(Above left) The Lawrence C. and Delores M. Weaver Medal of Honor, the highest award presented by Drake University's College of Health Sciences was awarded posthumously to Wendell Talbot Hill Jr. (1924 – 1995), who graduated from Drake in 1950. The award was presented by Raylene Rospond, dean of the college (far right), to Hill's wife, Marcella Washington Hill, GR'49, and the couple's two sons, Wendell Hill III (left) and Philip Elliott Hill.

(Above right) Drake alumni, faculty, staff and friends shared in the April celebration. Hill earned recognition from his peers for superior leadership as a member of several professional organizations, including his place on the Board of Trustees at Drake.

(Left) Delores Weaver speaks with attendees at the Weaver Medal of Honor reception held at the Salisbury House.

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DRAKE **blue**

The Changing Face of EDUCATION

A REVOLUTION IS UNDER WAY in America's classrooms — and Drake's School of Education is leading the charge.

the blue sheet

HERE'S YOUR COPY OF "DRAKE BLUE," THE DRAKE UNIVERSITY MAGAZINE, **wrapped with a special message** FROM RAYLENE M. ROSPOND, DEAN OF THE COLLEGE OF PHARMACY AND HEALTH SCIENCES

College of Pharmacy and Health Sciences Update


Raylene M. Rospond, dean

RESEARCH AS A TEACHING TOOL

In the pharmacy community — and even among many of our own graduates — the research done in Drake's College of Pharmacy and Health Sciences is a well-kept secret. However, student and faculty research is an important part of the CPHS and offers students opportunities they may not find elsewhere.

At other schools, research work is often more central to their mission and is more likely to involve graduate students who know they are pursing a research career. While the CPHS offers an undergraduate pharmaceutical sciences degree (now part of the Health Sciences degree program) and does see a handful of students go on to pursue research careers each year, the research environment in the CPHS is much smaller and decidedly different.

FALL 2007

AVAILABLE IN THE FALL OF 2007, the college's new Health Sciences degree program features three tracks: clinical and applied sciences, health services management and pharmaceutical sciences. The pharmaceutical sciences track replaces the bachelor of sciences in pharmaceutical sciences degree. It will prepare students for careers in research and drug development and in the pursuit of graduate education.

The Blue Sheet
is published for alumni and friends of the Drake University College of Pharmacy and Health Sciences

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PART OF THE EDUCATIONAL PROCESS

The student research done through the college, whether part of a course or extracurricular, is done in support of the University's teaching-oriented mission.

Nita Pandit, professor of pharmaceutical science, says, "I do research because my students are interested. I use it to show students how different [the educational process] can be from traditional classroom learning." Pandit says her research is focused on the chemistry side of pharmacy such as drug delivery, the components of drug products and enhancing the ability of a drug to be absorbed into the body.

John Rovers, associate professor of pharmacy practice, says he uses research as a teaching tool to show "bright, hard working, motivated students some alternative career paths that they may wish to explore."

HANDS-ON STUDENT INVOLVEMENT

Because the CPHS does not have full-time graduate students working in the labs, undergraduates have the opportunity to do actual research work themselves.

Pandit says this allows students the opportunity to learn if research is for them early in their undergraduate years and offers a valuable experience students can use later in a larger research environment.

Student researcher Amanda Weber, P3, agrees. "If you have a small interest in research, you can try it here. If you don't like it, you still get something out of it." Weber, who is interested in pursuing a career in clinical research, says she believes her research experience is helping to make her worldly in all aspects of pharmacy.

Hands-on involvement from students who are not full-time researchers can pose some unique teaching challenges. Rovers says the students he works with must balance their research work, which is generally elective work, with their regular coursework. "From a faculty perspective, it often means you have to spend some time teaching the student how to work as a researcher. Unlike how it's portrayed in movies, research is about 99 percent just plain effort and persistence and, at most, 1 percent genius."

Bob Berendt, PH'04, said he did not begin doing extracurricular research until his sophomore year. He says his impression is that, although undergraduate research experiences are available at larger institutions, they are not as easily obtained, and may only be available to juniors and seniors.

So what kinds of research are CPHS students and faculty involved with? Here are a few examples:

OF MICE AND MEMORY During the 2006–07 academic year, Craige Wrenn, assistant professor of pharmacology along with two Drake CPHS students, Natalie Bainbridge, PH'07, and Lisa Koselke, P2, collaborated on a project with a researcher at the National Institute of Diabetes and Digestive and Kidney Diseases, an institute of the National Institutes of Health. They studied the role of a specific chemical in the brain (acetylcholine) and how it is involved in learning and memory. It is known that in patients with Alzheimer's disease, the brain cells that make acetylcholine selectively die as the disease progresses.

