientist in the College of Veterinary Medicine, was lauded for her work in a project that involved transporting, unpacking, sorting and storing a collection of bacteria and antiserum.

The project took place in the laboratory of Daniel Brown, Ph.D., an associate professor of infectious diseases and pathology in the college.

"In late 2013 we received seven commercial pallets of material containing 115 biosafety shippers of cultures and 25 boxes of antiserum," Michaels said. "It was quite a big undertaking because of the amount of boxes we received. Each specimen had to be inspected and inventoried."

After nearly a year of transportation negotiations, the collection arrived on short notice in November 2013. Michaels, with the help of undergrads she supervised, inspected around 30,000 vials by hand in less than three months.

ALEX MILLS

Alex Mills, a senior information specialist for the Clinical and Translational Science Institute, was recognized for her work on videos produced for the National Institutes of Health Common Fund national video contest, among other achievements.

"Alex had been on our team for just over a year and already contributed in a number of really wonderful ways," said Claire Baralt, director of strategy and communications for the CTSI. "She's helped with websites and videos and just established herself as a wonderful colleague."

Mills led the production of the CTSI's metabolomics and translational science entries in the contest, according to one of her nomination letters.

BRIAN KARCINSKI

Brian Karcinski, director of admissions and finance in entrepreneurial programs at the College of Pharmacy, was honored for his work with the college's online educational programs.

"What we ended up doing was reorganizing and bringing all of the online programs together using the same database technology and procedures to create efficiency," Karcinski said.

Karcinski oversees the fiscal, operational and managerial aspects of the college's online master's degree programs, an online professional degree program and an online continuing education program.

Karcinski and his team have streamlined the processes involved in the running of the online programs. This included streamlining the inhouse applications and the admissions processes, supporting the group workflow

KRISTY RADEKER

Kristy Radeker, M.S.M., a senior grant specialist in the College of Medicine department of emergency medicine, was awarded the Gabor Award for her role in facilitating research in the department.

Radeker helped organize the first emergency medicine class for the Medical Student Research Program. Subsequently, the department received the highest rating provided and it was one of the most popular programs in the college's summer research program, according to a nomination letter.

"Kristy Radeker's superior accomplishment is that she established this department's research infrastructure and, therefore, enabled our research mission," said Kenneth Marx, M.B.A., M.H.A., associate director of emergency services and department administrator, in a nomination letter.

Radeker played a key role in the department receiving its first award from

Michaels then entered the details for each specimen into the online Global Catalogue of Microorganisms database of the World Federation for Culture Collections to make the materials available to the international research community.

This accomplishment has brought national and international recognition to UF. The lab has filled requests from U.S. labs and overseas labs in Australia, Austria, Canada, England, Germany, Israel, Spain and Turkey.

"I was very honored that my supervisor nominated me," Michaels said. "Seeing our whole laboratory covered wall to wall in boxes on that day back in 2013 was quite overwhelming. I never expected that this project would end up becoming award worthy."

"Working with the Creative Services team at UF Health Communications, she conceived, organized, scripted and produced two videos that finished fourth and sixth in the country," wrote Michael Conlon, Ph.D., former co-director at the CTSI, in a nomination letter.

Mills also organizes the CTSI seminar series and maintains the CTSI website.

In addition, she was recognized for the creativity she brings to the workplace as well as her technical skills and communication abilities.

"It was really the whole package that she was nominated for," Baralt said.

and implementing a system to track student and staff communications on admissions, tuition payments and program questions.

Previously, tracking the management and population of the online courses was done manually. Karcinski's work has helped reduce errors when handling the many aspects of the programs, according to his nomination letters.

Karcinski also initiated and developed consistent policies for the administration and helped increase revenue by \$500,000.

"It was a nice validation for the effort that myself and my staff have put in over the last year, Karcinski said. "Having a reorganization and big changes is not always very easy or goes very smoothly. It was nice to see that people within the college appreciated the work of myself and my staff."

the Patient-Centered Outcomes Research Institute.

Her work has supported research that has led to therapeutic advances in lung injury prevention, potential changes to the treatment of flu viruses, discoveries for the treatment of life-threatening conditions such as sepsis and research in emergency department utilization that serves as a way to address challenges in the health care system.

"The research productivity in the department of emergency medicine increased dramatically when Kristy joined our department. Our research funding grew over 20-fold (from \$97,330 in February 2012 to over \$2 million in February 2014)," said Donna Carden, M.D., a professor and director of faculty development for the department of emergency medicine, in a nomination letter.



COLLEGE OF MEDICINE FACULTY HONORS

During its annual Faculty Appreciation Reception, the College of Medicine bestowed the following honors on faculty members

PAULUS AWARD FOR CLINICAL EXCELLENCE

Jennifer Light, M.D.

LIFETIME ACHIEVEMENT AWARD

Linda Morgan, M.D.
Mohan Raizada, Ph.D.
William A. Friedman, M.D.
Patricia Abbitt, M.D.
C. Richard Conti, M.D.
Marylou Behnke, M.D.
Paul Dell, M.D.

BASIC SCIENCE TEACHER OF THE YEAR

Peter P. Sayeski, Ph.D.

CLINICAL SCIENCE TEACHER OF THE YEAR

Robert L. Hatch, M.D., M.P.H.

