

Spring 2007

FLORIDA STATE UNIVERSITY COLLEGE OF MEDICINE

FSU MED

From Hippocrates to the present, innovative teachers have opened new frontiers in medical education.



THE ART OF TEACHING

PLUS:

TASTING LIFE AS A DOCTOR
UNDERGRADS WARM UP TO THE BENCH



When most people think of a medical school, they envision an academic medical center with a large teaching hospital, where the main activities are patient care and research.

In fact, the main business of any medical school is teaching. It is the education of physicians and scientists who will go on to provide quality health care for people and advance our medical knowledge.

We are fortunate that the FSU College of Medicine was established without conflicting expectations as to its core mission. We are not a health-care delivery institution, so we can focus our energies on medical education.

In choosing the artwork at the entrance to the main medical school building on the FSU campus in Tallahassee, we wanted to make a statement regarding the rich heritage of medical education, beginning with Hippocrates.

Known as the father of clinical medicine, Hippocrates introduced a code of medical ethics more than 2,000 years ago that remains the basis of the oath physicians take to this day. One of the tenets of this oath is that physicians have a responsibility to pass on knowledge to future generations of healers.

FSU's distributed model of medical education gives doctors in communities around the state the opportunity to exercise this part of the Hippocratic Oath by sharing with our students their expertise in both the art and science of medicine.

Along with clinical educators, our biomedical sciences faculty and graduate program are critical to providing a first-class learning environment with the necessary scientific foundation. The Ph.D. program in biomedical sciences fosters an atmosphere of discovery in which medical students can participate, either through coursework or through supervised research projects.

Our faculty includes some of the nation's best medical educators. Many came from institutions where they had won multiple teaching awards and have also earned accolades at FSU, statewide and nationally.

In this issue of FSU MED, you can read more about the great teaching that takes place in the classrooms, small-group rooms and laboratories of the FSU College of Medicine and in the practices of the excellent community physicians at its regional campuses.

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format upon request.



**At the frontier of teaching****10**

by Doug Carlson

An atmosphere in which professors devote most of their time and energy to teaching is a novel concept in today's climate of medical education. Not quite as radical as the approach Hippocrates once took, but enough to make the College of Medicine a place where teachers are reminded of their calling.

Year 3: A day in the life**16**

by Doug Carlson

After two years of rigorous preparation, FSU medical students find new challenges and a wealth of opportunities in the third year. For these aspiring physicians it's time to live and learn in the real world, and to get a taste of what it means to be called "doctor."

Lighting fires in the lab**22**

by Nancy Kinnally

Every great doctor or scientist was first an undergraduate. Igniting the first spark of discovery in the mind of a potential researcher or physician can be among the most satisfying professional experiences for a faculty member. It's also critical to launching the next generation of medical scholars.

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Things you don't expect to find in medical school

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A terrazzo panel of Hippocrates at the entrance to the medical school reminds visitors of where medicine began.

International appeal

When Tel Aviv University began modernizing its pathology course 15 years ago, the faculty sought a resource that could be used with a traditional lecture format, as well as laboratory-based and case-based instruction.

Like other universities around the world, TAU turned to WebPath, a multimedia teaching resource developed by Dr. Edward Klatt and supplemented by colleagues worldwide.

"The old traditional pathology course moved from 240 or more contact hours of lectures and laboratory to a model in which the students assumed significant responsibility for their own education," said Ilan Hammel, professor of pathology at TAU. "WebPath was one of the main tools to implement the new model in our teaching syllabus."

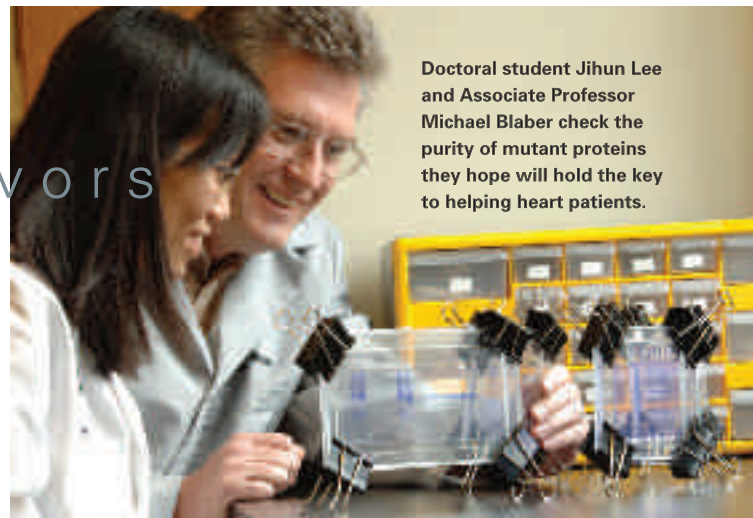
Director of the second-year curriculum and professor of biomedical sciences at the FSU College of Medicine, Klatt began collecting images of both gross and microscopic pathologic findings, as well as related radiologic imaging, more than 25 years ago.

Having taught at the University of Southern California and the University of Utah before coming to FSU in 2001, Klatt has served as director of autopsy services at two academic medical centers and as deputy medical examiner for the County of Los Angeles.

Now in its 10th edition, WebPath is continually updated. It now contains more than 5,000 images with accompanying text, as well as more than 3,600 examination items, 55 laboratory and problem-based learning sessions, and 45 tutorials in specific subject areas.

"WebPath continues to evolve as a teaching tool," Klatt said.

Most of the content of WebPath is available to medical and biomedical sciences students worldwide via the Internet, but a CD-ROM version is used by medical schools around the world that have developed their pathology curricula using WebPath as a primary component.



Doctoral student Jihun Lee and Associate Professor Michael Blaber check the purity of mutant proteins they hope will hold the key to helping heart patients.

Patients may soon take heart in new treatment option

Heart damage due to blocked arteries remains the leading cause of disease and death in the Western world.

Associate Professor Michael Blaber and a team of dedicated researchers in the department of biomedical sciences are working on a unique way to treat the problem.

The key to a potential solution? Mutant forms of human protein.

Obstructed blood vessels and clogged or blocked arteries typically are treated through angioplasty (the mechanical widening of a vessel) or bypass surgery. Some patients suffering from heart disease, however, are classified as "no-option."

They have numerous small blockages that cannot be treated through traditional approaches. In most cases, they are sent home with a predicted life expectancy that, no matter how it's phrased, sounds like a death sentence.

A new approach to the problem called therapeutic coronary angiogenesis is creating hope through the injection of human proteins into affected areas.

The process is successful in getting the patient's own body to grow new blood vessels and restore blood flow. However, one of the most promising proteins, called FGF-1, has physical properties that affect its stability when used in angiogenic therapy.

Blaber has been awarded a \$264,000, three-year American Heart Association grant to create artificial "mutant" proteins that would mimic FGF-1, but without the stability issues. So far, the proteins engineered at the College of Medicine have exhibited greater stability at high temperatures, as well as potency in stimulating cell growth.

The work has enormous potential commercial applications, but that's not what is driving Blaber.

"This research offers the potential to treat people who currently are being sent home to die," Blaber said. "Sometimes when we make these mutants we aren't sure what to expect. Sometimes the mutant form of the protein is unstable and sometimes the opposite result happens."

"But we've tested a group of mutants with unusual properties of increased stability and activities – good properties. In some cases, it was unexpected, but the results are very promising."

On Feb. 1, Blaber also received a new \$219,000, three-year grant from the National Institutes of Health to study a different set of proteins called kallikreins. The study could shed light on ways to control or repair damage in diseases such as multiple sclerosis, where inflamed nerves have lost some of their protective coating.





Dr. Yoichi Kato's research is supported by a grant from the Bankhead-Coley Cancer Research Program funded by the Florida Legislature.

Cracking the cancer code

Access to DNA, the double-helical strands of nucleic acids that carry genetic information, is regulated by histone proteins which are responsible for packing the genetic code into its tightly bound form called chromatin in the nucleus of cells.

Johanna Paik, research assistant professor in the department of biomedical sciences, is delving into the regulation of these proteins, hoping that a greater understanding will open up new avenues for cancer researchers to explore.

The National Institutes of Health awarded Paik a \$213,000 grant with the expectation that her work could have substantial implications.

"If the process [of packaging DNA] goes wrong we can have chromosomal abnormalities that can lead to cancer," Paik said.

"Trying to understand how the cell regulates access to DNA is basic science research, but if we understand these processes better, it will allow us to move forward toward treatments for cancer."

Paik came to FSU after finishing her post-doctoral training at Cancer Research UK in London. She earned her Ph.D. from the Max Planck Institute for Molecular Genetics in Berlin.

Dr. Yoichi Kato, assistant professor in the biomedical sciences department, is pursuing cancer research from another angle.

Kato is focusing on how molecular changes in cells and tissue work in the formation of the vertebrate nervous system. The work has attracted a \$146,000 grant from the Bankhead-Coley Cancer Research Program, funded by the Florida Legislature to encourage cancer research among the state's promising young scientists.

Kato received his Ph.D. and M.D. at Nagoya City University Medical School in Japan and did a research fellowship at Harvard University.

Finding the fear factor

When George Mallory was asked in 1923 why he wanted to climb Mount Everest, he issued the famous reply, "Because it's there." The British mountaineer attempted the climb the following year, never to return.

Something in Mallory's brain circuitry had determined that, for him, the thrill outweighed the risk.

The same cost-benefit equation plays out in the mind of a drug user, according to Mohamed Kabbaj, assistant professor of biomedical sciences.

"If you take a bunch of animals and put them in novel environments, some animals like to explore these novel environments while others are more fearful," Kabbaj said. "So those animals that explore more of this novel environment, they are more interested in drugs. They are novelty seekers if you will."

With support from the National Institutes of Health, Kabbaj is studying how differences in the brain's "reward circuitry" relate to novelty-seeking behaviors and drug use patterns in rats. He is principal investigator on a two-year, \$150,000 NIH grant focusing on gender differences in novelty seeking.

Kabbaj separates the rats into "high responders," those willing to venture, for example, into the middle of an empty black box, and "low responders," those that cower in the corner or along the edge.

While the high responders have a clear tendency to take more drugs, stress can turn a low responder into a high responder.

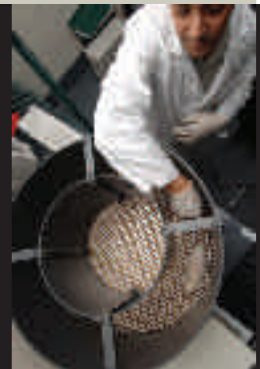
"This model is a good example because some humans take drugs as part of their novel sensation seeking, while others take drugs as a response to stress," he said.

Using micro-array technology, Kabbaj is looking at about 20 genes that could play a role in drug addiction, while he also is trying to determine whether

environmental factors, such as an enriched adolescent environment, can reverse an animal's tendency to take drugs.

"The goal is to make these high responders behave like low responders," he said. "It could be a drug. It could be social enrichment. We are still trying to find out."

Kabbaj is also co-principal investigator, with Professor Zuoxin Wang of the department of psychology, on a \$1 million, five-year NIH grant to examine the relationship between social bonding and drug addiction, with prairie voles as the animal model.



Rats that actively explore a new environment are more predisposed to drug addiction.



Rats that back themselves into a safe corner when put into an empty box are less likely to do drugs.

RAY STANYARD



A new AAMC grant will focus on the treatment of chronic illnesses such as diabetes and heart disease.

Curriculum gets chronic-care infusion

One in three Americans is affected in some way by chronic disease, yet most medical students leave school without being immersed in ongoing care for people with diabetes, heart disease and other common lifelong ailments.

