Advancements in technology
Four equipment grants support disease research, health care training

by Tim Olsen

Federal stimulus funding has enabled Marquette researchers to purchase nearly $1.5 million in new equipment in the past 18 months. “The American Recovery and Reinvestment Act was a real boon to academic research,” said Kathy Durben, director of project planning and development in the Office of Research and Sponsored Programs. “There just haven’t been a lot of sources for equipment funding available nationally. Marquette faculty did a wonderful job of preparing applications quickly to benefit from the funding.”

Two of the four grants were from the National Science Foundation and were awarded to faculty in the Department of Biological Sciences — a $601,079 award for an X-ray diffractometer and a $286,000 award for a confocal microscope. The other two, from the Health Resources and Services Administration, were awarded to faculty in the Department of Physical Therapy and College of Nursing.

Dr. Martin St. Maurice, assistant professor of biological sciences, is the principal investigator on the grant for the X-ray diffractometer, which is used to see the atomic structures of molecules. “The instrument focuses a powerful X-ray beam on a small crystal and captures the X-ray reflections after they pass through the crystal,” said St. Maurice. “The result is a three-dimensional map of a molecule’s complete electron density. The map can be detailed enough to allow us to see exactly where every single atom is positioned in a complex chemical molecule.”

Knowing the detailed molecular structures of biological molecules is critical in understanding how they function, according to St. Maurice. Understanding the structure and function is a major step toward understanding the underlying mechanisms of disease.

Faculty in the Department of Biological Sciences, the School of Dentistry and the Medical College of Wisconsin will benefit from the confocal microscope, which allows researchers to view tiny structures — in this case, cellular structures — that can lead to better understanding of diseases. “The microscope uses lasers of five different wavelengths to allow scientists to study structures at various depths within the cell, as opposed to a conventional microscope that looks at the cell surface,” said Dr. Bob Fitts, chair and professor of biological sciences. By labeling proteins with fluorescent probes, researchers can pinpoint their location and how they interact with other proteins, he said.

The $300,000 physical therapy grant funded the purchase of two motion analysis systems for Marquette’s Health Careers Opportunity Program. “The systems provide data on human movement and bring science to life through video animations,” said Dr. Larry Pan, chair and professor of physical therapy. “At least 400 disadvantaged middle and high school students will be trained...”


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Harvard professor of Jewish Studies to present Père Marquette Lecture

The 2010 Père Marquette Lecture will be presented by Dr. Jon Levenson on Sunday, March 27, at 2 p.m. in the Weasler Auditorium. Levenson, the Albert A. List Professor of Jewish Studies at Harvard University, will present “Abraham Between Torah and Gospel.” Levenson will highlight differences rather than similarities in the relations of Judaism and Christianity to the figure of Abraham, with additional differences that appear in Islam. Levenson’s work concentrates on the interpretation of the Hebrew Bible, including its reinterpretations in the “rewritten Bible” of Second Temple Judaism.

“God in Mass Media?” is topic of Wade Lecture

The Rev. Francis Wado, S.J., Public Lecture will be delivered by Rev. Johannes Ehrat, S.J., Wednesday, March 30, at 4 p.m., in the Raynor Library Beaumier Suites BC. Father Ehrat, professor extraordinarius of social sciences at the Pontificia Università Gregoriana in Rome, will discuss “God in Mass Media? — A Semiotic Approach to a Theology of Communication.” Media scandals, with special attention to religious scandals, are the focus of his most recent research in television studies and investigative and other practices of journalism.

Mitchem fellow to discuss tourism and Native American celebrations

Gabriela Spears-Rico, a doctoral candidate in ethnic studies at the University of California-Berkeley and 2010-11 Mitchem fellow in the Department of Social and Cultural Sciences, will present her dissertation research on the effect of tourism on Native American spiritual celebrations Tuesday, April 5, from 3 p.m. to 5 p.m., in the Raynor Library Beaumier Suites BC. Her ethnographic research examines how P’urhepecha artists, dancers and healers perform their identities and negotiate the selling of their culture and spirituality to Mexican tourists.

Lenten Half-Day Ecumenical Retreat offered to employees

The Faber Center for Ignatian Spirituality will host a Lenten Half-Day Ecumenical Retreat of prayer, reflection and renewal for employees Friday, March 25, from 9 a.m. to 1 p.m. at the Church of the Gesu Parish Center. Rev. John P. Fitzgibbons, S.J., associate provost for faculty development, will facilitate. The retreat is free and includes continental breakfast and lunch. Register at http://bit.ly/Faberlecture2011.

