



Florida Tomorrow | College of Pharmacy





“Faculty are the engine that makes our college go. Providing the funding resources they need to excel is critical to the growth of the college.” — William Riffie, Ph.D.

A Message from the Dean

The College of Pharmacy’s “Funding Excellence to Sustain Excellence” campaign will shape the future of pharmacy health care not only in Florida but throughout the world. We hope to inspire alumni, friends, corporations and foundations to invest in our programs by supporting our most valuable asset: our faculty and our students.

The practice of pharmacy has now come full-circle to exemplify the community pharmacist of yesteryear, who not only dispensed tablets and elixirs, but was an integral part of a family’s health care. Tomorrow will bring many new challenges. The profession is rapidly changing in response to environmental and societal factors such as longer life expectancy, increased number of drug prescriptions and a greater divide between economic classes. Our college is addressing these demands and looking further into the future to investigate emerging health care issues that are moving to the forefront.

Building a foundation for excellence takes forethought, time and resources. The College of Pharmacy — the oldest health science college at UF — has demonstrated this in its enduring, quality program developed and sustained for more than 80 years.

Our mission is to promote the health and welfare of the people of Florida and the nation by preparing graduates in pharmacy to take independent professional responsibility for the outcome of drug therapy in patients. We are proud that our graduates have the scientific and cultural background necessary to assume leadership roles in the profession and community.

With the right resources today we can expand our impact to affect more lives in more places with a greater depth of solutions, while educating and preparing pharmacists for tomorrow. I look forward to the journey and invite all advocates of pharmacy health care to join me in creating a place of drug discovery, a day of partnerships and a belief in health access for all.

Sincerely,

William Riffie, Ph.D.

Dean, College of Pharmacy

Florida Tomorrow ... and the College of Pharmacy

The Promise of Tomorrow

The University of Florida holds the promise of the future: *Florida Tomorrow* — a place, a belief, a day. *Florida Tomorrow* is filled with possibilities. *Florida Tomorrow* is for dreamers and doers, for optimists and pragmatists, for scholars and entrepreneurs, all of whom are nurtured at Florida's flagship university: the University of Florida, the foundation of the Gator Nation.

What is *Florida Tomorrow*? Here at the College of Pharmacy, we believe it's an opportunity, one filled with promise and hope. It's that belief that feeds the university's capital campaign to raise more than \$1 billion.