As one of 10 schools in the United States chosen to receive a \$100,000 "Enhancing Education for Chronic Illness Care" grant from the Association of American Medical Colleges, the FSU College of Medicine is doing something about that.

By adjusting and expanding the curriculum, the College of Medicine will make sure graduates enter residency with valuable exposure to an area of medical care especially relevant in Florida, where 18 percent of the residents are elderly – the largest population of elderly residents in the nation.

More than 70 medical schools applied for the grant.

"The AAMC is concerned students are not being adequately prepared to understand chronic illness," said David Steele, associate dean for curriculum and

evaluation and principal investigator on the grant along with Dr. Alma Littles, senior associate dean for academic affairs.

"During a four-year expansion of the curriculum we will expose students to the concept of team-based care, utilize longitudinal care with patients, and teach students the humanistic and psychosocial components of care. They'll also learn the natural history of disease and find out what it's like to live with congestive heart disease, diabetes and depression."

Those lessons will come from participating in such programs as "Walk a Mile in My Shoes," a self-care workshop for the chronically ill in which students will role play by being diagnosed with chronic illness and given a treatment plan to follow.

Another program, Chronic Illness in the Cinema, will expose students to the everyday life of the chronically ill through such films as "Soul Food" (diabetes, hypertension), "Ordinary People" (depression), "What's Eating Gilbert Grape?" (obesity) and "My Left Foot" (cerebral palsy, disability).



Rent-free living

For Mason Shamis, saving \$5,000 a year on rent and living across the street from the College of Medicine were just a couple of the many benefits of living in the Southern Scholarship Foundation's Stone House.

"Not to mention I was able to sleep longer without the burden of having to find parking in the mornings," said Shamis, a fourth-year medical student who lived in the Stone House for a year.

Students live rent-free in the scholarship house and are only responsible for their share of utilities, groceries and other household items. That works out to about \$800 a semester.

Each student living in the Stone House has his own furnished, private bedroom and shares a bathroom with one other person. The house includes a furnished living room, dining room, fully equipped kitchen, laundry room, guest bathroom, patio and wireless Internet access.

Shamis said living together in the scholarship house enabled him to bond with his fellow medical students outside of medical school. The students living in the Stone House even formed their own study group and spent much of their free time together.

"I think the Stone House is probably the most underutilized, underpublicized benefit at the College of Medicine," said Shamis.



RAY STANYARD

The College of Medicine (background) is just accross the street from the Southern Scholarship Foundation.

The Southern Scholarship Foundation was co-founded by the late Mode L. Stone, former dean of the College of Education. He recognized back in 1952 that many students had to forgo college because of cost. His solution was to work with several other FSU faculty members and a local attorney to build and purchase houses and offer scholarships to deserving students in the form of rent-free housing.

The Stone House, one of 27 Southern Scholarship houses in Florida, was designated for FSU medical students in 2004 and can house nine students. It is located just accross Stadium Drive from the medical school. Mary Lois Mayfield, president of the Southern Scholarship Foundation and daughter of Mode Stone, said her family members agreed that the mission of FSU's medical school – to educate physicians to work in rural and other medically underserved areas – was one their parents would have embraced.

"They were about service to their God and to mankind in any way that was presented to them," Mayfield said. To be eligible for scholarship housing, students should have outstanding character, integrity and motivation. GPA and financial need are also considered. Information and applications can be found at www.southernscholarship.org.

- Amber Smalley

Steven Weitzman surveys a terrazzo panel of Elizabeth Blackwell upon completion of the work in his Maryland studio.

History in concrete

A true innovator in the art world, Steven Weitzman shares a philosophical link with the subjects he has depicted in terrazzo murals at the main entrance to the College of Medicine.

The three figures from the history of medicine selected by a College of Medicine committee were willing to accept the risk of ignoring tradition to create lasting advances for society. Likewise, Weitzman has pioneered the techniques of public art.

When the College of Medicine contracted to have the artist create tributes to physicians Hippocrates, Elizabeth Blackwell and John Gorrie, Weitzman spent a year at his Brentwood, Md., studios engineering three 3,500-pound panels using methods of his own invention.

The father of clinical medicine, Hippocrates opened a medical school in Greece in 400 B.C. that completely contradicted the medical beliefs being taught at that time. He was the first to indicate that the mind, not the heart, was the source of thoughts and feelings, and he prescribed rest, hygiene, and diet as an effective healing process. His teachings would become the basis for Western medicine.

Blackwell didn't accept the belief that women weren't capable of being physicians. In 1849 she became the first woman to graduate from medical school in the United States. She later helped found a medical school for women, an especially relevant accomplishment at the FSU College of Medicine, where 66-percent of current first-year students are female.

Gorrie received the first U.S. patent for commercial refrigeration in 1851 when he developed the basis for modern air conditioning systems as a way to combat yellow fever. The inventor and one-time mayor of Apalachicola noted that "nature would terminate the fevers by changing the season" and set out to find a way to do the same to help treat his patients.

Weitzman has spent a lifetime finding new ways to express his artistic vision.

The results are striking.

The panels are imbedded in the auditorium-wall façade that greets visitors to the main campus. They are made from a patented formula of poured, colored concrete into which Weitzman mixes mineral pigments to create dramatic effects.

COURTESY OF STEVEN WEITZMAN



at the front lines

The FSU College of Medicine will lease space at Daytona Beach Community College and Indian River Community College for its new regional campuses in Daytona Beach and Ft. Pierce. Artist renderings show new buildings to be constructed by the community colleges in Daytona Beach (right) and Ft. Pierce (below).



New campuses, new leadership

Two longtime Florida physicians have been selected to lead the medical school's new regional campuses in Daytona Beach and Fort Pierce.

Dr. Luckey Dunn, a private-practice family doctor and medical director for the city of Daytona Beach, will serve as dean of the Daytona Beach regional campus. Dr. Randall Bertollette, a Vero Beach pediatrician since 1979, will be the dean in charge of the Fort Pierce regional campus.

Students will begin arriving at the new campuses in June. The Daytona Beach campus is located at Daytona Beach Community College, and the Ft. Pierce campus is located at Indian River Community College. Eventually the campuses will be home to 20 third- and 20 fourth-year medical students, who will complete clinical education requirements at area hospitals and medical facilities.

"We are fortunate to have two new campus deans who have been active in medical education and who also have strong, longstanding relationships within the local medical communities in which they will serve," said Dr. J. Ocie Harris, dean of the College of Medicine.

Dunn, a distinguished graduate and valedictorian at the U.S. Air Force Academy in 1976, has been an attending physician with the Halifax Medical Center family medicine residency program since 1993. He served 21 years in the Air Force Reserve.

Bertollette, a former president of the Indian River County Medical Society and current Florida Medical Association board member, was vice chief of staff at Indian River Memorial Hospital.

In private practice since 1991 in Vero Beach, Bertollette has served as senior staff pediatrician for the Florida Child Protection Team as a certified expert with the Florida Attorney General's office of victims' assistance.

The medical school now has six regional campuses, with the other four located in Orlando, Pensacola, Tallahassee and Sarasota.

Dr. Mel Hartsfield recently was named dean of the Tallahassee campus, replacing Dr. Eugene Trowers, who was named assistant dean for diversity and outreach at the main campus.

Hartsfield, a graduate of FSU's Program in Medical Sciences, came to FSU from Archbold Memorial Hospital in Thomasville, Ga., where he was an emergency medicine physician and vice-president of medical affairs.



Dr. Luckey Dunn



Dr. Randall Bertollette



RAY STANYARD

Tallahassee campus reaches north

Liberty Taylor is one of three FSU medical students spending the third year in Thomasville, Ga.

The Tallahassee regional campus of the FSU College of Medicine has expanded to nearby Thomasville, Ga., with support from the Williams Family Foundation of Georgia Inc. and John D. Archbold Memorial Hospital.

A \$1 million gift from the foundation will be matched with \$750,000 from the State of Florida to support the clinical training program in Thomasville. In addition, Archbold has committed \$500,000 through a combination of in-kind contributions and direct financial support.

Already, three FSU medical students – Amy Reimer, Liberty Taylor and Randa Perkins – are spending their third year on rotations with Thomasville physicians.

Reimer said the community has been extremely inviting, and the doctors are outstanding.

“The hospital itself is also on the cutting edge of information technology,” Reimer said. “Plans are well underway to have a paperless medical record throughout the hospital network that’s available for community doctors also. Radiology is already completely computerized up here, and we’re rapidly moving forward. I feel like I’ve been given a present by being chosen to come to Thomasville. I’m having the time of my life.”

Williams Family Foundation Executive Director Alston Watt said Thomasville’s proximity to FSU presents the community with unique opportunities, and the foundation seeks to take advantage of those.

“When we learned of the four-year medical school being established and accredited, we saw that as a win-win situation for FSU and our local medical center here,” Watt said. “We realize that the quality of care at a medical institution can be improved by having the students doing rotations there. The medical students keep the physicians on their toes.”

Watt also hopes students assigned to Thomasville will see the benefits of living in a small community.

“It’s fun to see the medical students enjoying all of the community, not just going to work and leaving, but enjoying all of what Thomasville has to offer,” she said.

Archbold President and CEO Dr. Jim Story said the physicians in Thomasville enjoy working with medical students.

“It makes us all have more energy when we have students,” Story said. “So far it has worked out well. The students seem to be very pleased, and I know our physicians are very impressed with the caliber of students that are coming from Florida State.”

Dr. Rudy Hehn, a family physician and alumnus of FSU’s Program in Medical Sciences, serves as the director of the clinical program in Thomasville.

Orlando Regional Medical Center supports medical student training

A \$100,000 gift from the Orlando Regional Healthcare Foundation is helping enrich the educational experience of students assigned to the medical school’s Orlando campus for their third and fourth years of medical school.

FSU PHOTO LAB



Dr. Michael Muszynski

“The generous Orlando Regional Healthcare gift lends additional support for regional campus programs and projects that are traditionally faced with funding challenges,” said Dr. Michael Muszynski, dean of the Orlando campus.

The fund enhances the ability of the Orlando campus to meet its most pressing needs, including funding for visiting professorships and scholar programs, faculty development and advising, student initiated and directed projects, and student support.

“We are proud to be a partner of Florida State University’s College of Medicine and are pleased to provide additional resources to help fund needed programs,” said John Bozard, president of the Orlando Regional Healthcare Foundation. “We appreciate their commitment to our community and we want to provide the best medical education possible to their students, as they are our future physicians.”

Muszynski said FSU’s relationship with Orlando Regional Healthcare as a teaching partner has been crucial to the success of its innovative model of medical education.

“Without the philanthropic support from donors like ORMHC, the FSU College of Medicine would not be able to live up to the aspirations we all hold as it continues to create the next generation of caring physicians in Florida,” Muszynski said.

- Amber Smalley

If you would like to discuss gift opportunities at the College of Medicine, please contact Assistant Dean for Development Robert C. Dawson, Ph.D., at (850) 644-4389 or robert.dawson@med.fsu.edu.

RAY STANVARD



Suzanne Johnson

Historic honor

During a career spanning more than 30 years, Suzanne Bennett Johnson has established herself as one of the world's leading experts on methods to assess and improve patient adherence to diabetes regimens and the psychological aspects of genetic testing for type 1 diabetes.

She is unique in making significant contributions in the areas of education, research and clinical care of patients. So unique that she has been selected for a rare honor from the American Diabetes Association.

Johnson, professor and chair of the department of medical humanities and social sciences, will be the third person in ADA history chosen for a Behavioral Medicine and Psychology Lectureship for Distinguished Contributions.

The honor is limited to behavioral researchers with outstanding achievement or innovative contributions that have led to advances in the study and understanding of behavioral aspects of living with diabetes and its prevention and treatment.

