

SUMMER SCHOLARS SHINE

Drawing on the expertise of faculty mentors, undergraduate students immerse themselves in summer research and collaboration to give their learning experiences a definite edge.

BY THOMAS W. DURSO '91 (B.A.), '02 (M.B.A.)

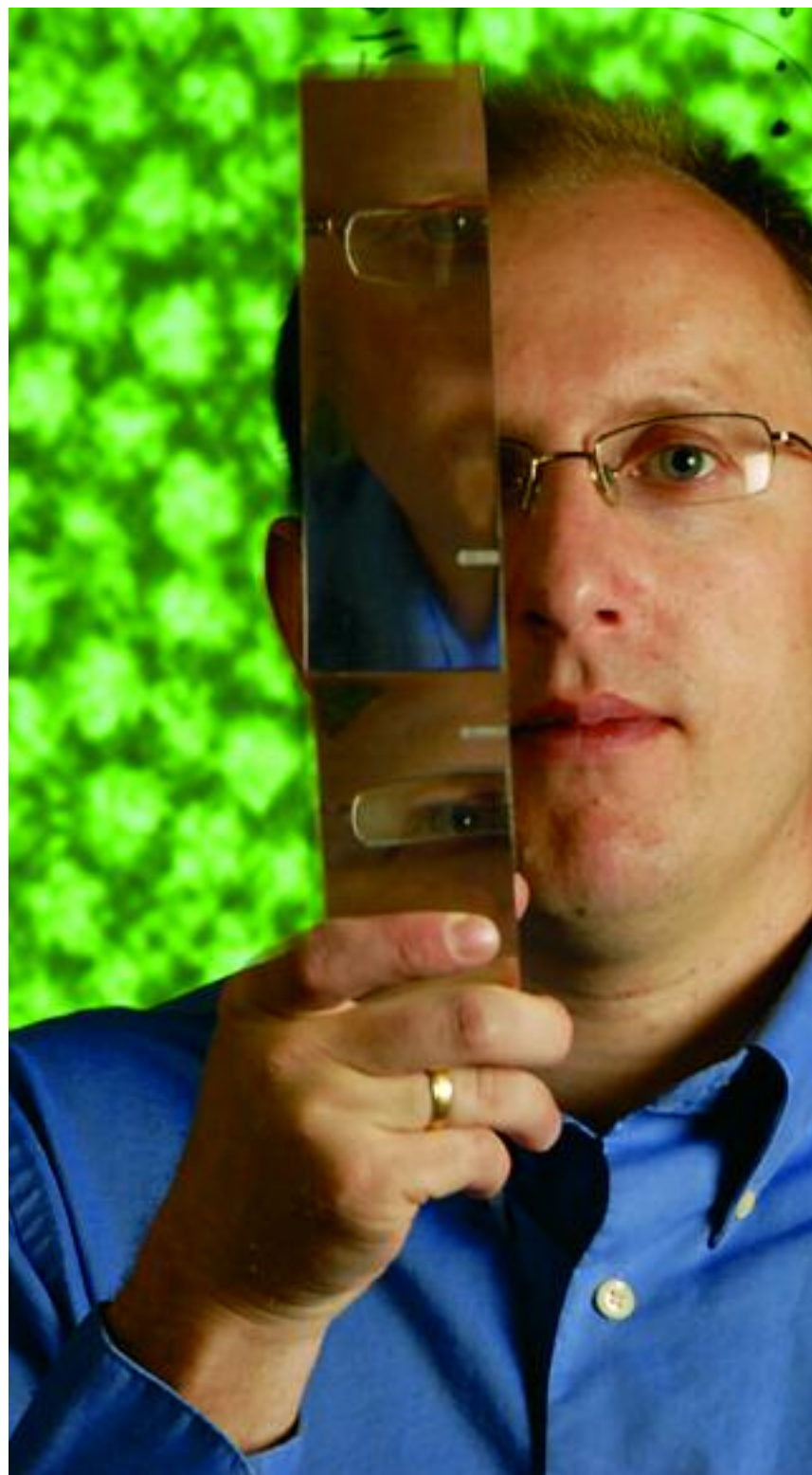
Classroom instruction can impart only so much knowledge. For a student to truly grasp the intricacies of the field she is examining, she must close her textbook, roll up her sleeves, and immerse herself in its daily reality. This is why Saint Joseph's "Plan 2010: The Path to Preeminence" explicitly calls on the University to demand excellence in student academic achievement through a teacher/scholar model that promotes an atmosphere that enables students to be intellectually curious throughout their lives.