Wrenn and his student researchers conducted studies with mice that have been genetically engineered to lack a receptor that acetylcholine uses to modulate brain function. The "gene knock out" mice were subjected to a variety of learning and memory tests, and their performance was compared to that of normal mice. The results showed that this particular receptor is necessary for learning and memory — a finding that could have implications in the development of drugs for the treatment of Alzheimer's disease. Their work was showcased to the international pharmacy community when Wrenn was invited to present at the third Pharmaceutical Sciences World Congress in Amsterdam, Netherlands, in April 2007.

PATIENT COMMUNICATION Associate professors John Rovers and Michael Miller do pharmacy practice-based research, such as studying the kinds of activities pharmacists do and the outcome of those activities, advancements in pharmacy practice and the development of new practice tools.

Recently, the pair developed an interview tool to assist pharmacists in gathering patient information and determining whether the patient may be having problems with his or her drug therapy. CPHS student researchers helped with the library searches needed to write the grant proposal and assisted with data collection, data entry and project administration. Rovers and Miller are now attempting to validate their interview tool by comparing the problems found by expert pharmacists (college faculty) who do not use the tool with the problems found by clinically less experienced pharmacists (P4 students in the last half of their experiential year) who do use the tool. This project was funded through a grant from the Community Pharmacy Foundation.

GROW IOWA VALUES FUND In fall 2006, Drake University was awarded a $67,000 grant from the Grow Iowa Values Fund, an economic development program designed to expand and attract new businesses to the state. The grant is intended support efforts to enhance the focus of the sciences at Drake University on research that will lead to commercialization.

The grant funded a research collaboration between CPHS faculty and the Drake Undergraduate Science Collaboration Institute, an initiative created to promote and support undergraduate scientific research at Drake. It paid for three PharmD students to attend the Compounding Lab Boot Camp, an intensive, two-day pharmacy compounding training program available through the Professional Compounding Centers of America. The students then worked full-time through most of summer 2007 researching specific drugs in hopes of developing one or more extemporaneously compounded dosage forms that could be made available to pediatric patients in the state of Iowa. This grant also created a new partnership between the CPHS and Blank Children's Hospital in Des Moines.

In addition, the spring 2007 issue of Drake Blue ("Fishing for Answers," p. 9) highlighted the research work of Ron Torry, CPHS professor of pharmacology.

A FOUNDATION FOR SUCCESS

Today, Berendt is a graduate student in the department of Pharmaceutical Chemistry at the University of Kansas. He credits his student research experience at Drake with defining his career path. "Having exposure to various research projects as an undergraduate at Drake not only helped me decide to go to graduate school, but it also helped me gain acceptance into the graduate schools of my choice." He adds, "Fellowships for incoming graduate students are awarded based on student applications, which includes previous research experience. By providing students with research opportunities so early in their undergraduate careers, Drake science departments are helping them not only make career choices but also create a platform that will launch them toward a successful graduate school experience and professional careers."


CPHS students Amanda Weber, P3, (left) and Laura Wolf, P3, conduct research as part of a project funded by a grant from the Grow Iowa Values Fund.

HOW YOU CAN HELP

If you are interested in supporting research in the College of Pharmacy and Health Sciences, there are many ways you can help:

- Volunteer your pharmacy as a study site for a pharmacy practice research project.
- Donate quality used laboratory equipment.
- Share your story. If you conduct research as part of your professional career, our students would love to hear about your experience.
- Collaborate with the college on creating an internship or scholarship in support of student researchers.

If you would like to learn more, please contact Raylene Rospond, dean of the College of Pharmacy and Health Sciences at *raylene.rospond@drake.edu* or 515-271-1814.

IN THE 2006–07 ACADEMIC YEAR, SCHOLARLY ACTIVITIES BY THE CPHS FACULTY AND STUDENTS INCLUDED:

- 15 peer reviewed publications
- 21 peer reviewed podium and poster presentations
- 22 non-peer reviewed publications
- 43 invited presentations and posters
- 9 book chapters
- 9 undergraduate research projects
- Strong involvement in the peer review of manuscripts and grant applications
- Strong involvement in national and state professional pharmacy organizations

SCHOLARLY ACTIVITIES

the blue sheet College of Pharmacy & Health Sciences DRAKE UNIVERSITY *Fall 2007*