Part of the honor includes presenting a symposium lecture at the 2007 ADA annual meeting in Chicago in June. In addition, Johnson will lead interest group discussions during scientific sessions at the meeting.

"Suzanne is the consummate triple threat, a disappearing species able to excel in all three disciplines of education, clinical care and research," Dr. Desmond Schatz, medical director of the University of Florida Health Science Center diabetes center, wrote in supporting Johnson for the award.

"She has the unique ability to balance her full-time commitment to her trainees, patients and their families with her intensive research involvement."

Tallahassee pediatric endocrinologist Dr. Larry Deeb, who works with Johnson on a comprehensive diabetes research project funded by the National Institutes of Health, recently was elected president of the ADA. Deeb, a clinical professor at the College of Medicine, is expected to introduce Johnson in Chicago.

Dr. J. Ocie Harris, dean of the College of Medicine, describes the honor as a tremendous achievement.

"It's a well-deserved recognition for her many contributions, not the least of which is an ability to share her knowledge and experiences with our students," Harris said.

RAY STANVARD



Beyond compassion

A caring family physician often has enough to worry about in trying to provide quality time with every patient. In Dr. George A.W. Smith's case, compassion demands something more.

Smith's commitment to his work at the Escambia Community Clinics in Pensacola extends to the clinic's existence as an alternative to emergency medicine, with patients able to receive reduced-fee care otherwise unavailable to them.

The clinic is a collaborative effort among Sacred Heart Hospital, Baptist Hospital and Escambia County. Its focus is on providing access for underinsured, uninsured, indigent and medically needy patients in an outpatient setting.

Ordinarily, hospitals and local governments struggle to form and maintain the type of partnership that has made Escambia Community Clinics successful since opening in November 1992. Smith, the clinic's medical director and principal health-care provider, gets much of the credit.

"Dr. Smith has served as an invisible focal point, literally a fulcrum for the continued teamwork by these unnatural partners," said Dr. Dennis Mayeaux, a Milton physician and colleague who felt that Smith should be recognized for his efforts.

The Florida Academy of Family Physicians, acting on Mayeaux's nomination, selected Smith as its 2006 Physician of the Year.

Smith, who is married and has four children, combines his demanding work at the clinic with service to the local community that includes sitting on multiple boards of



Dr. George A.W. Smith (left) was recognized by the Florida Academy of Family Physicians as its 2006 Physician of the Year.

directors, advisory committees, panels and agencies.

By taking on the added level of involvement, he has positioned himself to influence the decisions that have kept Escambia Community Clinics a viable alternative for patients with few options.

In addition, Smith teaches College of Medicine students from the Pensacola campus during family medicine rotations.

"His gentle manner, kind disposition and genuine concern for the health-care needs of the underserved have without a doubt kept petty disputes from dismantling the clinic," said Mayeaux, family medicine clerkship director for the Pensacola campus.

"All the while he has continued to maintain a full-time presence as a family doc in the clinic, quite underappreciated by those he serves," Mayeaux said. "As a sea of humanity that most of us do not see in our private offices floods by, he remains calm, seemingly unhurried, and gives attention to all."

The FAFP honored two other physicians with College of Medicine ties. Dr. Wendy Wozniak won the organization's Part-Time Educator Award. She has taught FSU medical students at the Pensacola campus in the six-week family medicine clerkship since 2002.

Dr. T. Byron Thames, a member of the Orlando campus community board, received the FAFP Distinguished Service Award. A past winner of the Florida Family Physician of the Year recognition, Thames also serves on the national board of the AARP.



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At the frontier

by Doug Carlson



Elizabeth Blackwell, M.D.

When graduating medical students recite the Hippocratic Oath, one of the pledges they make is to share their knowledge with future colleagues.

The tradition traces back 2,400 years to Hippocrates' creation of a medical school on the island of Cos. There, the Greek physician began passing on physical explanations for illness that departed from then-accepted rationale involving evil spirits and disfavor of the gods. His teachings became the basis upon which Western medicine was founded.

The responsibility of a physician to educate the next generation is among the most sacred tenets of the profession, a concept not lost on Dr. Lisa Granville, associate chair in the department of geriatrics.

"One of the things I had learned is that 'physician' means educator," Granville said. "Originally, I thought I would be teaching patients how to take care of themselves. It was sometime after that I knew that if I went into academics I would get to teach students, health staff and peers."

A fourth-generation teacher, Granville had a great-grandmother who taught in a one-room schoolhouse on the prairie – like a page straight out of a Laura Ingalls Wilder book.

Even when she decided to go to medical school, Granville knew she'd teach. She'd found her calling. But no sooner had she found it than she felt the rug being pulled out from underneath.

"I think many institutions across the country acknowledge that as a medical school they have an obligation to provide education, but they don't actually have the funds or ability to pay you to teach," she said.

"So what they say is, 'generate your salary through clinical services. We need an administrator and we have some funds for that. Get research dollars – teach in your spare time.' You fit teaching in when you have to, and a lot of people find that extremely frustrating."

The "publish or perish" atmosphere didn't embrace Granville's greatest strengths, seeming instead to tolerate them. She had no

*"It is not easy to be a pioneer,
but oh, it is fascinating!"*

– ELIZABETH BLACKWELL, M.D.

"You have freedom here to actually focus on your teaching without getting penalized," said Professor Charles Ouimet, course director for clinical neurosciences.



of teaching



Ouimet said engaging students in dialogue makes him feel successful as a teacher.

desire to leave Miami, where she and her mother were born and raised, but when the College of Medicine contacted her she was intrigued.

Though Granville attracted research grants, excelled as a teacher and was never made to feel unappreciated, she felt something missing. Perhaps her restlessness was a hearkening to the schoolhouse on the prairie.

What better enticement, then, than the chance to come to the first new medical school in a generation and be a part of life on medical education's frontier?

"I thought, 'There hasn't been a new school in over 20 years and if you want to be a part of something really exciting and new, how often is that going to happen in my academic lifetime?' " Granville said. "Given its mission statement, goals and objectives, it was just such a good fit. It was irresistible."

The Florida Legislature never considered granting the College of Medicine an academic medical center for economic reasons. Consequently, the College of Medicine is one of a couple dozen among the 125 M.D. programs in the country that does not have its own teaching hospital.

In hindsight, that deviation from the norm among medical schools has in many ways been a blessing.

"We weren't going to have a large hospital full of clinicians, so we decided to create a model that had experts in the specific areas of the curriculum. That looked pretty good on paper, and many of us were attracted to that because we had all generally worked in settings where teaching took second place, or last place," said Dr. Edward Klatt, who previously served as director of autopsy services at two academic medical centers. He teaches systemic pathology and laboratory medicine and is director of the second-year curriculum.

"That was the financial constraint: the institution had to make money to survive," he said. "Teaching reduced the competitiveness of the institution because teaching takes time. It slows you down."

College of Medicine students spend their first two years at the main campus in Tallahassee, where faculty are committed first and foremost to educating them in basic and clinical sciences. Research faculty members are responsible for most of the grant applications and also play an important role in teaching.

"When we recruit faculty we give them clear expectations," said Dennis Baker, assistant dean for faculty development. "Some have research as their primary assignment, while others are hired to focus on teaching. Because of that, there's an expectation of innovative teaching from these experienced faculty who have been recruited for that purpose."

The first time Charlie Ouimet walked into a classroom as a 19-year-old teacher in New Bedford, Mass., he received a memorable introduction. "Somebody threw a chair at me," he said.

The value of innovative teaching hit him squarely between the eyes. The chair narrowly missed.

"I learned that you better make what you have to say relevant, and you have to find some way of capturing the students," he said.

"I think anyone who goes into the teaching profession has to ask themselves this question: 'What's the difference between a professor and a text book?' And if there's no difference you shouldn't be teaching."



Ouimet, course director for clinical neuroscience, already taught at FSU when the College of Medicine opened. He was named the top teacher in the Program in Medical Sciences for nine out of 10 years through 2000.

So appreciated was his teaching ability that his name was added to the award in 2001 to "allow him the pleasure of presenting the award to a colleague instead of accepting it one more time." He went on to win FSU's highest teaching honor.

Ouimet is one who places an emphasis on research, but has found an atmosphere at the College of Medicine where it blends with his love of teaching. His work in the area of the brain's recovery from damage has led to multiple major grants from the National Institutes of Health.

So how does Ouimet innovate? He constantly evaluates how he teaches and whether or not the students are absorbing the lessons.

He looks for clues. He writes critiques on every class he teaches and revisits important topics from different perspectives over the course of the semester. When a large percentage of students miss the same question on an exam, Ouimet goes back to how and why he taught that particular information and looks for a way to make sure the students get it.

He doesn't grade on a curve and was pleased last semester when 100 percent of his students correctly answered an exam question about aneurysms.

"If a patient comes into the ER with a pupil that is enlarged and a severe headache of sudden onset, you must assume this is an aneurysm until you can prove otherwise because the person could likely die," he said. "What percentage of my class do I want not to know that?"

"Many of us were attracted to (FSU's model) because we had all generally worked in settings where teaching took second place, or last place."

**- DR. EDWARD KLATT, PROFESSOR AND DIRECTOR
OF THE SECOND-YEAR CURRICULUM**

“We’re taught about the importance of creating a strong patient-physician relationship. To me, this is truly the art of medicine: knowing the options and being able to tailor to each individual patient’s needs.”

- MICHELLE ASHER, THIRD-YEAR STUDENT

“If you grade on a curve you might expect half of them to get it wrong, but if I go to the ER, I want my doctor to know that. I don’t want a 50-50 chance.

“Some faculty feel that part of our job is to separate students out and we have to do that to serve the residency programs,” he said. “The reality I see is that the person who graduates last in a class is called ‘doctor.’ ”

Occasionally, Ouimet likes to slip in the back during a lecture to watch how students learn – or don’t learn.

“We’ve all slept through courses, right? There is a study showing students will drift off after about 10 to 15 minutes, but our class goes for an hour and a half,” Ouimet said. “If you start teaching at 1, and now it’s 1:30, they haven’t heard the last 15 minutes of what you’ve had to say.

“We all have egos and we don’t like to think everyone is sitting there ignoring what we have to say, but that’s the reality of it. And I can remember being a student – that’s exactly how it was.”

So Ouimet engineers his lectures to include well-timed surprises often including humor. For instance, he’ll call on a student to answer a question and simultaneously display a candid photo of that student on the screen.

It’s literally a wake-up call. But it’s more than that.

Ouimet makes lectures give-and-take sessions rather than continuous tests of attention span. On his PowerPoint slides he asks questions in addition to listing facts. He then calls on students to answer, encouraging critical thinking and problem solving instead of fact recall.

“I feel I am at my best when the students have forgotten to take notes because they have become engaged in rigorous debate,” Ouimet said.

Watching his Friday neuroscience lab is a lesson in how the teaching environment at the College of Medicine impacts students. Inspired by a brainstorming session on ways to get students more immersed in the material, Ouimet lets them become the teacher.

Using a digital camera, lab groups take photographs of sectioned brains, then present their findings on a mock case study to other class members by way of a PowerPoint presentation. They’ve gone from identifying areas of the brain, like memorizing

states in geography class, to explaining why a lesion here might have caused this patient’s problem.

“They do incredible jobs. I am completely blown away,” Ouimet said. “I give them hard questions and they do these professional presentations. It’s unbelievable.

“We emphasize the logic as much, sometimes more, than individual facts. We emphasize logic and problem-solving, and so as they give their presentations there’s this emphasis on why did you think what you thought? Why did you come to this conclusion? It’s been extremely rewarding for us to watch the students perform at such a high level.”