Seeking to actualize this initiative, the University launched the Summer Scholars Program, which supports undergraduates in working full-time over a 10-week period on a scholarly project under the mentorship of a volunteer faculty member.

While many schools maintain similar initiatives, the breadth of the Summer Scholars Program, which extends beyond mathematics, engineering, and the sciences to include the arts and humanities, differentiates Saint Joseph's, suggests Michael McCann, Ph.D. '87 (B.S.), a Summer Scholars Committee member, associate dean of the College of Arts and Sciences, and professor of biology.

"This experience is rather like graduate school, but on a smaller scale, in that the faculty member acts as a mentor, providing guidance to the student but not wielding total control," explains Dr. McCann. "It allows students to immerse themselves in the professional work of a discipline."

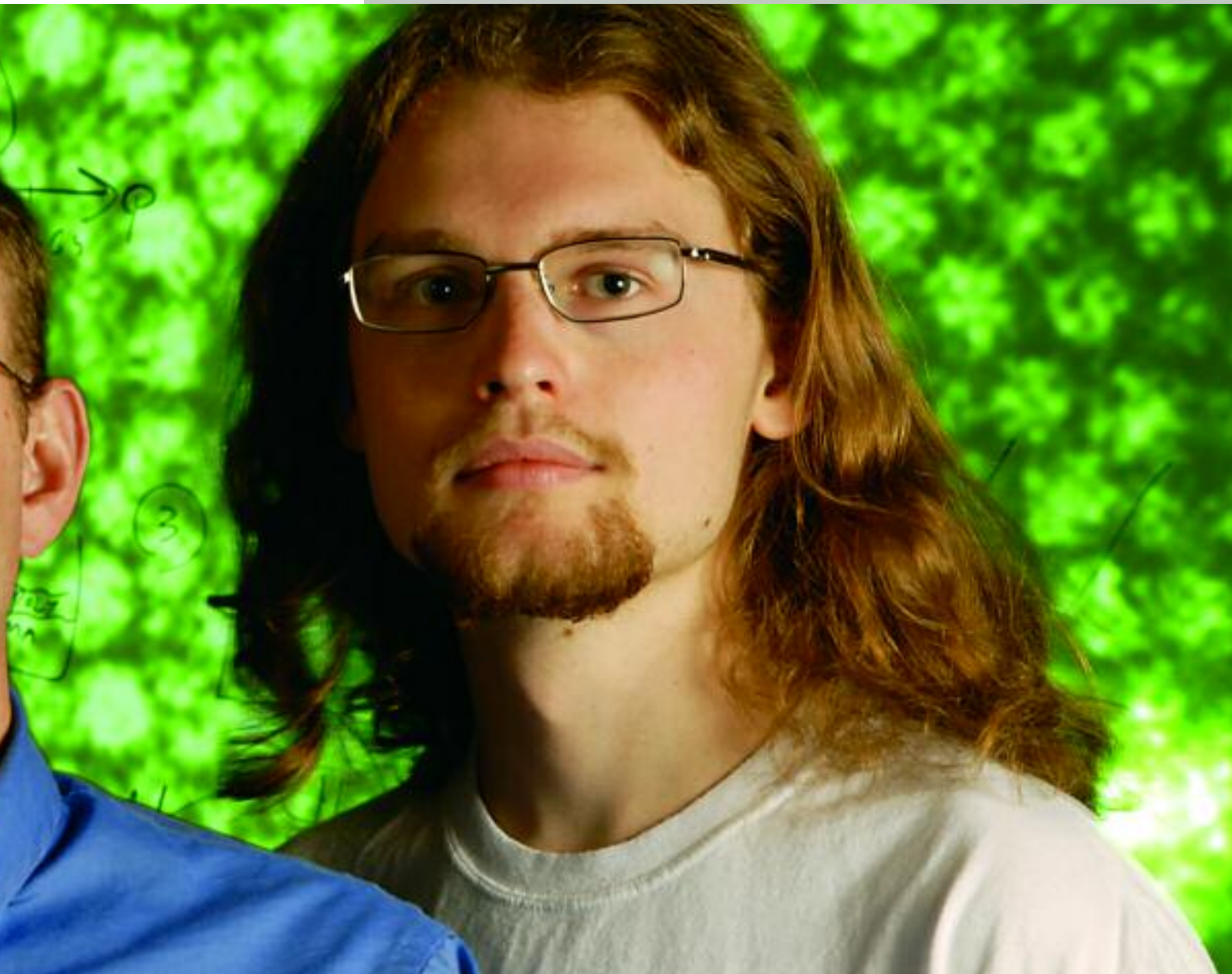
Following are just a handful of fascinating examples of collaborative work between Saint Joseph's undergraduates and their faculty mentors.