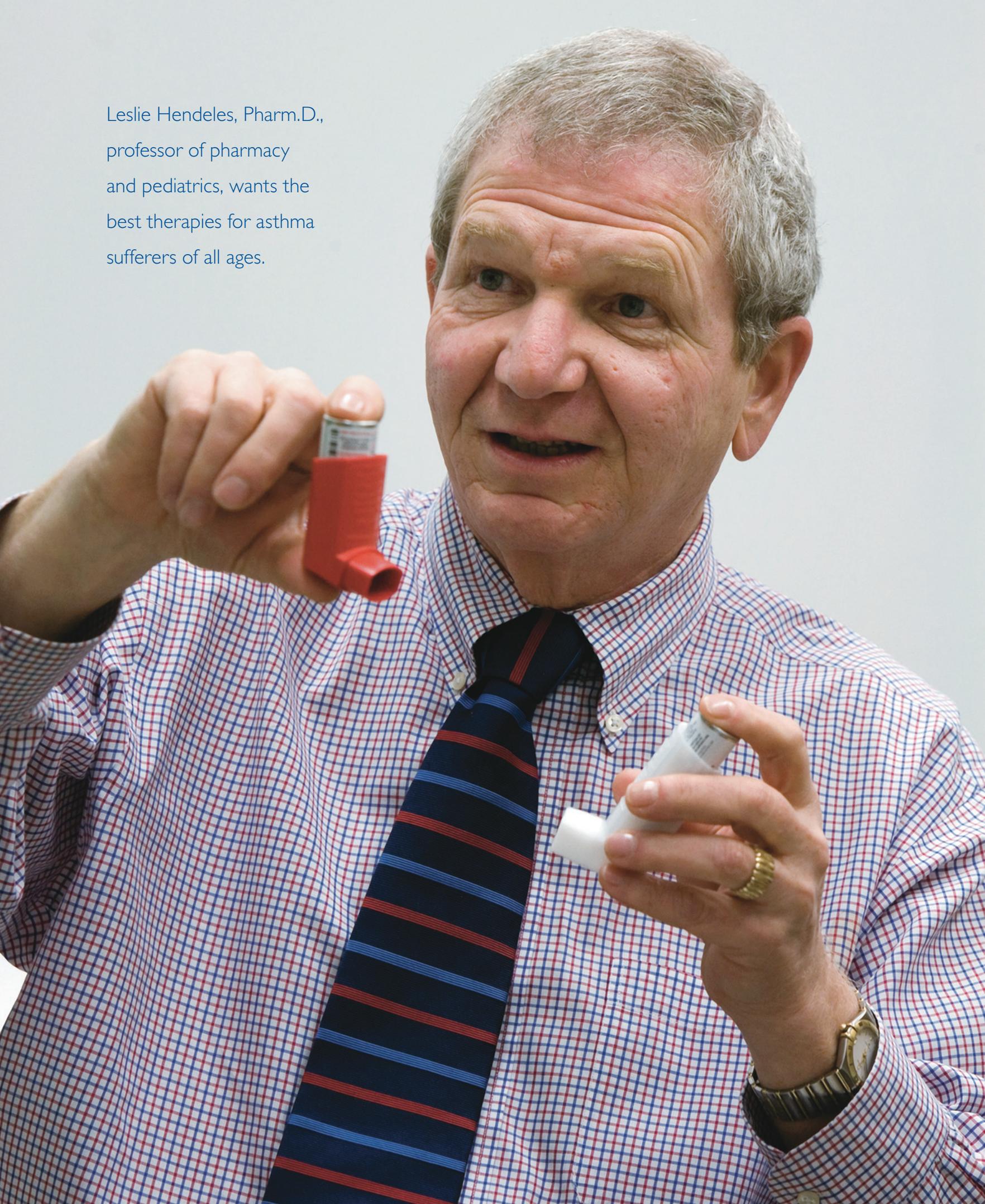
The *Florida Tomorrow* campaign will shape the university, certainly. But its ripple effect will also touch the state of Florida, the nation and the entire world. *Florida Tomorrow* is pioneering research and spirited academic programs. It's a fertile environment for inquiry, teaching and learning. It's being at the forefront to address the challenges facing all of us, both today and tomorrow.