And it’s been rewarding for the students, who aren’t sleeping through neuroscience.

Ouimet succinctly describes his teaching philosophy: “If you have failed to engage the class, you might as well have stayed home.”

Dr. Gene Ryerson had 30 years of experience in medical education when he arrived in Tallahassee. The first time he handed one of his written tests to Klatt for evaluation, it came back filled with red marks.

Chair of clinical sciences, Ryerson didn’t blush, or blanch. He took the suggestions as a way to improve his test-writing skills, not once feeling an urge to announce the 30 teaching awards on his curriculum vitae, including four Hippocratic awards for teaching excellence, the highest honor awarded medical school faculty at the University of Florida.

Ryerson isn’t the type who fights for a corner office. Yet, office location is something he sees as relevant to being an effective teacher.

His office is on the third floor of the medical school, easily accessible to students who spend much of their time in the learning communities directly across the hall. Inside those communities, in small-group learning rooms, is where Ryerson believes he does his best teaching.

He shares with groups of eight or fewer students topics related to material that has been covered in lectures and which they are likely to encounter as physicians. He asks them to consider a condition – shortness of breath, or jaundice, for example – and to explain its relationship to material they have been presented in class.

Together, they explore real-life applications of scientific information that might otherwise seem disconnected from patient care.

“It’s a wonderful learning environment where you can truly be innovative in your approach because you have such personal access to your students,” said Ryerson, who was named by students as outstanding clinical professor each of his first two years since arriving in January of 2004. “I’m not sure our students understand that – how much access they have to the faculty here compared to most medical schools.”

“Wherever the art of medicine is loved, there is also a love of humanity.”

- HIPPOCRATES

During the third and fourth years, students are assigned to regional campuses around the state, where they receive clinical training under the supervision of physicians at community hospitals and outpatient facilities.

Because students spend the majority of their time with community physicians during the last two years, it is critical that they be adequately prepared to enter the clinical world once they leave the main campus. This point was emphasized by Dean J. Ocie Harris during the development of the medical school's curriculum

"It was one of the things that Dr. Harris talked about a lot based on our distributed model and the fact that we were going to be using community physicians, not academics, as our primary teachers during the third and fourth years," said David Steele, associate dean for curriculum and evaluation.

"These are people who were going to be very busy taking care of their own patients and running their own practice. Dr. Harris always really stressed that our students needed to be better prepared clinically in terms of their abilities to do histories and conduct physical examinations than medical students at most other medical schools, who were sort of within the fold the whole time," Steele said.

"We were sending ours out and we wanted to make sure they went out with a very, very firm foundation. All those kinds of things were discussed very explicitly in the development of the curriculum at all levels."

Steele notes the emphasis during the first year on the doctoring course, which accounts for about one-third of the students' scheduled time. Granville is the course director.

The doctoring courses seek to teach students fundamental patient-centered skills that serve as the basis for safe and effective care.

"We're taught about the importance of creating a strong patient-physician relationship," said Michelle Asher, a third-year student at the Orlando campus. "To me, this is truly the art of medicine: knowing the options and being able to tailor to each individual patient's needs."

During the third and fourth years, medical students at schools with academic medical centers typically are working under the supervision of interns and residents. Physician faculty are, by necessity, devoting the majority of their time to patients.

The patient population at academic medical centers also tends to lean toward specialized care not necessarily representative of what students would be expected to encounter once they enter practice. Granville remembers that during her neurology rotation in med school three of the 10 patients she saw had an extremely rare neurological abnormality.

"I was getting the perception that, 'Boy, this is a pretty common condition,' " she remembers. Twenty years later, those remain the only three such cases she has encountered.

Third- and fourth-year students at the College of Medicine work directly with physicians, who typically take on one or two students over a six-week period.

"You have constant access to a more educated physician mind throughout the day, as opposed to only during teaching rounds at a program with the standard model of a student learning from an intern or resident the majority of the time," said Charles Hotte, a fourth-year student at the Sarasota campus.

"The atmosphere is not hierarchal and allows you to ask a more broad range of questions, which might have never been brought up in a more intimidating environment. It is the physician's job to teach us during a rotation, and it is taken very seriously amongst our faculty, while an intern or resident may be overwhelmed in their daily activities.

"This is something that I was made aware of, but did not understand the magnitude of its impact on my education, until I started my clinical rotations."

Convincing arguments are being made that medical education, in general, needs a fresh start in the United States. For many, the newest medical school in America offered a once-in-a-lifetime opportunity to be part of such a rebirth.

Few would argue that teaching medicine shouldn't be first in a medical school's commitment to its students and the general public. But somehow that notion has been slowly squeezed to the bottom of the priority list.

Dr. Kenneth Ludmerer, noted author and medical professor at Washington University, concluded as much when he thoroughly examined the state of medical education in the United States for his book *Time to Heal*, published in 1999. In it, he recounts a decades-long shift in priorities, particularly as related to medical schools operating academic medical centers.

"Medical schools were running on an ever-quickenning treadmill – seeing more and more patients to compensate for continuing drops in profitability per case," Ludmerer wrote. "As a result, the atmosphere within medical schools became decidedly less academic. The very adaptations medical schools made to preserve their operating income turned them away from their central purpose of education and research."

The effort taken by FSU to steer medical education in a new direction is exemplified by other pioneers in the history of medical education.



RAY STANYARD

The ability to draw directly on the screen of a tablet PC has enhanced the way FSU medical students take notes.

Like Hippocrates, Elizabeth Blackwell wasn't afraid to change accepted norms. She defied the belief that women weren't suited to become physicians.

In 1849, she became the first woman to graduate from medical school in the United States, finishing first in her class at New York's Geneva Medical College. In 1857 she developed the New York Infirmary, where women rejected for internships elsewhere could expand their skills as physicians.

The founding faculty of the FSU College of Medicine also sought to create room for change where institutionalized medical education had failed to do so. The result is teachers who value the opportunity they've been given.

"I think a great teacher is someone who focuses more on learning than on teaching," Steele said. "I think that really does exist here. Most of the people we brought in for educational leadership positions really are passionate about what they are doing.

"They're not the kind of people who get up in front of a classroom with the yellow, crumbling pages of a lecture they've given over and over. It's not to say people at other medical schools aren't being innovative, but one of the advantages we have here is the administration went looking for those types of people, created for them an environment in which they could thrive, and made it clear that education would be the preeminent value governing the way teaching faculty would spend their time."

Is that your final answer?

If they think it will be effective, faculty at the FSU College of Medicine don't hesitate to hijack a new technology for use in the classroom – even if it was first popularized on television game shows.

Professor Andrew Payer, who directs the first-year curriculum and serves as course director for clinical anatomy, embryology and imaging, has become a major proponent of Turning Point class-participation software for instant feedback on how well students absorb material, especially in large lecture settings, where dialogue is a challenge.

Turning Point allows professors to assess how well students understand the material by asking a question to which students quickly respond through a virtual keypad on their computer.

Results are instantaneously displayed on the overhead screen at the front of the room, not unlike audience responses on shows like "Who Wants to Be a Millionaire." Professors also have the option of discreetly checking individual responses, which might help in selecting a particular student to discuss a topic.

As one of the most technologically advanced medical schools in the United States, the College of Medicine instituted a standard platform of laptop computers for all students from Day 1. Combining the computers and wireless technology in every classroom, Turning Point allows for a real-time dialogue between students and teacher.

Payer pilot-tested the software in his anatomy class a year ago and now the program is being utilized in all first-year and many second-year courses.

"This software has changed my style of teaching," said Payer, a member of the faculty curriculum committee. "Instead of asking the class if they understand, I can throw a question up with a multiple choice answer and we can all look on the screen and see how the class performed.

"It can give me a better grasp of how I'm teaching and it gives the students a better grasp of how they are doing in comparison with their peers."

Payer came from a medical school where there was debate as to whether students should all be required to have computers.

"The computer is a very functional part of the whole educational enterprise," he said. "All of the students having laptops has opened up a whole door of new educational opportunities."

Those laptops gave way to notepad "tablet" computers for the Class of 2010, allowing for handwritten notes to be scribbled directly on the screen and saved as page files.

"They are particularly useful in a course like histology, where the slides you're being shown are all photos," said second-year student Tariq Hakky. "I can take the picture on my screen and circle the relevant points – 'This is the cell, this is the color that has changed' – directly onto the picture and save it that way, which is what you need."

Hakky's class still has the older laptops issued upon arrival, but he saw the need for tablets and purchased his own. His class notes are widely used by other students through the medical school's Intranet.

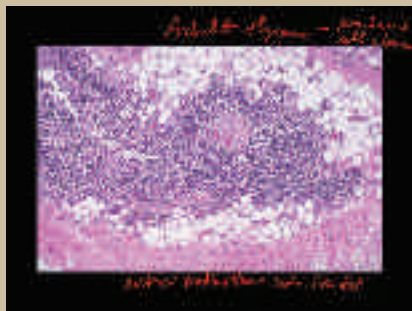
"Tablets definitely change the way you learn, and make it easier to keep up with what a professor is stressing during lectures and in courses like anatomy," said Hakky's classmate, Brian Zirgibel.

Students aren't alone in their preference for tablet computers.

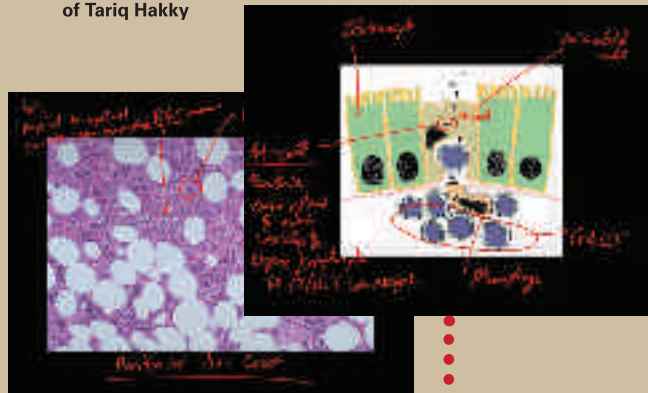
"It has changed my life," said Charles Ouimet, course director for neurosciences. "In the old days you had a laser pointer and you'd point and say, 'This is the corpus callosum.'"

"Now you can actually circle it and make notes directly on your slides and students can do the same. The best thing with the new technology is that in lecture, students no longer have to learn passively. If you lecture properly, it can be very active learning."

Payer also has introduced the use of sonogram technology in teaching clinical anatomy. The technology helps students better identify and understand organ location ahead of incision when dissecting in the anatomy lab.



Slides courtesy of Tariq Hakky



Year 3:



BEN TANNER PHOTOGRAPHY

During her obstetrics/gynecology rotation at Florida Hospital in Orlando, Aarti Patel started the day by visiting patients. She typed her notes into a computer to share and discuss with attending physician Dr. Ashley Hill.

During the third year of study at the College of Medicine everything changes. Possibilities once guarded in the imagination – thoughts about life as a physician beyond the mastery of seemingly endless scientific minutiae – begin to unfold in surprising ways.

You're still not an M.D., but while immersed in the daily regimen of required rotations, that significant detail often is obscured. Especially when a patient, with nowhere else to turn, looks in your eyes and says, "Doctor."

For four days in November, FSU MED followed a third-year College of Medicine student at regional campuses in Orlando, Pensacola, Sarasota and Tallahassee, taking a closer look at this pivotal year in medical education.

A day in the life

by Doug Carlson

Aarti Patel will never forget the second day.

It began at 6:30 a.m.

She barely knew her way around the labor and delivery ward at Florida Hospital, where she had witnessed the birth of a baby boy on Day 1 of her obstetrics/gynecology rotation at the Orlando regional campus.