Basketball alumnus personally delivers equipment prize

For most researchers, making a capital purchase or securing grant funding are the more conventional ways of acquiring major equipment. Dr. Fang Yao Stephen Hou, however, simply won a $35,000 piece of equipment as a prize at a conference. Hou, assistant professor of clinical laboratory science, completed a survey at the Lumixen booth at the American Association of Clinical Chemists conference in Anaheim, Calif., last July to be entered into a drawing for a MagPix, a fluorescence imager that allows for detection of up to 50 substances simultaneously. “After I won, I was told that Tom Copa, one of the VP’s at Lumixen, graduated from Marquette and wanted to personally deliver the instrument,” said Hou. In October, Copa, Bus Ad ’89 and former member of the basketball team, delivered the MagPix, which has been installed in the Department of Clinical Laboratory Science lab.

CAMPUS Happenings

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Developing world citizens
University expands international education opportunities

by Tim Cigelske

Even with 550 Marquette students participating in study abroad programs this year, faculty and the Office of International Education have made it a priority to create even more international education opportunities for students — both at Marquette and abroad. Specifically, new educational efforts focusing on Middle Eastern and North African cultures are underway to expand opportunities for students.

Beginning in fall 2011 students will be able to take advantage of course offerings in levels III and IV of Arabic, an expansion from levels I and II (elementary and intermediate) that are currently available. Thanks to faculty development funding supported by a U.S. Department of Education grant, “Strengthening Middle Eastern and North African Studies at Marquette,” several faculty will also infuse MENA content into new and existing courses. Terry Miller, director of international education, is project director for the grant.

New or revised courses will include:

• The Crusades — Dr. Leslie Knox, associate professor of history
• Film in Iran — Patrick McGilligan, lecturer in the Diederich College of Communication
• History of the Byzantine Empire — Dr. Phillip Naylor, professor of history
• Philosophy and Faith in the Arabic Tradition — Dr. David Twitten, associate professor of philosophy

Furthermore, Dr. Irfan Omar, associate professor of theology, and Dr. Jean-Pierre Lafouge, associate professor of French, will lead a three-week “Introduction to Islam and Islamic Culture in Morocco” short-term study program in Morocco for 10-12 students in May and June 2011.

“Our citizenship transcends national borders,” said Miller. “How are we preparing our students with language and understanding of culture? We’re an academic, Jesuit institution. No area of the world should be out of reach of student studies.”

New Marquette website centralizes social media
By Tim Cigelske

A new Marquette website, marquette.edu/social, conveniently locates in one place all of the university’s social media feeds.

The new site includes status updates, video, photos and more from Marquette on Facebook, Twitter, Flickr, YouTube, Foursquare and LinkedIn. It also includes a digest from social media in the form of a blog, and tips, best practices and guidelines for use of social media by departments, faculty and staff.

“We created the site to serve as a starting point for people who would like to follow Marquette communities in social media, so they might connect with others and join the conversation,” said Tom Pionek, director of interactive marketing in the Office of Marketing and Communication.

As of early February, Marquette has more than 25,000 fans and followers between Facebook and Twitter, nearly 500 videos on its YouTube channel, more than 2,000 photos on its Flickr page, and more than 8,500 members of Marquette’s alumni group on LinkedIn. The university’s Twitter account — @Twitter.com/MarquetteU — was ranked ninth most influential university account in the nation by Klout, a company that measures impact in social media. Klout accounts for variables such as how often messages are responded to and retweeted and the influence of those following the account.

Marquette athletics has more than 18,000 fans and followers between Facebook and Twitter — their accounts can be found at http://go.mu.edu/muathletics.

One of the newest additions to Marquette’s social media utilities is Foursquare, which awards users business specials, tips and “badges” for completing challenges. Marquette’s Foursquare profile has become the 12th most popular among universities, with nearly 5,000 “friends” according to FanPageList.com. Harvard and Stanford are the most visited via Foursquare.

Foursquare works by users checking in” via texting or using a Foursquare app, which lists user-submitted tips about nearby places. Foursquare participants can also let their friends know their location by sending a check-in message to Twitter and/or Facebook.

Marquette’s goals in social media include creating awareness of the Marquette brand online, building a sense of community, and fostering word of mouth about Marquette, according to Tricia Geraghty, vice president of marketing and communication.

Hartman Literacy Center helps boost reading scores
By Tim Cigelske

“I believe that helping children become literate is the greatest act of social justice that we can do as teachers,” Jeni Berthold told faculty, deans and administrators. Berthold became emotional as she spoke about her life’s work when she accepted the 2010 College of Education Young Alumna of the Year Award.

Berthold, Arts ’97, Grad ’07, a reading specialist in the Wauwatosa School District, arrived at this passion in part by mentoring teachers at the College of Education’s Hartman Literacy and Learning Center. The center is a teaching, research and service site that improves the quality of literacy instruction for urban children, as measured by assessments of their reading abilities over time.