Habdas and Latka

"I have a better feel for what it means to do physics."

ANDRZEJ LATKA



ANDRZEJ LATKA AND PIOTR HABDAS, PH.D.

From spectacles to windshields, from mirrors to windowpanes, glass is a ubiquitous material in modern life. Yet little is known about how glass becomes, well, glass.

“We know how to make it,” says Piotr Haldas, Ph.D., a native of Poland and assistant professor of physics, “but we don’t exactly know how it happens.”

Junior physics major Andrzej Latka, who is also from Poland, has been exploring glass’s mysterious transition from liquid to solid, and his work has been good enough to earn him slots to present at the last two annual meetings of the American Physical Society (APS), a rare accomplishment for an undergraduate.

“It was stressful, but a lot of fun,” Latka says. “I got to meet a lot of people who are doing similar research, and it’s improving what we’re doing.”

Using a microscopic model system of colloidal suspensions that behaves like glass, Latka inserts small, spherical particles into a liquid and observes how they move around. By inserting increasing

amounts of these spherical particles into the liquid, he gives the spheres less space to move around, and at the point where they lock in place, the system hardens and glass is formed. Inserting even another species of particles causes the system to melt, changing the system from a solid to a liquid; continuing this process leads to a re-hardening, but as a different form of glass, in a process known as “re-entrant transition.”

“It’s fairly cutting-edge,” says Dr. Haldas. “There haven’t been many papers on microscopic techniques in re-entrant glass transition.”

Latka is a Barbelin Scholar in his second year in the Summer Scholars Program. He is also a member of Sigma Xi, the Scientific Research Society, and of APS. He hopes eventually to earn a Ph.D. in physics and remain in research and academia. For now, the hands-on work he’s been engaged in has proved invaluable.

“I have a better feel for what it means to do physics,” he says. “Now I know what to expect.”

*“She’s fearless
in putting together images
and trying things.”*

STEVE COPE, M.F.A.
on Kathleen Vaccaro '07



Vaccaro '07 and Cope

KATHLEEN VACCARO '07 AND STEVE COPE, M.F.A.

The first thing that strikes you about Kathleen Vaccaro’s eye-catching painting “Rollercoaster” is the bold tracks that sweep with abandon all over the canvas. The point of view is from the top of the coaster, just before the car begins its primary descent, and the undulating path of the track slashes its way across the work.

“I was trying to describe what the college experience is like,” says Vaccaro, an art education major from Rydal, Pa. “That’s what that was about.”

Vaccaro relies on “whatever’s going on in my life at the moment” to inspire her work, which she sees as a narrative to share with the viewer. With help from Steve Cope, M.F.A., assistant professor of fine and performing arts, with whom she worked in last year’s Summer Scholars Program, as well as Department Chair and Professor Dennis McNally, S.J., she completed four paintings that were exhibited in April and May at MBN Studios in Philadelphia’s Old City. It was the first such exhibit for a Saint Joseph’s undergraduate in recent memory.

“Her interest is to make a compelling image,” observes Cope. “She’ll do whatever it takes to make that happen. She’s fearless in putting together images and trying things.”

A member of Phi Beta Kappa, Alpha Sigma Nu, and the education honor society Kappa Delta Pi, Vaccaro hopes to teach art in a grade school or high school and pursue a master’s degree in fine arts. She will also continue to paint, of course, seeking images that catch her eye and that she can render in some intensely personal way.

“You have to find an image that you can alter to make your own,” Vaccaro says, “so that when it gets locked into paint, it’s wholly yours.”

Left Behind No More

*“He’s entirely committed
to these children.”*

MARK ORRS '03 (B.S.)
on Michael Mungai

As a young teen, Michael Mungai was one of countless children living on the streets of Kenya’s impoverished Dagoretti province. After seeing Mungai’s story in *Left Behind*, a documentary about Kenyan HIV orphans and the street children of Dagoretti, Mark Orrs '03 (B.S.) traveled to Africa to seek him out. The two met, and Orrs, captivated by Mungai’s intelligence and insight, persuaded him to apply to Saint Joseph’s, where today he is a junior economics major.

As an additional result of the exposure he earned through the documentary, Mungai established contacts with volunteers who

aided him in establishing Dagoretti 4 Kids. Since the organization’s inception in 2003, Dagoretti 4 Kids has provided housing and schooling to more than 40 street children, many of them former drug addicts.