This morning she was following the progress of an expectant mother, visiting her room on numerous occasions, trying to create a comfort level for both patient and student.

After 12 hours on the floor, it should have been time for her to head home, but Patel decided to stick around a while longer because delivery appeared imminent. Toward 8 p.m. the moment arrived, much differently than Patel had anticipated.

Dr. Ashley Hill, the attending physician and her preceptor from the Loch Haven Ob/Gyn Group, casually stepped to one side and nodded for Patel to take over.

"Wow, it was one of those situations where it's overwhelming and you're in the moment and don't really have time to think about being nervous," Patel said. "You're just thinking, 'I've seen this done. I know what I'm doing,' and you focus in and concentrate on your patient."

"It was really amazing. It was a little boy."

Dr. Hill's decision to let a third-year medical student deliver a baby on the second day of her rotation wasn't made casually. His intent was to put both patient and student at ease, and he had no doubt Patel was ready for the experience.

"It's the best way to learn. I wish I had had some of the same opportunities when I was in med school," said Hill, associate director of the obstetrics and gynecology department at the Florida Hospital Family Medicine Residency Program. "A couple nights earlier a third-year from FSU was first-assistant on an emergency hysterectomy. That's something I didn't get to do until my second year of residency."



RAY STANYARD

Ivan Porter prepares to assist during a surgery at Tallahassee Memorial Hospital.

Ivan Porter remembers the frustration of long nights during his second year spent learning complex material without knowing how, or if, he would ever use it.

Today, in The Surgery Center at Tallahassee Memorial Hospital, Porter is relaxed after two hours assisting Dr. Spencer Gilleon in an outpatient surgical procedure.

Porter felt outside his comfort zone during the psychiatry rotation that was his introduction to life as a third-year medical student at the College of Medicine.

That's no longer a problem.

"Surgery is the first time I felt like my idea of what medical school would be like," he said.

"The transition is something that takes time to appreciate. You're bombarded with all that information, writing it all down, and there doesn't seem to be any real-life application for it, and little by little you trickle onto these real-life applications."

"The more you go the more it seems like you apply what you actually learn and you feel like it wasn't wasteful, like you weren't going through all that for nothing."

Porter's candor is something Dr. Gilleon appreciates. He doesn't slow the hectic pace of his routine with Tallahassee ENT just because a medical student is beside him.

Patel said third-year rotations bring a new dynamic for a medical student. "The first time someone calls you doctor you're saying, 'I'm not a doctor yet,' and they say, 'To me you are.' That's a little overwhelming, but it feels good because we've been working for that for so long."

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Porter likes it that way. The initial urge to worry about making good impressions, he said, lasted about two weeks into his second rotation.

"For me, at least, now it's definitely less about trying to impress someone and more about trying to get all the information I can in a short amount of time," he said.

"Each rotation is a very small, concentrated amount of time and I think if I spent it trying to impress the preceptor I was working with it would be a waste for both of us.

"I realized I needed to stop worrying about it and just learn as much as I can so I can try to picture myself doing this and find out what aspects of this I like, and what aspects I could work with in my life in the future."

The patient, a quiet 81-year-old man with a faint smile, along with his wife and middle-aged son, flash a look of instant recognition when Stacey Lindo is first in the exam room to see them at Medical Center Clinic in Pensacola.

A week earlier she had given them flu shots.

This time, the elderly man with diabetes, seated in a wheelchair, is back because the wound on his elbow from a fall at home five weeks earlier is not healing properly. The wound was not mentioned when the family came in for flu shots.

They are grateful for the attention Lindo gives him, and although she's not the doctor, they say they appreciate her

listening skills and the time she takes with them. Lindo takes notes and leaves the exam room to meet in an office down the hall with Dr. Kevin Jones, her preceptor from West Florida Primary Care.

They talk briefly about Lindo's observations and a possible treatment plan, along with associated risks for an elderly diabetic man with a lingering cut.

"It's very exciting to go in there on your own and make your own observations before sharing them with the doctor," Lindo said. "You feel like, 'OK, this is what I think it might be,' and it's always a great feeling when you find out that, actually, that's what is going on and I would have treated him correctly."

Lindo's internal medicine rotation with Dr. Jones includes other opportunities for feedback outside of long days at the hospital. Each week he assigns, or allows her to choose, a topic to research and present on at the end of the week.

"You end up reading up on your patients that you're seeing during the day," Lindo said.

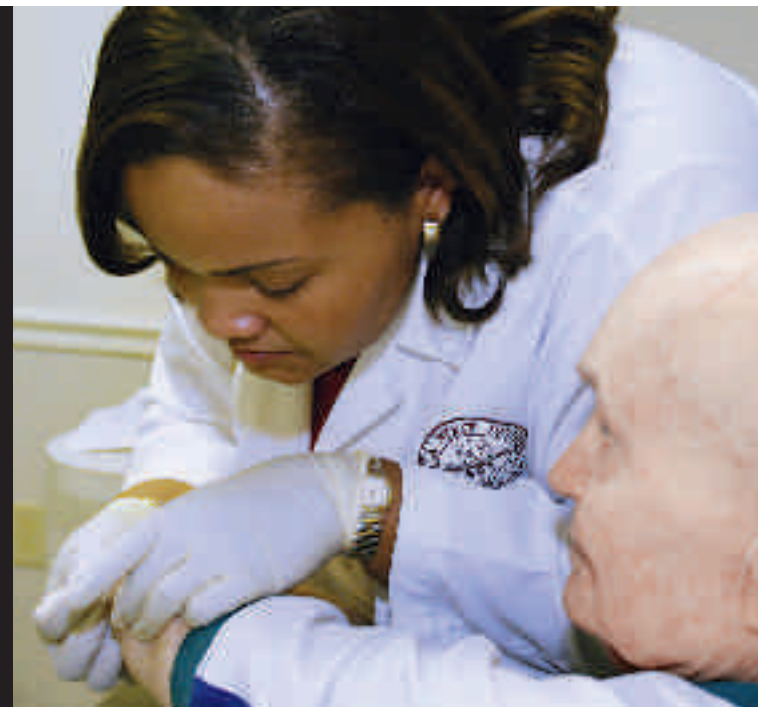
"The first two years begins the feel of the clinical experience, learning how to interview patients and interact with them, but it's much better now because you're actually working.

"Your rotations are like a job. You go home and study after your job, but basically you're working right alongside the doctor."

J.D. HAYWARD PHOTOGRAPHY

"The first two years begins the feel of the clinical experience, but it's much better now because you're actually working. It's like a job. You go home and study after your job, but basically you're working right alongside the doctor."

- STACEY LINDO



"I do their treatment plans and I come out and talk to the doctor and I say, 'This is what I think is going on. This is how I would like to treat them,'" Stacey Lindo said of being first to see a patient.



RAY STANYARD

During their internal medicine rotation at Sarasota Memorial Hospital, Paola Dees and Marc Bernstein work closely with faculty physicians such as Dr. Scott Grojean.

Paola Dees and rotation partner Marc Bernstein have been on their internal medicine rotation at Sarasota Memorial Hospital only three days, but the way they navigate hallways that seem part of a Byzantine maze hints at how they spend their time.

In short, they have full run of the place.

“This is really exciting, but real overwhelming at the same time,” Dees said. “You’re kind of safe in the classroom environment, behind your books, and you go out and kind of fumble through patient encounters through your first two years.

“But here it’s real. You’re with patients all day and there’s a lot more individual responsibility and the expectations are a lot higher. You just slowly start to realize how much we still have yet to learn, but how much we’re learning at the same time.”

Dees and Bernstein work with one of the hospitalists on duty, but are given plenty of latitude. Chance encounters in these hallways have led them to change course and witness an interesting case they hadn’t expected.

They quickly accepted an offer to go listen to a rare form of heart murmur neither had heard before.

“If we run into a neurologist that we’ve worked with before we might ask, ‘Hey, do you have anything we can come tag along on and see?’” Dees said. “Sometimes it kind of goes that way,

where the effort you put into it is what you take out, instead of things just being laid out for you.”

During her pediatrics rotation, Dees excitedly told her physician parents about inserting an umbilical artery catheter into a three-hour old baby.

“They said, ‘What? You’re doing that as a third-year medical student? Residents don’t even get to do that.’”

Dees and Bernstein flow from various specialty suites, where they’ve watched colonoscopies, endoscopies, heart catheterizations and other procedures, to a radiology film room, where they are free to spend time viewing pictures of anything that interests them.

If things get slow on their floor, they might head down to the emergency room to see if any interesting cases have come in.

Leaning in to get a closer look at the film in front of her, Dees finds what she is looking for.

“In a traditional chart all that comes up is the radiologic interpretation of what is going on. It says, ‘two-centimeter mass in the tail of the pancreas.’ You trust what the radiologist says,” she said.

“We want to see if we see the same thing, to learn what a two-centimeter mass in the pancreas actually looks like. It’s not something that’s required. It’s an extra opportunity.”

“Here it’s real and you’re with patients all day and there’s a lot more individual responsibility and the expectations are a lot higher. You just slowly start to realize how much we still have yet to learn, but how much we’re learning at the same time.”

- PAOLA DEES



Faculty member Dr. Spencer Gilleon and student Ivan Porter discuss plans prior to the start of surgery.

RAY STANYARD

Porter, like many of his classmates, has mixed feelings about Wednesday doctoring classes at the regional campus. The sessions require that students take a half day out from their rotations each week to study topics that may or may not relate to their current clerkship. To some students these sessions are a little like being told to eat vegetables as a child. Good for you, perhaps, but not necessarily a favorite part of the menu.

Porter remembers arriving at the regional campus recently and smiling at the sight of Dr. Gene Ryerson, the clinical sciences professor and director of the second-year doctoring course who always told students they'd need to know this stuff someday.

"He was right," Porter concedes.

The rotations have more obvious implications.

"You really get thrown in there. They tell you to do something and then they expect you to know how to do it," Porter said. "You get thrown in and then you get more and more comfortable with interacting with patients."

For most, it seems, long-held visions of being a doctor are permanently altered by the third year of medical school.

"My classmates and I talk about that all the time – some for good, some for bad," Dees said. "Many times a premed counselor

or a family friend or someone can tell you what it's going to be like, but until you're there you really don't know. It's very different than what you could imagine."

Dees isn't reluctant to have it described as naiveté.

"I think most people go into medicine because they want to help people. That's the standard response when you write your medical school application. Everyone says, 'I want to help people,'" Dees said.

"People kind of see doctors as these all-knowing, superhero types who can come in and look at someone and say, 'OK, you have symptoms A, B and C, so I need to run tests D and E and then the diagnosis will be X.'

"Medicine is not by any means that black and white. It can be frustrating as a student because in the past two years we've been in front of a book and we've memorized these sentences and concepts and then we reproduce that on a test.

"But in clinical practice the patients never present with the classic symptoms that we learn or the classic things to look for, so we need to grasp the whole art of medicine. You kind of just have to trust your instincts a lot more than you would think sometimes and say, 'Something just doesn't seem right.' "

"You really get thrown in there. They tell you to do something and then they expect you to know how to do it."

- IVAN PORTER

"You already know the basics. You know how to approach a patient when you walk into a room. You know to be very respectful of the fact that you're a student and you're learning and presenting that to the patient. I think they are really receptive to you having that experience when you're not shy and nervous to work with."

- AARTI PATEL



BEN TANNER PHOTOGRAPHY

By developing relationships on the maternity ward at Florida Hospital, Aarti Patel earned the opportunity to take a lead role during delivery.

Paola Dees and Marc Bernstein examine patient film at Sarasota Memorial Hospital.



