

umass MED

The University of Massachusetts Medical School Magazine

YEAR IN REVIEW 2012

A globally savvy student body

Helping Liberia make strides
toward sustainability

**Local heart, global reach:
Why global health matters**



YEAR IN REVIEW WITH A GLOBAL EDGE

Hosting a head-of-state from another country at Commencement is very prestigious. When this head-of-state is the first democratically elected female president of any African country, the importance of the visit grows. And when, during her keynote address, she offers heartfelt thanks to the many members of the UMMS community for helping to rebuild the medical infrastructure in her country and save thousands of lives, it's hard to deny something pretty special is happening at this medical school. This year in review edition of *UMass Med* magazine details the growing importance of global health at UMass Medical School and answers the question: Why is global health an important part of our mission?



The University of Massachusetts Medical School, the state's first and only public academic health sciences center, educates physicians, scientists and advanced practice nurses to heal, discover, teach and care, with compassion. Our mission is to advance the health and well-being of the people of the commonwealth **and the world** through pioneering advances in education, research and health care delivery.

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Once again, UMMS tops
in nation for primary
care education

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As you read about the dynamic UMass Medical School community, you'll frequently come across references to our partners and programs.

Commonwealth Medicine

UMass Medical School's innovative public service division that assists state agencies and health care organizations to enhance the value and quality of expenditures and improve access and delivery of care for at-risk and uninsured populations. www.umassmed.edu/commed

The Research Enterprise

UMass Medical School's world-class investigators, who make discoveries in basic science and clinical research and attract \$250 million in funding annually. www.umassmed.edu/research

UMass Medicine Development Office

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UMass Memorial Health Care

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www.umassmed.edu

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Chancellor's Message

Our future is bright. Our campus is thriving. Our commitment to improving health for all is resolute.

This is a truly momentous time for our great academic health sciences center, and it is a tremendous privilege to lead such an exceptional institution. We look with great pride upon the continued accomplishments of our outstanding faculty, staff and students. As you will read in this issue of *UMassMed*, their efforts are enhancing our own institution's remarkable success, as well as impacting health around the world.

Shortly after I began my tenure at UMass Medical School, we crafted a detailed joint strategic plan with our clinical partner, UMass Memorial Health Care. That plan, now in its fifth and final year, created a bold and unified vision that called upon us to design the future model of health care delivery, build the workforce of the future, establish an ideal learning environment, translate discovery into practice and function as a high performance and high reliability institution.

“Our global endeavors play a key role in our success. They benefit and enrich education, health professional training and quality patient care. They demonstrate that our commitment to helping all is strong.”

Notably, we set our sixth goal as: “Having a significant impact *in the world*.” In reviewing our earlier mission statement, we felt strongly that it did not accommodate the growing importance of global health. Extending our mission's reach beyond the Commonwealth of Massachusetts, across the globe, better reflected our abilities and aspirations.

The results have been extraordinary. We have met or exceeded all of our goals, including that last one, as evidenced by the growing number of partnerships signed with universities abroad, grant applications with foreign collaborators and other global projects. The health and well-being of the people of Massachusetts has, and will remain, our foremost priority. But as we continually dedicate ourselves to the important work here at home, we celebrate our stature as a trusted and impressive ally in international health.

At the heart of all of our successes lies our faculty's exceptional ability to collaborate so generously in the practice of the science and art of nursing, medicine and the health sciences.

This is well evidenced by the growth and advancement we continue to achieve. As the Albert Sherman Center, our newest state-of-the art education and research facility, opens its doors in early 2013, we have completed curriculum redesign across all four years and class expansion in the School of Medicine. The Graduate School of Nursing has graduated its first cohort of Doctor of Nursing Practice students and the Graduate School of Biological Sciences received a record number of admission applications. Commonwealth Medicine and MassBiologics are both thriving, as executive vice chancellors Joyce Murphy and Mark Klempner, MD, respectively, have taken up leadership of these important entities.