Mungai’s story would have been impressive enough had it ended there. But mindful of his own upbringing and all too aware of the children who remain on Dagoretti’s streets, he and Orrs returned to Kenya in summer 2006 to shoot their own documentary. With funding from a number of Saint Joseph’s departments, their untitled project tells Mungai’s story by focusing on a street kid named Kabro. Mungai and Orrs

MICHAELA STERDIS AND CAROLYN CHO FLEMING, M.B.A.

The loosening of federal regulation of drug marketing combined with the rise of the World Wide Web gave pharmaceutical companies an unparalleled opportunity to reach out to consumers directly and share information on both their corporate missions and their products.

Research conducted by senior marketing communications major and Irwin, Pa., resident Michaela Sterdis indicates that many of these companies are failing to take advantage.

Using metrics developed by Forrester Research, a leading market research company, Sterdis assessed the Web sites of the 25 largest pharmaceutical companies to determine whether the sites adequately reflect the companies' stated mission and philosophy, and whether they appeal to and inform consumers in terms of presentation, navigation, privacy and security, and performance. What she found surprised her.

"The top companies aren't doing a very good job using the Internet as a marketing tool," says Sterdis. "These companies are targeting older people who aren't very Internet-savvy, and they're not doing it well. A lot of times, the information was hard to find. The type was often too small or too cluttered. They're spending money, but they're not utilizing it in the most effective way."

This summer, Sterdis will broaden her evaluation to compare the pharmaceutical industry to other industries and to develop recommendations that can be submitted to the companies she's been studying. Meanwhile, her faculty mentor, Carolyn Choh Fleming, M.B.A., visiting instructor of pharmaceutical marketing, is working with Sterdis to shape her findings into work that can be published.

Choh Fleming praises Sterdis's intellectual energy and insightfulness, and adds, "I was tremendously gratified and excited by the amount of energy, volume of work accomplished, and enthusiasm Michaela brought to the project."

For her part, Sterdis sees the project as a chance to supplement classroom curricula.

"I thought this would take me a step further in reaching what I actually want to do," she says. "The classroom can only go so far. This has helped me expand on my abilities."



Choh Fleming and Sterdis

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MICHAELA STERDIS

filmed Kabro's struggles as well as his success after being placed at Dagoretti 4 Kids, where, after a tough period of adjustment, the boy is now off drugs and attending school.

With no film background before beginning his project, Mungai took classes with Deron Albright, associate professor of fine and performing arts, in order to learn editing. He and Orrs, who worked the camera, returned to Kenya this summer to begin some new projects.

"Michael is very careful about not getting too comfortable here," observes Orrs, an advisory board member for SJU's College of

Arts and Sciences and a doctoral candidate in sustainable development at Columbia University. "He's always been very committed about going back to Kenya. He's entirely committed to these children."

"I usually talk about the children and the plight of these boys," says Mungai. "I thought film would be the perfect medium to portray the problems, the heart of them, all the things we go through. I'm using film as a platform to represent the children and advocate for their rights."

For a feature on Mungai's work, see www.current.tv/pods/caring/IPD04479.

— Tom Durso



Mungai and Orrs '03



Surry '07 and Clark '75

LUKE SURRY '07 AND PETER CLARK, S.J. '75

In the West Philadelphia communities that Mercy Hospital serves, an increase in the number of undocumented, foreign-born Africans living there has coincided with an increase in emergency room visits by members of this population. Typically they arrive at the ER with symptoms of late-stage, acute diseases, such as complications from cancer, diabetes, and obesity, which makes it both more difficult and more expensive for the hospital to treat them.

A 10-day trip to the Dominican Republic last summer led Luke Surry '07 (B.S.), who is from Harrisburg, Pa., to develop a proposal to reach out to such immigrants before their illnesses progress to such dire points. Examining models of community medical outreach, Surry, working with Peter Clark, S.J., '75 (B.A.), director of the Institute of Catholic Bioethics and professor of theology and health administration, concluded that building trust among the population was paramount, since many avoid medical care for fear of being turned in.

The program that Surry and Fr. Clark have developed would bring community members to the hospital for training as “health promoters,” front-line evaluators capable of winning the trust of their fellow immigrants and referring them to more sophisticated medical care should the need arise. Ideally, the program would result in a higher quality of life for the immigrants and in conserved resources for Mercy.

“The idea is that this can be a paradigm for other Catholic hospitals,” says Fr. Clark. “Everyone is dealing with these issues of undocumented populations.”

Surry presented his proposal at the Global Health Education Consortium’s annual conference in February, and he and Fr. Clark published a paper about it in *Medical Science Monitor*’s March 2007 issue. He also presented the project to administrators at Mercy Health System, where Fr. Clark is a bioethicist.