PHARMACY



Oliver Grundmann

Oliver Grundmann, Ph.D., a clinical associate professor of medicinal chemistry, received the Janet K. Poley Award for Leadership and Innovation in Distance Education during the American Distance Education Consortium 2015 symposium at Oregon State University. The award recognizes an individual from higher education who has — at an institutional or national level — set and met innovative goals focused on online education and has been strategic in the planning, development, implementation and sustainability of programs aligned with the institutional mission.



Rhonda Cooper-DeHoff

Rhonda Cooper-DeHoff, Pharm.D., M.S., an associate professor of pharmacotherapy and translational research, was awarded a nearly \$50,000 grant from the Health Equity Research Institute to help underserved populations in Florida maintain their blood pressure control. The grant will allow UF researchers and others to investigate processes and tools that will help diminish ethnic, rural and socioeconomic disadvantages that often lead to disparities in blood pressure control among populations.

PUBLIC HEALTH AND HEALTH PROFESSIONS



Breton Asken

Breton Asken, a clinical psychology doctoral student, won the Best Poster Award at the third annual meeting of the Sports Neuropsychology Society in Atlanta. He presented data debunking the widely held belief that scoring lower on pre-concussion (baseline) testing results in a more rapid return-to-contact after concussion.



Robert Lucero

Two faculty members have been elected as fellows of the American Academy of Nursing. **Robert Lucero**, Ph.D., M.P.H., R.N., and **Jeanne-Marie Stacciarini**, Ph.D., R.N., both associate professors, will be recognized as fellows at the academy's annual conference in October. The academy honors those who have made outstanding contributions to effective nursing through practice, research, creative development, scholarly work, influence on public policy or a combination of these. Fellows also must show the potential to continue making significant contributions to the field of nursing. Lucero, who joined UF earlier this year, conducts research focusing on enabling health promotion and enhancing health care delivery through consumer health informatics. Stacciarini, who has been at UF since 2006, focuses her research on mental health promotion among minorities and community-based participatory research for minorities in rural and international populations.



Jeanne-Marie Stacciarini

VETERINARY MEDICINE



Richard Johnson

Richard Johnson, Ph.D., a professor of physiological sciences, has received the college's top teaching award. Johnson was selected as the recipient of the Zoetis Distinguished Veterinary Teacher Award, based on numerous criteria, including peer and student evaluations; quality of teaching and impact on student learning; and teaching-related research, service and publishing activities. He holds a joint appointment in the College of Medicine's department of neuroscience.

The bedside and beyond

Versie Johnson-Mallard uses research to change behavior in adolescents and young adults

By Sam Burroughs

Versie Johnson-Mallard, Ph.D., ARNP, can see gaps in health care that need to be filled and is using her expertise to help fill them.

Specifically, it was the gaps in the knowledge base of the women she has taken care of in sexual and reproductive health clinics that inspired her to go back to school to get her doctorate in nursing science.

"It gave me the translational research background to take science from the bench to the bedside," Johnson-Mallard said.

Johnson-Mallard, chair of the department of family, community and health system science in the College of Nursing, is a nurse researcher. Currently, her research focuses on sexual and reproductive health promotion and cervical cancer prevention. She is interested in finding innovative ways of changing sexual and reproductive risk behavior.

"I try to make information available to everyone," she said. "Nursing research provides a significant body of knowledge to advance education practices and, hopefully, to shape health policy. Shaping health policy is always an end point to research findings," she said.

Her favorite part of her job is the ability to change lives based on sound, reproducible evidence-based research. "The biggest part was the idea that I could mold nursing into what I wanted to be. All I had to do was imagine it," Johnson-Mallard said. "Nursing is a field where you can work in a health care setting where you can make a choice to be at the bench (conducting research), in the classroom or you could absolutely be at the bedside."

One of Johnson-Mallard's goals in her research is trying to make information available, understood and translatable to create positive and sustainable behavioral changes among adolescents and young adults.

The path to becoming a nurse was not always easy, she said. But once she received her degrees, she knew she could work in a variety of different fields.

She received her bachelor's degree in nursing from Florida A&M University and her master's degree in nursing from UF. After that, Johnson-Mallard's next step was working in gynecologic oncology.

"That was really sad because I saw a lot of patients die," Johnson-Mallard said. "In the '80s, they were admitted to the hospital because there wasn't a lot left to do. I lasted about six months and then I moved to orthopedics."

After a while, Johnson-Mallard said she felt she wasn't challenged enough. She then moved into the labor and delivery unit and found something she really loved.

"I've seen and played a role in thousands of births, and I've never become bored. I've never seen any child come into this world and it be the same every time," Johnson-Mallard said.

"That was incentive for me to go to graduate school to become a nurse practitioner."

As chair for the department of family, community and health system science, Johnson-Mallard will assist faculty members in moving their research, scholarship and teaching goals forward.

"I joined a dynamic faculty under the leadership of an innovative and visionary dean," she said. "I have not looked back but forged on."





Photo by Jesse S. Jones

▲ In June, the College of Medicine graduated its newest class of physician assistants from the School of Physician Assistant Studies.



Photo by Mindy C. Miller

▲ College of Dentistry students celebrate after receiving their white coats during the college's White Coat Ceremony.



Photo by Mindy C. Miller

▲ White coats wait to be worn by College of Dentistry students. The college holds a White Coat Ceremony each year to present students with their first white coats.

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