BARBARA BANKS PHOTOGRAPHY



Lighting fires in

by Nancy Kinnally

When Kate Calvin describes the scientific principles underlying one of her experiments, it isn't long before her entire body gets into the act.

She gestures to depict black spots being scattered across a detector screen through a process called x-ray crystallography.

"With the complex math behind the physics of it, you can deconvolute those spots and get the structure of the protein inside your crystal," Calvin explains. "That is just so cool. There's a concept involved called reciprocal space. What we see as a large distance in our spots is a small distance in the crystal's reciprocal space. It's like Jerry Seinfeld's Bizarro World. It's just absolutely fascinating."

It doesn't matter that the person listening has no idea what she is talking about. Calvin's enthusiasm is infectious. It positively takes hold.

Nearly finished with her Ph.D. in molecular biophysics, Calvin soon will begin a career either in academia or the biomedical industry. With her energy, she is sure to take one or the other by storm.

And to think it all started when, as an undergraduate student at FSU, she offered to wash dishes in a faculty member's lab.

As a biology major, Calvin attended a seminar called "Biological Frontiers." She later ran into Myra Hurt, a molecular biology professor whose presentation in the seminar had caught her interest. After their chance meeting, Calvin began working in Hurt's lab, where lab manager Beth Alexander did much of the hands-on teaching.

"She's such a good teacher, and she holds you to a high standard," Calvin said. "So I took it upon myself to take meticulous notes about where things were and what each step was, because if I was going to ask her a question, I wanted it to be a good question."

From Alexander, Calvin learned how to clone DNA and run gels.

"It was so inspiring for me to use the equipment and see the process and have the result," Calvin said. "It was fun to have that fire lit as an undergrad."

Lighting fires in students like Kate Calvin just may be the key to the future of Florida's biotech industry.

With about \$1 billion in land and tax incentives having been used to lure three San Diego research facilities to the Sunshine State, Florida is now heavily invested in biomedical research. The Scripps Research Institute, Burnham Institute for Medical Research, and the Torrey Pines Institute for Molecular Studies, as well as their potential spinoffs, are going to be in the hunt for scientists for years to come. Although they certainly will bring researchers from out of state and around the world, they will be looking to Florida's state university system as well.

"I think that Florida as it grows is certainly going to offer increased opportunities for people at every level of science," said Scripps spokesperson Keith McKeown. "Ph.D.s, people with master's degrees and people with bachelor's degrees in science. There's work in the scientific community at all of those levels and there will be work for people at Scripps Florida at all of those levels."

"It was fun to have that fire lit as an undergrad."

- KATE CALVIN, FSU DOCTORAL STUDENT

IN MOLECULAR BIOPHYSICS

the lab

Kate Calvin prepares to collect x-ray diffraction data from a protein crystal.

Hurt, associate dean for research and graduate programs in the College of Medicine, has directed research for seven FSU graduate students and 23 undergraduate students since 1992.

She notes that in the fall 2006 semester, more than 45 undergraduate students were working with 18 different faculty members in the departments of biomedical sciences and medical humanities and social sciences at the College of Medicine.

"The thing people don't understand is that, this is teaching," Hurt said. "Teaching kids how to do research, trying to encourage their love of science so that they'll carry it on into their career wherever they go with it. It's part of a researcher's career. To me undergraduates are so much fun, they really are."

For Susanne Cappendijk, research assistant professor in the department of biomedical sciences, undergraduates are more than just fun. They help make her lab run.

A computer science undergraduate, Geoffery Miller, for example, wrote a data reduction program that enables Cappendijk to observe changes in the movements and food and water intake of zebra finches after exposure to nicotine and other drugs. She had Miller write the program in such a way that it could benefit other researchers needing to compress thousands of data points into meaningful results.

"Everyone respects each other in my lab," Cappendijk said. "They work in teams. I usually team up a junior undergrad with a senior undergrad, so they teach each other."

After working in Cappendijk's lab for three semesters or more, some undergraduate students even end up teaching new graduate students during their first-year rotations in the lab.

"I believe in my students," Cappendijk said. "For me, if you are working in the lab and you are skillful, I don't care if you are a graduate student or an undergraduate. I pay them respect because those might be my future colleagues."

Furthermore, Cappendijk sees that the payoff to the university goes beyond the students' individual accomplishments.

"If I create an undergrad student with a very good, basic, solid background, and this undergrad is interviewing at another university for grad school, if they say they did their undergrad research at the FSU College of Medicine and they are skillful in the lab, then that is good publicity for FSU," Cappendijk said. "That's a free commercial for us."

That commercial has already aired at Yale University, where Stefanie Leacock, another alumna of the Hurt lab, recently completed her Ph.D. in genetics.

Back in Tallahassee for Homecoming, Leacock couldn't help but notice the growth on the west end of campus, with the new College of Medicine and psychology buildings and the construction of the chemistry and life sciences buildings.

"Wow, maybe I can come back and work here," Leacock noted, although her immediate quest is for a post-doc position.

Kate Calvin and colleague Song Xue use x-ray crystallography to determine the structure of proteins.



RAY STANYARD

"I think that Florida as it grows is certainly going to offer increased opportunities for people at every level of science."

- KEITH MCKEOWN, VICE PRESIDENT,

THE SCRIPPS RESEARCH INSTITUTE

Leacock said her experience working under Hurt definitely helped her get into Yale.

"I was told by faculty at other graduate schools that Dr. Hurt wrote me an incredible letter of recommendation, so I think that carried a lot of weight," she said. "What they really want is someone with research experience who knows what it's like to be in the lab."

That was also the case for Wildaliz Nieves, who received extensive training in the proteomics lab at the FSU College of Medicine while working with Cappendijk to study the effects of a particular drug on the central nervous system and liver of zebra finches.



Susanne Cappendijk explains to her student, Katie Brennick, how the bird feeder is wired to measure the zebra finch's food intake.

Nieves is now pursuing her master's in molecular and microbiology at the University of Central Florida.

"Because of that proteomics training I was able to get my position here at UCF, because I'm going to be looking at proteins here as well," Nieves said.

Not all undergraduate researchers are headed for master's or doctoral work. Some are gaining experience they hope will lead to a career in medicine. Another one of Cappendijk's students, Evan Johnson, recently was accepted to the Class of 2011 at the FSU College of Medicine. Cappendijk was one of the first people he told.

"That's what you work for," Cappendijk said, "to see the happiness on his face."

Tom Pitts, 21, hopes one day to follow in Johnson's footsteps and find a spot in FSU's medical school. A double major in chemistry and marketing, Pitts has been assisting Elena Reyes, director of the medical school's behavioral science curriculum, with a research project in Gadsden County.

His work involves providing mental health screenings in Spanish to migrant children from third through eighth grade. The screening can reveal problems such as depression, eating disorders and anxiety, as well as schizophrenia.

One of the things Pitts has learned from working with Reyes is the importance of cultural and personal sensitivity in behavioral research, particularly when dealing with immigrants, many of whom are in the country illegally.

"Dr. Reyes will be ultra clinical with you, and then she'll

turn around and say, 'By the way, they went through a hard time recently this week, so just take it easy,' " Pitts said. "The interview might take longer, maybe the children might be extra shy. She lets you tailor the interview to them just because she knows them so well. As far as the importance of the study, it's not possible without her. I don't even think the College of Medicine could orchestrate this without her, because it's all trust."

Pitts' undergraduate research has shifted his focus within health care. Rather than dropping the marketing major, he is keeping it so that he might one day use his business knowledge to establish clinics for the uninsured.

"I won't look at someone as whether they have insurance or not," Pitts said. "It will be this is a human being who has a family and probably works very hard for what they have, and they're sick. I think the main thing I can take from this is that everybody gets sick and everybody needs help whether they have everything in the world or nothing at all."

For some future physicians, undergraduate research may spill over into their practice.

FSU exercise physiology major Camilla Lamp, who has worked for almost two years in the lab of Suzanne Johnson, chair of medical humanities and social sciences, has discovered an interest in research she never would have expected. Working for Johnson has increased her interest in attending medical school at FSU.

"I know when you become a doctor sometimes it's hard to be involved in research," Lamp said. "But I think that would be something really neat to do. I would love to have a lot of research studies going on in my practice."

Learning where science ends and where medicine begins and which one fits you best is another part of the value of undergraduate research.

Nieves originally wanted to go to medical school also.

"My experience doing research led me to an opposite direction," Nieves said. "I think it was more important for me to be a scientist. You can't be a doctor if there hasn't been any founding science."

Calvin believes undergraduate research is essential to orienting the scientific mind.



Susanne Cappendijk and Katie Brennick examine a zebra finch.

RAY STANYARD



FSU senior Tom Pitts has been inspired by his work with migrant children in Gadsden County.

“Do I really want to do this, or do I have what it takes to do this?” she said. “As an undergrad if you have that exposure then you can weed yourself out and find something that really makes you happy.”

Clearly, Calvin has found that something, and now she’s just looking for a place to put all her meticulously developed knowledge to work.

“The more biomedical facilities there are, the wider my options,” she said. “The more research institutes that move here, the better our options are as graduates of FSU.”

No matter where she goes, she’ll always be grateful to the woman who sparked her interest as an undergraduate and has continued to support her as a member of her graduate research committee.

“Dr. Hurt always has words of wisdom for someone who feels lost in the woods,” she said. “She’s been with me every step of the way.”

“I believe in my students. For me, if you are working in the lab and you are skillful, I don’t care if you are a graduate student or an undergraduate.”

- SUSANNE CAPPENDIJK, RESEARCH ASSISTANT

PROFESSOR OF BIOMEDICAL SCIENCES

A

fter more than a decade of devotion to migrant children and their families in the Gadsden County area, Elena Reyes has been recognized as Health Care Worker of the Year by the Florida Title I Migrant Education Program.

Director of the behavioral medicine curriculum and associate chair of the department of medical humanities and social sciences, Reyes not only finds time to serve the migrant community herself, she also makes sure students are aware of and sensitive to the needs of migrant families.

Tom Pitts, an undergraduate student at FSU, has assisted Reyes with mental health screenings for more than a year in Quincy, the Gadsden County seat and home to the majority of migrant families in the eastern Florida Panhandle.



Elena Reyes

FSU PHOTO LAB

“Dr. Reyes taught me the difference between patients and subjects, how to approach them, and how to interview them,” Pitts said. “She has always emphasized the person, not just the number.”

Reyes also supervises a bilingual FSU graduate student who provides individual and family counseling sessions in Quincy twice a week, and she takes medical students to Gadsden County to provide diabetes, blood pressure and mental health screenings as well as patient education. She also is course

director for the medical school’s cross-cultural medicine elective, which includes a week spent immersed in another culture and experiencing the local health-care environment.

Prior to joining the FSU College of Medicine, Reyes had a private clinical psychology practice, through which she did pro bono work with migrant children and families. She also helped ensure that migrant students needing evaluations for learning disabilities were tested before leaving the area so that the schools receiving the children would be prepared to address their needs.

“Dr. Reyes is genuinely concerned with the overall well-being of the migrant community, both physically and mentally,” said Maria Pouncey, migrant coordinator for the Panhandle Area Education Consortium and the person who nominated Reyes for the award, which was presented in December at the Annual Florida Migrant Education Conference in Orlando.



COURTESY OF DR. ROBERT ALLISON

Back at the NIH

For Robert Allison (M.D. '06), the road to becoming an investigator in an infectious disease lab at the National Institutes of Health began well before he entered the inaugural class of the FSU College of Medicine.