Our global endeavors play a key role in our success. They benefit and enrich education, health professional training and quality patient care. They demonstrate that our commitment to helping all is strong and that we can find opportunities where others see insurmountable obstacles.

This particular strength was reinforced at Commencement in June, when Liberian President and Nobel Peace Laureate Ellen Johnson Sirleaf delivered the keynote address and received an honorary degree. Visibly moved, President Sirleaf thanked members of our community who have worked side by side with Liberians to rebuild her country's medical system, virtually obliterated by civil war.

Whether it is helping a struggling nation rebuild its medical infrastructure, helping researchers in other lands upgrade their laboratory techniques, or helping a child receive life-saving vaccines, UMass Medical School brings hope and healing. Through this issue of our magazine, we invite others to share in our excitement about our growing range of global health projects and the vital impact they are making.



Michael F. Collins, MD
CHANCELLOR, UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL
SENIOR VICE PRESIDENT FOR THE HEALTH SCIENCES, UNIVERSITY OF MASSACHUSETTS

Local heart, global reach

Why global health matters

The Blais Pavillion in the Lazare Research Building was a festive place this past June, as members of the local Liberian community gathered to meet their country's president, Ellen Johnson Sirleaf, the first democratically elected female head of state in Africa. As the Secret Service motorcade swept up to the front of the Lazare Research Building carrying the president and her entourage, her fellow countrymen and women greeted her as a rock star, a status befitting this transformative figure from a small country just emerging from years of civil war and brutality.

With an ever-present smile masking the weariness of a long day of travel and the heavy responsibility of her office, President Sirleaf made her way to the front of the room to reflect on the remarkable transformation of Liberia over the past decade, from a country wracked by conflict to one filled with signs of renewal and hope.

"We are now in our ninth year of peace," she said to cheers from the audience. Recently elected to a second six-year term in office, she predicted the coming years will continue to be filled with change. "Transformation means you must not only work on the tangibles . . . but the intangibles of changing minds and attitudes. Getting people to see that unity, reconciliation, love of country, work ethics are the true things that will build a nation. And that requires the effort of everybody, not just the government. Liberian citizens everywhere, at home and abroad, have to make a contribution to the changing of the mind."

The next day, President Sirleaf spoke at UMass Medical School's Commencement, offering heartfelt thanks for the unlikely partnership between her country and this small public medical school located an ocean away, a school that is helping with those more tangible elements of change: rebuilding Liberia's medical system and improving the population's health.

"This [honorary degree] will always remind me of the very close bonds between my country and this medical school. So many of your students and faculty have taken time away from their own lives to travel to Liberia to provide life-saving care to ensure a healthy population," she said. "My people and my country appreciate all that you do."

This gratitude was accepted proudly by many members of the UMass Medical

By Kristen O'Reilly



Liberian President Ellen Johnson Sirleaf gave the Commencement 2012 keynote address and received an honorary degree. She thanked members of the UMass Medical School community for helping to rebuild Liberia's medical system. While President Sirleaf was on campus, the local Liberian community hosted a reception in the Lazare Research Building, which included traditional dancers (below left).



66% of School of Medicine students participate in an international elective.



“The world has changed quite a bit since UMass Medical School was founded in 1971, and our mission needed to reflect that.

— Michael F. Collins, MD
CHANCELLOR

School community who are making a difference in the lives of many Liberians. But with the many problems in our own backyard, especially with issues around access to health care in our own country, is this an appropriate role for a public medical school? While the intent is noble and the need undeniably clear, should this particular medical school be investing our academic assets into enhancing public health in a small African country?