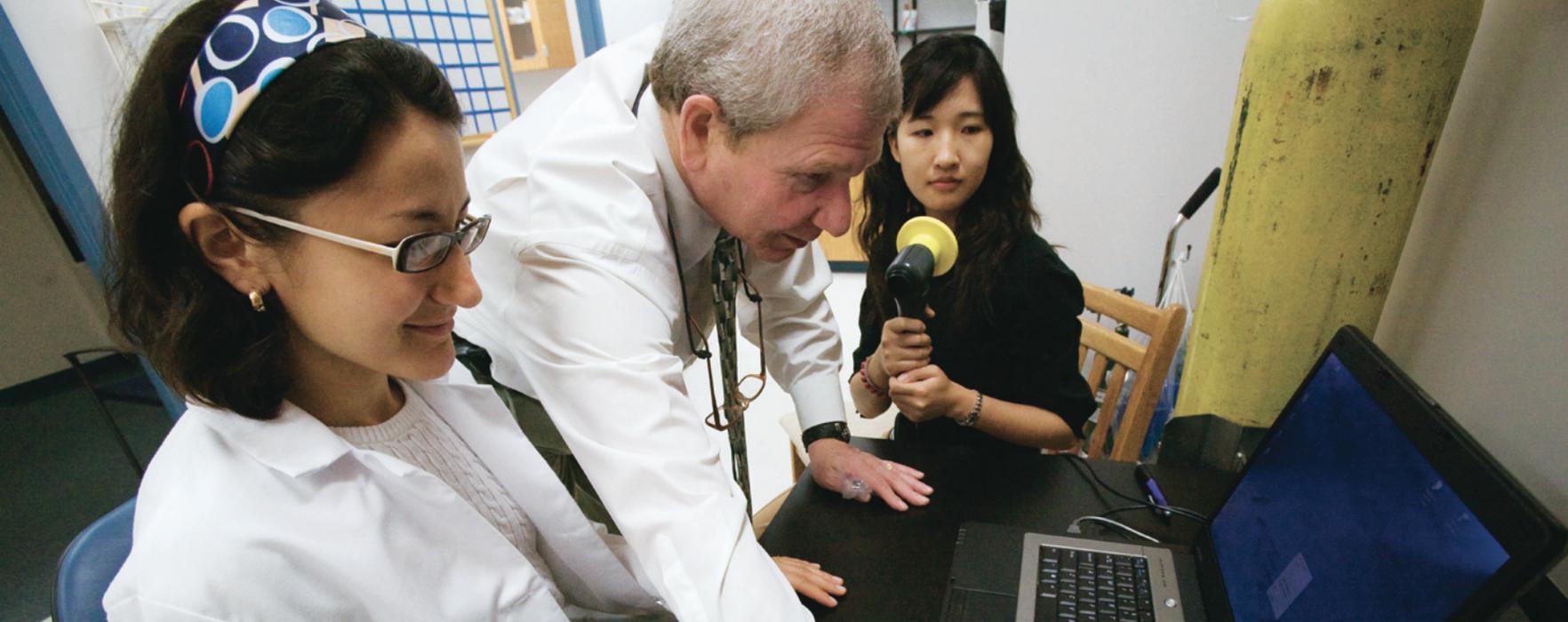
College of Pharmacy *Florida Tomorrow Campaign Goals*

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|-----------------------|---------------------|
| Faculty Support | \$6.5 million |
| Student Support | \$4.7 million |
| Programs and Research | \$1.8 million |
| Campus Enhancement | \$6 million |
| TOTAL | \$19 million |



Leslie Hendeles, Pharm.D.,
professor of pharmacy
and pediatrics, wants the
best therapies for asthma
sufferers of all ages.





Florida Tomorrow is a place ...

where new drug discoveries improve the quality of life.

Passion for Patient Care

Leslie Hendeles doesn't shy away from his reputation as an activist. The professor of pharmacy and pediatrics — also a pulmonary consultant to the Food and Drug Administration — has lobbied for better treatment for patients with asthma, a disease that affects 20 million people in the United States. He has fought for the removal of ineffective medications for cystic fibrosis patients and has helped promote safe, effective replacements for the ozone-depleting CFCs used in asthma inhalers, which will be soon be prohibited under an international environmental treaty.

In all of his causes, his goal remains the same: getting the best treatment options to patients.

"It's very gratifying to me to be able to make a difference through my research," he says.

For years, Hendeles has been convincing health care practitioners to treat asthma attacks with an inhaler with a special holding chamber instead of the traditional nebulizer treatment. The adapted inhaler treatment holds many advantages over the expensive, bulky nebulizer machine, he says.

"Many doctors think that nebulizers work better because that's what they were taught; but the inhaler doesn't require electric power, it works just as well and has fewer side effects in small children," he explains. "Families spend less time, energy, money and worry with this treatment."

Nebulizers, which take 15-20 minutes to use, must be disassembled, disinfected and reassembled before they can be used again. The quicker, more portable inhaler treatment, by contrast, offers more convenience and flexibility, which can lead to better management of the disease.

"Kids can put the inhaler in a backpack and go about their normal activities," Hendeles says.

Another area where Hendeles has had significant impact is in the regulation of pancreatic enzyme replacements for cystic fibrosis patients. Because the enzymes were on the market before the 1938 act that required FDA approval for medications, some drugs remained available despite the fact that they had never been proven effective. Hendeles' research, along with UF professor Guenther Hochhaus, has shown that the drugs can be ineffective or inconsistent, sometimes causing treatment failure in the patients who take them.