As an undergraduate chemistry major at The College of New Jersey, Allison studied how new, unlicensed chemotherapy drugs known as cisplatin attached to DNA. After he and his colleagues discovered cisplatin derivatives that had different binding properties than existing FDA-approved cisplatin-based drugs, he then tested the new drugs for effectiveness against resistant cancer cell lines.

"That's when I first became interested in translational research – studying basic mechanisms and translating them into new therapies – although I hadn't realized it until now," Allison said.

A research fellow in the Infectious Diseases Section of the Department of Transfusion Medicine in the NIH Clinical Center, Allison is co-principal investigator on a multi-center study of accelerated progression of liver fibrosis in patients with hepatitis C. The study compares patients who receive liver transplants with patients who receive kidney transplants.

Known as TRAP-C (transplant-related accelerated progression of hepatitis C), the study hypothesizes that the accelerated fibrosis is related to immunosuppression induced for transplantation. Allison's interest in hepatitis C stems from his experience treating underserved HIV-positive patients, many of whom are coinfecting with both viruses.

Now on his third stint at the NIH, Allison first began working on this research topic under Dr. Harvey Alter when he was selected to participate in the NIH Clinical Research Training Program, which he completed between his third and fourth years of medical school.

"I had invested a considerable amount of time and energy during my Clinical Research Training Program year at the NIH and during my fourth year of medical school, and I wanted to ensure that this complex but potentially very important study got up and running," he said.

Allison was recently chosen for the AIDS Loan Repayment Program for writing a protocol to study accelerated liver scarring in patients coinfecting with HIV and hepatitis C. The program pays \$35,000 a year for two years toward medical school loans.

Allison's research career has continuously developed since his undergraduate studies. Prior to medical school, he earned a master's degree in public health at the University of South Florida, where he began to pursue his interest in infectious disease and underserved populations. He first worked at the NIH the summer before his second year of medical school, when he completed an internship there in biomedical research.

Along the way, Allison found plenty of support among the faculty of the FSU College of Medicine. He is particularly grateful for the guidance of Myra Hurt, associate dean for research and graduate programs, and Drs. Dick Hornick and Adam Golden from the Orlando campus, where he completed his clinical training.

Allison plans to complete two years of research at the NIH and then will pursue a residency in internal medicine. He hopes eventually to return to the NIH as a clinical and translational research investigator.

- Amber Smalley

In his several stints at the National Institutes of Health, Robert Allison (M.D. '06) has worked for Dr. Harvey Alter, chief of the Infectious Diseases Section in the Department of Transfusion Medicine at the NIH Clinical Center, and Dr. Alison Wichman, acting director of the Office of Human Subjects Research in the NIH Office of the Director. Alter is a member of the National Academy of Sciences and the Institute of Medicine.

Alumni accolades

With 62 graduates in residency positions around Florida and throughout the United States and one in a research fellowship at the National Institutes of Health, the College of Medicine is gaining recognition for the quality of its alumni.

A survey of residency program directors assessing the quality of work being done by 2005 FSU College of Medicine graduates in comparison to graduates of other programs reveals high levels of satisfaction. The survey is one of many ways in which the College of Medicine monitors graduate and program director perceptions to ensure the overall quality of the educational program.

The latest graduate to be honored is Garrett Chumney (M.D. '05), a member of the college's inaugural class. He received the 2006 University of Florida Raymond H. Alexander, M.D., Intern of the Year award.

Chumney is in his second year with the UF Health Science Center-Jacksonville general surgery residency program. One of six interns in the program during 2005-06, Chumney initially did not plan to attend the health center's annual awards program because of responsibilities at the hospital.

However, Dr. Richard Crass, the program director, persuaded Chumney to be in attendance for the surprise announcement of his honor, determined by a vote of peers and faculty.

Chumney's College of Medicine classmate, Fawn Harrison (M.D. '05), previously was named outstanding resident of the quarter at All-Children's Hospital in St. Petersburg, where she is in the University of South Florida pediatrics residency program.



Dr. Fawn Harrison



Dr. Garrett Chumney

NATIONAL COMPOSITES



Students in the rural slums of Kisumu, Kenya, participated in the operation of a medical clinic through a program run by Hezekiah Bunde Nyaranga (second from left). With Nyaranga in the second row are Dr. Kevin Broyles, his wife Noelle and sister-in-law Jean Davidson, both nurses.

Orphans in the Mukuru slum in Nairobi, Kenya, play a game donated for KenyaKids together with Dr. Kevin Broyles.

COURTESY OF DR. KEVIN BROYLES

Nonprofit success

In Tallahassee for his 30th high school reunion, Dr. Kevin Broyles stopped by FSU to see some old friends.

One was Robert Reeves, an associate professor of biological sciences who was director of FSU's Program in Medical Sciences (PIMS) at the time Broyles completed his first year of medical school through the program.

Broyles wanted to express his gratitude to Reeves, who helped him through a challenging period at the start of his medical education.

As medical director of Duke Urgent Care Services in Durham, N.C., Broyles has met with much success since leaving FSU, where he also completed his undergraduate studies.

But what he was most anxious to tell Reeves about was his role in starting a nonprofit organization that is sponsoring more than 100 Kenyan children left orphaned or otherwise vulnerable by the African nation's HIV/AIDS epidemic.

"Because of the opportunity you gave me, I have been continually motivated out of gratitude to work hard, continue to learn and to develop skills to truly help people around the world," Broyles told Reeves.

Broyles worked with members of his non-denominational church in North Carolina and others from the Durham area to develop the nonprofit organization.

"We met for about a year to figure out the nuts and bolts of how to start a child sponsorship program," he said.

A child smiles at a visitor to his rural slum in Kisumu, Kenya.



Known as KenyaKids, the program now operates under the auspices of HOPE worldwide, Kenya. It provides children in and around Nairobi with nutritional food packets, medical care, clothing, and school books and supplies.

With his family and other members of his church, Broyles has traveled to Kenya to support and enhance the program.

"The difference between the United States and someplace like that is just phenomenal," he said. "We need to take resources from the United States and get them over here where they're needed."

In addition to sharing his personal story while visiting FSU, Broyles took time to tour and learn about the medical school that grew out of PIMS and to visit with Dr. Alma Littles. Senior associate dean for academic affairs at the FSU College of Medicine, Littles was a classmate of Broyles during the three years of medical school he completed at the University of Florida. Both went into family medicine.

"One of the things I love about the way this school is structured is that primary care is really highlighted. It's getting the attention that it deserves," Broyles said. "I'm excited for Alma to be here because she's got a ton of support to do what is her passion, which is to take care of people."

For more about KenyaKids and HOPE worldwide, go to: www.hopeww.org/ and search "Kenya."

Attention Alumni! We don't want to lose touch with you. Update your directory information at: www.med.fsu.edu/alumni

And send your news to:

Nancy Kinnally, Director of Public Affairs and Alumni Relations

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COURTESY OF ADAM BRANOFF

Now a first-year medical student at FSU, Adam Branoff met children from an orphanage in Ayacucho, Peru, on a medical outreach trip he took with the Peruvian American Medical Society prior to medical school.

A tall gringo in scrubs

by Adam Branoff

I woke up to a sharp right turn. The driver of our large, double-decker bus precariously navigated the narrow roads as we ascended the Peruvian Andes at about 15,000 feet. As I looked out my window across the ridges and enjoyed the barren beauty of the landscape, I turned my thoughts to the two weeks ahead in Ayacucho, Peru. Having already traveled through the Galapagos Islands and trekked the Inca Trail to Machu Picchu, I was excited to participate in the project that initially attracted me to Peru. Looking around the bus, I was surrounded by a diverse demographic profile, with occupations spanning medical and non-medical fields alike, all united by their desire to provide care for the underserved.

I was volunteering with the Peruvian American Medical Society, which focuses on caring for the Quechua Indians, direct descendants of the ancient Incas who are indigent and underserved. The Quechua, true to their heritage, predominantly reside in the mountainous, rugged terrain of the Andean high country. Ayacucho province is the former haven for the 1980s socialist terrorist group Sendero Luminoso, or Shining Path. In addition to the difficulties inherent to life in the Peruvian Andes, the damage created by the militia destroyed much of the town's infrastructure, especially health care.

Children from the Perez Aranibar Orphanage in Ayacucho, Peru.



Branoff was able to scrub in on surgeries while working with the Peruvian American Medical Society at the Hospital Regional de Ayacucho.

Explorin

A recent college graduate, I was composing my medical school application as I traveled. Still, I was able to participate actively in primary care, surgery and pathology. My activities ranged from scribing SOAP notes with the family doctor and reviewing slides with the pathologist to scrubbing into surgeries in the antiquated OR.

After only five days and with an entire week remaining, the rigors of Third World travel, the tedious work schedule, the language barrier, and the undeveloped, antiquated hospital settings were starting to wear me down. I was scribing for my father, who was running a primary-care clinic, and we had about two more hours left on our typical 10-hour day. By this time I had a good grasp on SOAP notes, and my father and I were really moving through patients quickly with the typical diagnosis and treatment of gastritis and parasites. Looking across the table at the translator I could tell she was as exhausted as me, but the doctor kept asking our nurse for the next patient.

Later that day I was asked to walk some equipment back to the hotel. The cobblestone streets, normally buzzing with taxis and activity, were ominously subdued. As I rounded a corner nearing the hotel, the streets were suddenly desolate. Looking ahead, I noticed an angry mob of Peruvians armed with rocks and sticks chanting aggressively in Spanish and moving toward me. I put my back against a storefront and worried what would happen as this mass of people surrounded me, a tall gringo in scrubs. The group passed by, directing its anger instead at nearby cars and buildings.

I would later come to understand that these demonstrations resulted from overwhelming frustration and disappointment with Peruvian domestic political policies, including the lack of health care, and also with then-recent American foreign policy. These angered citizens, in all their frenzy, passed me by completely unharmed.

This story highlights some of the many reasons why participation with international medical missions is so valuable. Not only do these activities empower one to care for underserved populations while learning about global issues and cultures, they also enlighten disenchanted people that much of the global community cares about them. I believe the mob, fueled by frustration with their government as well as strong anti-American sentiment, realized my altruistic intentions and deliberately directed their aggression elsewhere.



COURTESY OF ADAM BRANOFF

ing global health

COURTESY OF MOLLY AND TESSA MCKENNA



A pregnant woman caught the McKennas' attention as she went through a food line in Port-au-Prince wearing one crumbling shoe.

"Getting worms through the feet is a problem in Haiti that can be easily addressed by having adequate footwear," Molly McKenna said. "A good pair of shoes can help kids remain in school instead of being home sick and can keep fathers at work, helping them to feed their families. A pair of shoes taken for granted in our closet can be a true blessing to another family."

Months later, the McKenna sisters were being crowded out of their one-bedroom Tallahassee apartment by donated shoes. Today, they estimate they have a few thousand pairs stored in an office at the College of Medicine.

Their idea, like the mound of shoes, is growing.

The McKenna sisters are trying to raise \$6,000 to pay for a 20-foot shipping container, with half of the money going toward a refundable security deposit. They plan to fill it with shoes and medical supplies and ship it to Haiti, then hope to make similar regular shipments three times a year to Haiti and other countries.

"This is a passion of ours," Tessa McKenna said. "It's been a lot of work, but it gives you energy when you see the results. We have been very surprised at the response."

Share One Pair shoe donations can be dropped off at the College of Medicine or Garnet and Gold store locations in Tallahassee. Information on tax-deductible monetary contributions is available by calling (850) 321-9486.

Walk in my shoes

Twins Molly and Tessa McKenna, second-year students at the College of Medicine, saw many things they'll never forget on mission trips to Africa, the Dominican Republic, Uganda and Panama.

One memory, in particular, lingered when they returned home to Pompano Beach.