Making a difference in Liberia

The Medical School's involvement with Liberia began in 2006 with the work of HIV/AIDS researchers Katherine Luzuriaga, MD, professor of pediatrics and medicine and associate provost of global health; John Sullivan, MD, professor of pediatrics and molecular medicine; and Donna Gallagher, MSN, instructor in family medicine & community health and co-director of the Office of Global Health, who were engaged as visiting faculty and consultants to the University of Liberia A. M. Dogliotti Medical College (ULAMD), the Tubman National Institute of Medical Arts and the Liberian Ministry of Health soon after the country's civil war ended.

“We went in right as the dust settled,” said Gallagher. What they found was daunting: a fractured medical system; a medical school without students, faculty or supplies; hospitals without care providers or the ability to train them. In partnership with a Liberian non-governmental organization Health,

Education and Relief Through Teaching, and with funding from the U.S. Agency for International Development (USAID), many members of the UMMS community have made dozens of trips to Liberia over the past six years to help rebuild Liberia's health care delivery and educational systems.

Even librarians from the Lamar Soutter Library, working with a consortium comprising UMMS, the National Medical Library, the Walter Reed Army Medical Center, George Washington University and Howard University, have worked to rebuild the ULAMD libraries to provide resources necessary to support the new medical school curriculum. [See sidebar on page 12.]

While still a work in progress, this experience can certainly be considered a success story, and one UMMS is proud of. At one time, there was not a single pediatrician in a country in which 50 percent of the population is under the age of 19. With USAID funding, a Liberian-born pediatrician was recruited back to lead the Department of Pediatrics at the ULAMD and the JFK Hospital in Monrovia. Patricia McQuilkin, MD, clinical associate professor of pediatrics and director of global health education in the Department of Pediatrics, has worked with Liberian colleagues and a U.S. pediatric academic collaboration to develop pediatric training programs for ULAMD students. They have also assisted with the development of a plan for pediatric graduate medical education to be implemented next year.

But the question remains, should a medical school originally charged with helping to keep the residents of the Commonwealth of Massachusetts healthy be focusing on the problems of a different country, even if it

does mean life or death for millions of people? What exactly can we learn from an African country 2,400 miles away that can translate to the Massachusetts population?

A mission-centered focus on global health

From an institutional point of view, a clue can be found in the three words added to the UMass Medical School mission statement in 2008, a result of strategic plan discussions at the start of Chancellor Michael F. Collins’ tenure:

“Our mission is to advance the health and well being of the people of the commonwealth *and the world* through pioneering advances in education, research and health care delivery.”

“The world has changed tremendously since UMass Medical School was founded in 1971, and our mission needed to reflect that,” said Chancellor Collins. “Improving the quality of life for the communities we serve means translating our research and knowledge into real treatments, while working with collaborators from around the world to attack the toughest challenges.”

“If we are truly a top-tier academic medical institution, that means recognizing that international borders are less significant in an interconnected world,” said Dean Terence R. Flotte, MD, the *Celia and Isaac Haidak Professor of Medicine*, executive deputy chancellor, provost, dean of the School of Medicine and professor of pediatrics.

“Global health issues affect every person in this country and every person in this state. We are taking care of immigrants, training the health care workers who will treat them and collaborating with colleagues around the world on medical and research breakthroughs that will change the way disease is treated. Institutionally we need to raise our sights beyond our state borders,” said Dean Flotte. “Our work here and beyond our state borders will in total accelerate our success in improving care locally and globally.”

It’s not that faculty weren’t already working on global health issues and collaborating with international colleagues before the mission was officially expanded, but that work was done more or less under the radar. Adding a more direct charge to expand the mission of the Medical School to include world impact—one of six goals spelled out in the strategic plan—set the wheels in motion for the creation of the Office of Global Health (OGH) in 2009 to strategically enhance and expand UMMS research and training programs in global health improvement and disease prevention.

The OGH works to identify and address the challenges of conducting global health training, research and service projects; works with the medical,

graduate and nursing schools to better train students, residents and fellows for careers in global health; provides seed money for innovative research and educational programs; and serves as a clearinghouse for all global health activities, policies and resources.