After years of advocating for cystic fibrosis patients, Hendeles was thrilled when, in 2004, the FDA agreed to mandate regulation of these drugs.

"This is why I'm on this earth," he says, "to do these things to help people."



Florida Tomorrow is a day ...

when pharmacists work in partnership with patients and their doctors.

The Evolving Classroom

On distance learning campuses in Jacksonville, Orlando and St. Petersburg — and in homes in rural Montana and even as far away as South Korea — UF pharmacy students are honing skills. Distance learning has emerged as a way to address the nation's need for pharmacists, a trend driven by baby boomers retiring from the profession coupled with longer life expectancies.

"There are more patients, more drugs than ever before," says Sven Normann, assistant dean for Distance, Continuing and Executive Education at UF's College of Pharmacy. "Remote campuses are a way to rapidly add qualified, competent pharmacists to the workforce."

The three Florida campuses, which have made UF the country's largest pharmacy school, offer a blended curriculum of lectures in streaming online video and off-site classes. UF's distance learning program, created in 2001, was one of the first in the country to use streaming video, which has become a national model. But technology isn't just reserved for distance campuses.

"Many Gainesville students opt to watch the video just as students in Jacksonville, St. Pete and Orlando do. It's a feature they really like," Normann says. "When we started six years ago, there were just a few other distance programs in pharmacy. Now other institutions have looked at our program and are looking to replicate."

The college's first distance learners graduated in 2006, nearly doubling the graduating class size. Pharmacy students from four Florida cities joined together at commencement.

Another remote-learning program offered by UF allows pharmacists in the workforce who graduated with a bachelor's degree to pursue a doctorate, now the standard qualification for employment. Students watch lectures on DVD — a format more widely available than Internet lectures — and attend classes near their hometown with UF facilitators. Lectures can also be downloaded as MP3 files. More than 1,300 students have graduated from the Working Pharmacist program since its inception in 1994.

"These students already know about pharmacology, compounding, dispensing. What we're adding is a focus on patient-centered pharmacy practice. That's increasingly important, as pharmacists have evolved into an integral part of the health-care team," Normann says.

"They're gaining an added credential that makes them more marketable in the workplace, upgrades their skills and gives them a sense of personal accomplishment. It can help them get a promotion or raise, and in some cases, it can allow them to keep the jobs they already have."

Bonny Reinhardt, Pharm.D. (class of 2007),
attended the College of Pharmacy
Jacksonville distance campus.





Paul Doering, M.S.P., distinguished service professor of pharmacy (center), guides fourth-year pharmacy students serving on rotation at the UF Drug Information and Pharmacy Resource Center.



Florida Tomorrow is a belief ... that no one will be denied access to drug therapies.

Sharing Knowledge

In Orlando, a drugstore loses power in a hurricane and pharmacists scramble to figure out which refrigerated medicines are still safe to dispense to customers. In Miami, a pharmacist is puzzled as she tries to find the stateside equivalent of a prescription from South America. In Jacksonville, a zoo veterinarian is tasked with calibrating a dose of human antibiotic for an 11,000-pound African elephant.

The answer, in each of those cases, is a phone call away. When doctors and pharmacists are baffled, they often turn to UF's Drug Information and Pharmacy Resource Center. The center — a collaboration between the College of Pharmacy and Shands — is a free service to Florida's pharmacists and health care professionals.

Pharmacy students in their final year of training field the calls. Questions are researched and UF faculty members are consulted before students offer an answer. Professors Paul Doering and Randy Hatton direct the center. Calls to the center, Doering says, often lead to "teachable moments."

"It's the perfect marriage of service and education," he says. "Students are getting real-world experience, not contrived cases. These are skills that will carry them through the rest of their careers."