The center, founded by Dr. Lauren Leslie, professor emerita of education, and now directed by Dr. Kathleen Clark, assistant professor of educational policy and leadership, operates by involving families in their children’s learning process. Pre-service teachers teach small groups of struggling readers twice a week, 90-minutes a day, for 10 weeks in the center. Hartman tutors help parents understand how they can help at home, and children receive materials to read with their parents. The center sponsors literacy events where families hear children’s authors read their materials.

This hands-on approach has received praise from parents, teachers and school administrators. One parent commented that she was impressed with her daughter’s willingness to read books at home, while another remarked that the program gave her son “a lot of confidence in reading.”

Over the last two years, almost 300 students have attended the Hartman’s 10-week program. Nearly two-thirds have increased their ability to recognize words by one or more levels, and nearly half increased their overall instructional reading level, according to Clark.

These results have translated to helping not only students and families, but also teachers, as Berthold found in her own work.

“I have been overwhelmingly fortunate to have studied under, been mentored by, and ultimately become colleagues with some of the finest literacy professionals in the field,” she said. “Their passion and knowledge about reading education inspired me to follow the same path.”
Marquette Colleagues
Program immerses university leaders in Ignatian spirituality

by Tim Olsen

It’s difficult to work or study at Marquette for very long without familiarity with the four pillars of the university mission — excellence, faith, leadership and service.

To help Marquette leaders better appreciate the university mission and bolster their understanding of Ignatian spirituality, the Office of Mission and Ministry introduced the Marquette Colleagues Program in spring 2010. 11 members of the University Advancement leadership team participated. In fall 2010, 18 university administrators also completed the program.

Adapted from the more in-depth Ignatian Colleagues Program of the 12 Heartland Delta universities, Marquette’s program was developed to help lay members explore how Ignatian spirituality informs their work in Jesuit higher education and affects how the university mediates between faith and culture. It includes an experience of the Spiritual Exercises of St. Ignatius; a learning component of reading, reflection and group discussion; an immersion experience of working with the poor in Milwaukee for a day; and practicing prayer.

One of those memories was the chance encounter with a Marquette alum, Angie Gius, Arts ’04, at Agonda Beach in Goa.

Jennifer Sjostedt, teaching assistant in the College of Nursing, participated in the “Rickshaw Run,” in which teams of three worked together to navigate, and coax, their Rickshaw Run nearly 2,000 miles across India, raising more than $2,000 for clean water projects in India and picking up memories of a lifetime along the way.

“The people of India and those from around the world that we met doing the event took the term hospitality to a whole new level,” said Sjostedt, Grad ’10. “We had several invitations for chai or visiting homes, and felt very welcomed. I already have a list of people I need to go back and visit again some day.”

Sjostedt, however, India was on her list of countries to see, so she and some friends teamed up to “race” across the subcontinent Jan. 1-15 in the common mode of transportation in India known as the rickshaw. Sjostedt, teaching assistant in the College of Nursing, participated in the “Rickshaw Run,” in which teams of three worked together to navigate, and coax, their Rickshaw Run nearly 2,000 miles across India, raising more than $2,000 for clean water projects in India and picking up memories of a lifetime along the way.

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Sjostedt’s team, Team Vamanos, crossed the finish line 23rd out of 65 teams. Their team website, by Tim Olsen

Jennifer Sjostedt — Rickshaw racer

With all the possible ways to see a country in person, put-putting along in a tiny, semi-reliable vehicle akin to a three-wheeled, seven horsepower golf cart isn’t at the top of most people’s list. For Jennifer Sjostedt, however, India was on her list of countries to see, so she and some friends teamed up to “race” across the subcontinent Jan. 1-15 in the common mode of transportation in India known as the rickshaw.

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On the Side
Jennifer Sjostedt — Rickshaw racer

Jennifer Sjostedt (center) traveled across India in January with teammates Dan Studzinski, her brother (left), and Daji Narra (right) in the annual Rickshaw Run.

By Tim Olsen

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On the Side offers a glimpse of faculty and staff interests outside of Marquette. E-mail your story suggestions to marquettematters@marquette.edu.

Take Five

The five most common first names, including variant forms and spellings, of Marquette female employees according to Human Resources:

1) Mary — 52
2) Christine — 42
3) Katherine — 34
4) Susan — 27
5) Debra — 26

Next month — most common male first names. Suggestion submitted by Stacy Tuchel, marketing office associate, Office of Marketing and Communication.

“Take Five” is a brief list concerning an interesting aspect of Marquette life. E-mail your list suggestions to marquettematters@marquette.edu.
Finding the science in the art of teaching

Biology professors will use enhancement award to test teaching techniques

By Andy Bradfeller

When Dr. Tom Eddinger, professor of biological sciences, and Dr. Michelle Mynlieff, associate professor of biological sciences, began teaching General Biology 1001 in 2003, it was a traditional lecture-style class with 200-plus students in each section. After two years of focusing on rote learning and exams, the professors were convinced there had to be a better way to teach the class. Since then they have incorporated active-learning techniques, classroom response systems (clickers) and writing assignments.