A reflection of our community

Beyond the institutional charge, a practical reason for caring about global health is that the medical professionals graduating from UMMS will be serving these global citizens who continue to immigrate to this state at a steady rate. Immigrants make up a significant part of the underserved populations cared for by UMMS-trained primary care physicians.

“Anybody who practices medicine in Massachusetts recognizes that our patients are increasingly diverse,” said Dr. Luzuriaga. In fact, according to the Migration Policy Institute, in 2010, 15 percent of the state’s total population was foreign born, with the largest number coming from Latin America. While only representing 7.9 percent of the state’s immigrant population, African immigrants are the fastest growing group, jumping 62 percent over the last decade.

Often more than just a language barrier stands in the way of effective care.

“There’s no question that we can provide better care if we understand the roots of our patients’ culture,” said Gallagher. “Understanding cultures and eliminating barriers to care reduces the cost of health care and gives better access to a growing population.”

A prime example of these barriers was uncovered when the community health centers in Worcester realized that the city had higher-than-average infant mortality rates. Concerned health care leaders in the community formed the Worcester Infant Mortality Reduction Task Force, which included several UMMS faculty members, and they discovered that a larger percentage of infants born to West African immigrant mothers in the city were delivered very prematurely—too premature to survive. With funding from the Medical School and UMass Memorial Health Care, several members of the task force visited Ghana to better understand its culture and medical structure and, in the process, have established ongoing partnerships with Ghanaian health care providers over the past few years.

“We came back from Ghana with some very helpful ideas and insights that will help us plan our future endeavors,” said Marianne Felice, MD, professor of pediatrics and obstetrics & gynecology, and former chair of the Worcester Infant Mortality Reduction Task Force, in 2010. “We will use this experience to find ways to protect the babies of Worcester.”

Many of the current global health projects reflect other immigrant communities living in Massachusetts, including people from Haiti and the



A globally savvy student body

The individual stories of UMMS students global experiences are numerous and inspiring.

- 1. Before entering the Graduate School of Nursing, Meredith Walsh, MPH, RN, spent four years in Thailand on the Burma border, first working in refugee camps and then at the Mae Tao Clinic, where she worked in maternal and child health programming. Using that experience, she and fellow volunteers started the Worcester Refugee Assistance Program, which is helping refugees from Burma assimilate to life in Central Massachusetts. The Office of Global Health awarded Walsh a Pilot Project Grant that allowed her to continue a research project focusing on identifying and addressing barriers to contraception use to improve reproductive health.
- 2. GSN student Alainie Costas, BSN, RN, became a nurse so that she could fulfill a dream to serve on the hospital ship Africa Mercy in West Africa. She is now pursuing a master’s degree in order to become a nurse practitioner and combine advanced patient care with team leadership and nursing education, both in the United States and abroad.
- 3. Prior to medical school, School of Medicine student Keith Azevedo and his wife spent three years bicycling across Asia and Europe doing first-hand research on the status of health care and education in other countries. The Azevedos, former high school teachers, founded a nonprofit organization, Global Partnership for Health and Education.



15% of the state’s total population was foreign born, with the largest number coming from Latin America.

MLK Day celebrates volunteerism at its best

At the annual Martin Luther King Day celebration, audience members viewed a video capturing just a few of the many ways members of the UMMS community give back to the community—27,000 hours in volunteer efforts in Worcester last year alone. »



Colleagues knit together friendship and service

What started as an informal way to get to know colleagues in Commonwealth Medicine’s Disability and Community Services unit, has turned into an effort that will bring warmth to those in need. View the video about how a dozen employees have been busily knitting and helping the community. »



Disaster drill an exciting preview of health careers

Nearly 200 students interested in health care careers participated in a mass casualty simulation during the third annual Massachusetts Area Health Education Center’s Health Occupations Students of America Student Leadership Conference at UMMS. »