When it began as a thesis project in 1972, the center was one of the first of its kind — a free, statewide service for medical professionals. Although the center does not take calls from private citizens, patients can ask their pharmacists or doctors to call on their behalf. The center also advises law enforcement officials on issues from prescription and over-the-counter drug abuse to identification of drugs found in traffic stops and searches.

While much has changed in the 35 years of the center's existence — namely the flood of drug information available on the Internet — the center's mission has remained the same: to provide reliable, unbiased information, Doering notes.

"A lot of the information provided by different services may be colored by that source's agenda," he adds. "We look at ourselves as neutral and unbiased."

The state's health care professionals benefit from up-to-the-minute information on their most complicated drug questions, while students gain valuable drug-research experience, Doering says.

"It's a win-win situation."



Raymond Bergeron, Ph.D.,
Duckworth Eminent Scholar
of Drug Development

Our Vision of Tomorrow

Leadership and vision are cornerstones of the College of Pharmacy. The first professional health college at the University of Florida, its rich history began September 1923 with 43 students. In the 1930s, it became the first UF college to offer the Doctor of Philosophy degree and the first to accept women.

Over the following century, the pharmacy profession developed and matured and the pharmacist's role expanded to provide more patient-focused health care, which was the trademark of yesterday's pharmacist.

Today, at the heart of our college, faculty with interdisciplinary backgrounds in science, law, economics, health care administration and psychology, collectively work to create a profession integral to the health care team.

Striving for excellence, our faculty sets high standards in research, teaching and professional service. Their work encompasses far more than the study of medications. They investigate the causes of diseases like diabetes, heart disease, brain cancer, Alzheimer's and Parkinson's in order to understand how new drugs must be designed to treat and possibly prevent these diseases.

Our faculty is:

- **Leading research** ... Pharmaceutics researchers are developing a patent-pending approach to streamline lengthy drug development processes and get new medicines more efficiently to patients. Pharmacogenomics researchers are leading an interdisciplinary team studying the importance of genetics in drug therapy outcomes.
- **Ensuring safety** ... Health care administration faculty work with hospitals and clinics to prevent medication errors. Researchers in pharmacy practice are helping hospitals handle the nationwide health concern of antibiotic-resistant infections.
- **Treating asthma** ... Clinical faculty are improving the health of asthma patients by studying drug combinations and treatment, including better delivery methods for inhaled medication. They are also collaborating with national agencies, like the Food and Drug Administration, to advocate for safe and effective patient drug therapies.



- **Understanding addiction and obesity** ... Pharmacodynamics faculty want to find which chemicals in the brain fuel excessive alcohol consumption and hope to develop a new drug therapy to combat alcoholism. Medicinal chemistry faculty are tackling the cellular mechanics of obesity, which may aid drug development in regulating metabolism to control this condition that poses risk factors for diabetes, hypertension and stroke.
- **Serving the community** ... Pharmacy faculty is educating patients about food-drug interactions, such as grapefruit juice and St. John's wort, which may impact dose requirements for safe and effective treatment. Working with Shands hospital, our Drug Information and Pharmacy Resource Center provides a valuable service for all health-care professionals statewide while training pharmacy students.

Our college has taken a leadership role in redefining the pharmacy profession by expanding the role of the pharmacist beyond the corner drugstore of the 1920s. But, we can do more. The opportunities to make a difference are only limited by our funding. We aspire to sustain our Foundation of Excellence for future generations by supporting our most valuable assets — our faculty and students.

Your commitment to the *Florida Tomorrow* campaign will not only affect your area of choice immediately, it will create a ripple of change that will resonate for years to come. *Florida Tomorrow* is a day when the discoveries we create now, inspire excellence and innovation and transform quality of life throughout the state and the world. Please join us on this exciting journey in science and discovery.

“As a state university, our resources are limited and we depend on outside funding. We have developed one of the best pharmacy and scientific programs in the country. There is no limit to the imagination of what we can do — it’s just a matter of matching ideas with resources.”
— Hartmut Derendorf, Ph.D., distinguished professor and chair of pharmaceuticals





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