Now, as recipients of the 2011 Way Klingler Teaching Enhancement Award, Eddinger and Mynlieff, along with Dr. Martin St. Maurice, assistant professor of biological sciences, will use the one-year, $20,000 award to determine if their changes have had an impact on student learning.

Anecdotal feedback from students told Eddinger that the changes have been beneficial. Mynlieff’s data digs deeper. “Over the past seven years withdrawal rates in my class have decreased by two-thirds,” she said.

True to their science backgrounds, however, the professors want specifics. The grant will allow them to rotate different techniques and test their effectiveness in the three sections of General Biology. Mynlieff will also compare student data from students who took the class before and after the changes, to determine longer-term benefits.

“It takes more time and energy to implement and prep an active classroom,” said Eddinger. The professors believe if they can show what techniques are most effective it will be easier to encourage other colleagues to use and implement different teaching techniques.

Eddinger, Mynlieff and St. Maurice will develop course material this summer and test the techniques in the fall. Data from next fall will be evaluated in spring 2012, and, if appropriate, the professors will report their results in journals and at conferences.

Advancements in technology

with the portable system and 75 middle school, high school, college and professional students will be trained with the fixed system each year in HCOP summer programs,” said Pan.

The College of Nursing received $296,263 to purchase an electronic medication dispensing unit, a defibrillator and 13 patient care simulators for its Simulation Lab, including a high-fidelity SimMAN, two Hispanic and two African American simulators, a birthing simulator and a newborn simulator. “Because simulated learning experiences enhance students’ ability to give safe, high-quality, culturally competent patient care, and because we’re interested in increasing the number of nurses from all backgrounds in the workforce, the College of Nursing needed to increase the number and types of simulators,” said Dr. Kerry Kosmoski-Goeplert, associate dean and clinical assistant professor of nursing.

“Acquisitions such as these benefit the university by building the infrastructure for state-of-the-art student training and faculty and student research,” said Dr. Jeanne Hossenlopp, vice provost for research and dean of the Graduate School. “They are also important in recruiting students and faculty to Marquette by providing opportunities for engaged learning and facilities needed for cutting-edge research.”

MARQUETTE MATTERS

Jesuit to speak about his work with Los Angeles gangs

Rev. Gregory Boyle, S.J., founder of Homeboy Industries, will share his personal experiences of working with gang members in Los Angeles at “Tattoos on the Heart” Wednesday, March 23, at 7 p.m. in the Eckstein Hall Appellate Courtroom. The event is sponsored by Alpha Sigma Nu, the Law School Restorative Justice Initiative, the Office of Mission and Ministry, the Community Transformation Project, the Center for Peacemaking and Safe & Sound.

U.S. Patent and Trademark Office is subject of lecture

Mark Lemley, the William H. Neukom Professor of Law at Stanford Law School and the Director of the Stanford Program in Law, Science and Technology, will deliver the Law School’s Hon. Helen Wilson Nies Annual Lecture at 12:30 p.m. Friday, April 1, in Eckstein Hall. Lemley will present “Can the Patent Office Be Fixed?” about how examiners can effectively distinguish between patentable and unpatentable inventions without wasting time or money, addressing several proposed resolutions and their problems. Lemley has published seven books and has testified numerous times before Congress, the California legislature, the Federal Trade Commission and the Antitrust Modernization Commission on patent, trade secret, antitrust and constitutional law matters. RSVP to http://bit.ly/MUNies10 by March 15.

Photographers to discuss art museum’s “Constructed Identity” exhibition

The Haggerty Museum of Art will host two lectures in March in conjunction with its exhibition The Truth is Not in the Mirror: Photography and a Constructed Identity. Photographers Kelli Connell and Will Steacy will speak Wednesday, March 9, and photographers LaToya Ruby Frazier and Jesse Burke on Wednesday, March 30. Each pair will discuss their work and compare and contrast it with each other. Each lecture will take place at 6 p.m. in the Eckstein Hall Appellate Courtroom and a reception will follow at the Haggerty.

Nun to examine “Prospects for Women in Tomorrow’s Church”

Sister Anne E. Patrick, SJUM, Laird Professor of Religion and the Liberal Arts (Emerita) at Carleton College of Northfield, Minn., will present “What In God’s Eye SHE Is: Prospects for Women in Tomorrow’s Church” Wednesday, April 6, at 7 p.m. in the AMU Ballrooms. The program, which will be followed by a Q&A session and reception, is sponsored by the offices of Mission and Ministry and the Provost.

MARQUETTE HAPPENINGS