"A pregnant woman walking through the fields with no shoes," Tessa McKenna said. "She had walked several miles to come to the medical clinic where we were working. There were sores on her feet, and we spent part of the time bandaging her feet."

They recounted the story for their mother, Anne Duffek, and wondered aloud what they might do to help. She suggested they each go look in the closet.

What they found were many pairs of shoes they didn't really need. Shoes that would be a godsend for someone like the Dominican woman embedded in their memory.

From that conversation, the McKenna sisters formed a nonprofit organization, Share One Pair, and vowed to help the many people they had seen in impoverished nations who would benefit from a pair of decent shoes.

COURTESY OF MOLLY AND TESSA MCKENNA

Second-year student Tessa McKenna with malnourished Haitian children at a clinic where she and sister, Molly, volunteered.



The longest night in Africa

by Uchenna Ikediobi

I walked about three-quarters of a mile to the medical emergency unit at Komfo Anokye Teaching Hospital in Kumasi, Ghana, to work overnight alongside one of the interns. The attending physician and others were heading home, and within half an hour the intern and I were alone with patients for the most memorable night in my medical training.

After caring for a woman suffering from a buildup of abdominal fluid, I spent the rest of the night assisting and learning from the intern. In the early morning, with little energy left, I walked around the ward for what felt like the 100th time to check on the individuals I had come to regard as “my” patients.

As the intern attempted to insert an IV line on one patient, I walked toward the end of the room where another patient was awakening. He clutched his chest, and his eyes began watering. He soon began to cry out, “Pressure!” pressure!” Not quite knowing what to do, I rushed back to the intern and, in desperation, told him that this patient was in distress and asked what we should do.

He looked at me and calmly said there was nothing to be done as he continued desperately trying to find a vein in which to insert an IV for a patient who would later die from hypovolemic shock, a condition in which rapid fluid loss results in multiple organ failure.

I rushed back to my patient and sat down at his bedside and grabbed his right hand and squeezed it. Speaking the local language, but with an unsteady voice, I tried to tell him that everything would be okay.

As I sat and watched him die before my eyes - his mouth foaming with saliva and his eyes gradually glazing over - I became fully aware

of my own mortality. As I stood up from watching my patient take his last shallow breaths, his cries diminishing gradually in tone, the patient in the adjacent bed pleaded with me, “Doctor, do something!”

I wondered how I was to explain that I wasn’t a doctor, in spite of my white coat.

Only after my deceased patient was taken away did I have time to glance around the room, when I noticed a dobutamine pump sitting next to his empty bed.

The pump would have been the ideal treatment to alleviate the patient’s chest pains and prevent his sudden death. But it lay idle, unplugged, and dusty because no one in the emergency ward knew how to operate it.

My experience in Ghana taught me that sometimes what people in developing nations need is not free medications and supplies. More often, what they need in Ghana and places like it, is knowledge.

If the emergency staff at Komfo Anokye Teaching Hospital had possessed the knowledge to operate a relatively simple medical device that was readily available, I can’t help but think that my patient might still be alive today.

Ikediobi’s experience in Ghana was part of a trip organized by Students Interested in Global Health, a student organization founded at the FSU College of Medicine to provide a global perspective on health-care delivery in developing countries. Ikediobi, who founded SIGH, is author of a manuscript about her experience in Ghana that has been accepted for publication in Academic Medicine. Branoff plans to travel to Ghana with SIGH this summer, and the McKenna sisters are active in the organization.

COURTESY OF UCHENNA IKEDIOBI

Second-year medical student Uchenna Ikediobi visits with children from Kumasi in the Lake Bosomtwi region of Ghana.



now & then

JOSE RODRIGUEZ, M.D.



now (2007): Teaching how to treat obesity.

A casual conversation with his father more than three years ago triggered a major change in Dr. Jose Rodriguez's lifestyle, and professional life.

Today, the assistant professor of family medicine is a catalyst for change in others and a voice of experience in the battle against a growing obesity epidemic.

"They see me as somebody who went through what they are going through. I'm not just preaching to them," Rodriguez said.

Rodriguez's parents visited his home in Bronx, N.Y., in the summer of 2001 to attend his graduation from the residency program in social medicine at Montefiore Medical Center.

Armando Rodriguez, who had been advised to start medication for hypertension following a routine physical exam, asked his physician son about alternative treatments. Even as the words about diet and exercise were coming from his mouth in reply, Jose Rodriguez recognized the hollow sound.

"I had a body-mass index of 36 at the time. I was severely obese and I was desperately in need of the things I was advising him to do, but I myself was not doing them," Rodriguez recalled. "Why should he have listened to me?"

The conversation was an enlightening one. Not only did it trigger dialogue in which Rodriguez learned of a family history of hypertension, he also later learned of relatives with type 2 diabetes. And he saw a need for meaningful change.

Feeling a sense of hypocrisy about his own medical practice and a fear that his two children were adopting the same poor eating and exercise habits Rodriguez had developed during residency, he decided to take action.



then (2001): Obese physician in The Bronx.

And going on a diet was not the answer.

Rodriguez, who is 5-foot-6, had once lost 30 pounds in one month using a commercial herbal diet. What he didn't lose was the lifestyle, and he quickly gained the weight back, along with an additional 25 pounds.

Determined to achieve lasting results, Rodriguez asked for and received an exercise bike a friend was looking to get rid of, and he didn't get mad when the friend told him, "Doctor, you are too fat!"

"The first time I used it I pedaled for 10 minutes in my apartment. The best I can describe it is a feeling of impending death," Rodriguez said.

OK, call it a modest beginning. But, for lack of a better word, it was the start of something big.

With input from medical students who helped him understand and address his own weight problems, Rodriguez founded "Health Not Cosmetics," a lifestyle-based approach to weight loss and healthy living.

Rodriguez now rides his bike 7.8 miles to and from work at the College of Medicine each day from his northeast Tallahassee home. He also runs before the sun rises and recently completed his first marathon.

And when he talks about obesity, as he has at several national conferences, people listen. He's especially focused on obesity in underserved, minority populations.

"I feel like when I go up and tell people it's a personal thing, I think they listen more, and it makes it so I can talk about it with passion and make it interesting for them," Rodriguez said.

"People hear a lot about obesity, but it doesn't make a real difference to them unless they can hear an individual story. Unfortunately, even though this is a societal problem, society causes the problem and it puts the blame squarely on the individual."

The answer, he believes, also lies with the individual. It's a lesson he started to learn during the conversation with his father five years ago and it's one he enthusiastically shares with those who might find themselves in the same situation.

"If I'm not talking about this with passion, or if I can't motivate people to make the change, then I have no reason to talk about it," he said.

An unexpected journey into the heart



FSU PHOTO LAB

Most first-year medical students wouldn't be thrown into the middle of a life-and-death case by the second week of class, but that's exactly what happened to FSU medical student Kristen Barrie.

After dissecting the heart during the first week of her anatomy course, Barrie, 24, found herself in a hospital studying an echocardiogram on which she saw something that looked like a worm flopping around.

"In my head I'm thinking, 'This is not supposed to be there. That was not in Netter,'" she said, referring to the anatomy atlas she had been studying for class.

The medical staff around Barrie had grown quiet. It was clearly a serious case. A bacterial infection on the patient's mitral valve was breaking apart and forming septic emboli, some of which had already traveled to the brain. There was danger of a stroke, even perhaps death.

Barrie did her best to take in the information as she struggled with the notion that this was not a textbook heart. This heart belonged to a real patient. In fact, it was her own.

Only part-way through her second week of school, Barrie had awoken in the middle of the night with fever and chills. Thinking it was the flu, she dragged herself to class the next morning and took some Tylenol.

By the next day she was worse, but she was determined not to miss her first quiz in the Clinical Learning Center, a mock clinic where she would be learning to do exams on standardized patients. Upon seeing her, though, the faculty physicians who were there to teach her quickly began examining her instead.

Realizing Barrie needed immediate medical attention, they sent her to FSU's Thagard Student Health Center. Two staff members from the medical school drove her there, and later to Tallahassee Memorial Hospital, where she first saw the image of her infected heart.

"The next thing I know, they say I have bacterial endocarditis, and I might need to have surgery," Barrie said.

A family medicine resident at TMH, Dr. Antje Floegel, made the obscure diagnosis.

Kristen Barrie finally got the chance to don her white coat with the Class of 2010 after emergency open heart surgery took her out of the Class of 2009. Celebrating with her at the White Coat Ceremony last summer were her mother Dr. Kathleen Barrie, her sister Jamie Barrie, who was recently accepted to the Class of 2011, and her father Dr. James Barrie. Barrie's parents are both veterinarians.

In a million-to-one scenario, Barrie had gotten a staphylococcus infection originating from a blister on her foot. The bacterial infection had then unimaginably traveled to her heart. Her mitral valve was normal, and she had no clotting or immune disorders that would have explained the situation.

"There is absolutely no reason why I should have had this infection," she said.

Barrie had entered the hospital in Tallahassee on Thursday. By Monday she was having emergency open heart surgery in Tampa, where her family lived and would care for her afterwards. Her transport was via Learjet.

Just prior to the operation, she remembers the surgeon asking her whether, in the event they had to replace her mitral valve instead of repairing it, she would prefer a natural or artificial valve.

"That was a scary moment for me," she said. "That was when it was real."

Surviving her ordeal, which included months of recovery at home and sitting out a year of medical school, left Barrie a changed person. She learned first-hand how a serious illness impacts a whole family and interrupts a person's life. She believes the experience will make her a better doctor.

"I think it has affected me in a way nothing else could have affected me," she said. "I think I got a little bit more serious. I'm not really sure how to describe it. I find myself listening to people more carefully now."

As it turned out, her surgeon, Dr. Creighton Pruitt, was able to repair Barrie's valve rather than replace it, an option much better for her long-term health. She returned to the College of Medicine last summer, joining the Class of 2010, the class behind her original cohort.

While it's enough just having her life back, Barrie is particularly happy to be back in medical school at FSU.

"I love it," she said. "This is where I'm supposed to be."

Partners

As a community-based medical school, the FSU College of Medicine provides clinical training at regional medical school campuses around the state through affiliations with local physicians, ambulatory care facilities and hospitals. The medical school is pleased to recognize its affiliated partners.

FSU-sponsored Residency Programs

Sacred Heart Hospital Pediatric Residency Program – Pensacola
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Tallahassee Campus

Apalachee Center Inc.
Bond Community Health Center, Inc.
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Capital Regional Medical Center
HealthSouth Rehab Hospital
Neighborhood Health Services

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Tallahassee Outpatient Surgery Center
Tallahassee Single Day Surgery
Westminster Oaks

Archbold Medical Center – Thomasville
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Jackson Hospital – Marianna

Daytona Beach Campus

Florida Hospital Ormond Memorial
Halifax Medical Center
Volusia County Medical Society

Orlando Campus

Florida Hospital
Nemours Children's Clinic
Orange County Medical Society
Orlando Regional Healthcare

Ft. Pierce Campus

Indian River Medical Center
Lawnwood Regional Medical Center
Martin Memorial Medical Center
St. Lucie Medical Center

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Escambia County Medical Society
Nemours Children's Clinic
Sacred Heart Health System
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St. Vincent's Medical Center, Inc. – Jacksonville
Tallahassee Memorial HealthCare – Tallahassee

Other Affiliates

Bay Medical – Panama City
Collier Health Services, Inc. – Immokalee
Gulf Coast Medical Center – Panama City
Mayo Clinic – Jacksonville

(1) end note



A WINDOW INTO THE MIND. Mental health screenings of migrant children and their families in Gadsden County are among the research activities FSU undergraduate students engage in under the supervision of medical school faculty.

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