“It’s made my experience here,” says Surry, a member of Phi Beta Kappa, Alpha Sigma Nu, and Alpha Epsilon Delta, who will head to Georgetown University School of Medicine this fall to study pediatric medicine. “It’s opened so many doors for me.”

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LUKE SURRY '07

MORE FACULTY-STUDENT COLLABORATION

Across the University, in both the Erivan K. Haub School of Business and the College of Arts and Sciences, Saint Joseph’s undergraduates engage in an incredibly diverse array of research projects under the mentorship of faculty members. Here are just a few:

- Education major and senior Patricia Duckworth (Nazareth, Pa.) assisted Eileen F. Sabbatino, Ed.D., assistant professor of education, in her examination of how best to teach children with autism. Duckworth researched a program called TEACCH (Treatment and Education of Autistic and related Communication-handicapped CHildren), which was developed in North Carolina and has been implemented nationally, and visited several Philadelphia-area schools utilizing it during summer programs.
- Accounting major Meaghan Kelly '07 (Cheshire, Conn.), a two-year Summer Scholar, worked with Stephen Porth, Ph.D. '80 (B.S.), associate dean of the Haub School of Business and professor of management, and George Sillup, Ph.D., assistant professor of pharmaceutical marketing, in assessing media coverage of ethical issues in the pharmaceutical industry. Kelly developed a database called EthicsTrak, which logged front-page articles and editorials about the industry in the country’s five highest-circulation newspapers over a two-year period.

“The value of the project for me is using my technological background to learn from a faculty member ...”

THOMAS KRAMER



Kramer and Ragan '69

THOMAS KRAMER AND JOSEPH RAGAN, M.B.A. '69

The enterprise resource planning (ERP) software developed and sold by SAP, the German company whose U.S. headquarters are in Newtown Square, Pa., is meant to allow businesses to crunch numbers from all parts of their organizations and conduct comprehensive analyses using an almost limitless number of variables.

The software is a rich, robust product — perhaps too robust. Its complexity, according to Joseph Ragan, M.B.A. '69 (B.A.), department chair and associate professor of accounting, often leaves those who purchase it unable to take full advantage of the vast potential locked within.

Under Ragan's tutelage, senior Thomas Kramer, an accounting and finance double major from Glenview, Ill., is taking data from actual companies, plugging it into the software, and trying to develop reports and analyses that will enable decision makers to drill down as deeply as possible, thus more fully realizing ERP's value. The data, from companies such as IBM, Siemens, and Coca-Cola, have been masked and denormalized, but they are real, giving Kramer invaluable access to past trends and current information as he tries to guide future decision-making.

“We can go into a system with data, pull up reports at high levels of statistical analysis, and pull up information about a company to make high-level decisions about the business in terms of profitability, growth, and so on,” says Kramer, a Beta Gamma Sigma member and STAR (Student Technologists to Assist in Reengineering Curriculum) Scholar who spent last summer studying at the London School of Economics.

A paper describing the work will be presented at this fall's International Business Educators' conference in Las Vegas; another has been submitted to the *Journal of Business Information Systems*.

“The value of the project for me is using my technological background to learn from a faculty member the different types of business perspectives and the analyses that can be accomplished with these technologies,” he says.

- A four-year service-learning student, English major Katharine Porter '07 (Drexel Hill, Pa.) wrote creative nonfiction about her time volunteering at the Bethesda Project, which aids the homeless in Philadelphia. Assisting Porter in this work has been Ann E. Green, Ph.D., associate professor of English and director of SJU's Writing Center. She hopes that Porter's work will be published and notes that it contributes to University-community collaboration by documenting SJU's long-term connections to the community.
- Two groups of students worked with Mark F. Reynolds, Ph.D., assistant professor of chemistry, on research involving proteins. Chemistry major Joseph Patterson '07 (Zionsville, Pa.),

and chemical biology majors junior Matthew Weaver (Upper Darby, Pa.), and Megan Schutt '07 (Philadelphia) studied how a protein called FixL senses oxygen and controls nitrogen fixation in alfalfa plants. Chemical biology majors Matthew Pace '07 (Philadelphia), Jason Burrows '07 (Havertown, Pa.), and Brenden McMahon '07 (Nokesville, Va.), collaborating with researchers at the University of Pennsylvania, studied the structure and function of BK Slo channels, which are believed to be important for regulating blood pressure and other important cellular functions. ❖

Tom Durso is a freelance writer and regular contributor to SJU Magazine.