On Earth Day, hundreds vow to do their part

More than 300 people signed the “Doing My Part” pledge during the Medical School’s Earth Day activities. A tree was also planted outside of the Lazare Research Building by the Worcester Tree Initiative, with help from Chancellor Michael F. Collins. »



» For more on these stories, including videos, visit: www.umassmed.edu/pockets

YEAR IN REVIEW: LOCAL HEART, GLOBAL REACH

Dominican Republic. In addition to immediate attention from clinicians from the Massachusetts Disaster Medical Assistance Team after the 2009 earthquake in Haiti, a subsequent effort by 15 physicians and nurses from UMass Medical School and UMass Memorial Medical Center treated more than 1,000 victims, in response to a call for help from the Good Samaritan Hospital of La Romana in the Dominican Republic, an organization with which UMMS has a longstanding affiliation.

“We will never be everywhere around the globe. But we can focus on four or five major projects, and make those sites work really well,” said Gallagher.

Students expect and demand it

The push to become more involved in global health initiatives also comes from students who are starting their medical education with far more international experience than ever before, through undergraduate work or post-graduate academic, personal or professional adventures.

“So many more of our students in recent years have had international experiences coming into medical school, compared to when I started the international medical education program 17 years ago,” said Mick Godkin, PhD, professor of family medicine and community health and director of the program. “They have already developed a global lens on how they learn. Their expectation is that their medical education will have a global context and there will be opportunities to experience global health personally. In fact, two-thirds of our students participate in international electives, compared to half that number, on average, at other U.S. medical schools.”

According to Karen Lawton, director of admissions for the School of Medicine, 44 out of 125 students from the Class of 2016 had participated in some form of international experience of at least a year or more prior to beginning medical school.

This prior experience is reflected in the students’ expectations of international electives. In the past, medical students who traveled abroad between the first and second years through the Pathway on Serving Multicultural and Underserved Populations optional enrichment program did so largely for language and cultural immersion experiences to polish their language skills, live with a host family and understand the culture of the country. Dr. Godkin,

who is also director of the pathway program, said students are now more sophisticated in global travel and are more interested in applying existing skills, including in medically related experiences, whether in field research, working with a health related NGO or in a foreign clinic, because they’ve already lived in or visited foreign countries before entering medical school.

“It used to be these experiences were largely to help students with language skills or to understand the culture of the patients they were likely to treat in this state,” says Godkin. “Now, less of them have that sole motivation. Instead, many want to be in a situation that is directly relevant to learning medicine and providing a service whether it is in a clinic or through conducting field research, and that’s exciting.”

Student-led projects are also focusing on global health care. In 2006, eight members of the School of Medicine’s International Medicine Interest Group who were interested in experiencing international medicine started an annual trip to the Dominican Republic during their spring break to provide medical care to workers in the country’s sugar fields. Today, the student-organized trip has evolved into an interprofessional medical mission involving an average of 40 students and 15 faculty members providing more than 1,500 patients with the only medical care they may receive in a year.

Three fourth-year students who wanted an intense infectious disease rotation traveled to Bolivia to learn how to treat infectious diseases that are common in that country, but considered rare in the United States. In turn, UMMS faculty who acted as attending physicians taught Bolivian health care providers about the intricacies of administering the complex anti-retroviral drugs that combat HIV/AIDS infections.

While a GSBS student, Yuly Fuentes, PhD ’12, worked with fellow students and faculty from the Department of Neurobiology as well as pioneering Latin American scientists to spread the word about invertebrate model systems to young scientists in Latin America. Team members organizing

“Their expectation is that their medical education will have a global context and there will be opportunities to experience global health personally.”

— Mick Godkin, PhD



Many members of the UMMS community travel internationally to advance global health. Dean Terence R. Flotte, MD, left, travels frequently to Haiti; Patricia McQuilkin, MD, center, is helping to develop pediatric training at the University of Liberia A.M. Dogliotti Medical College, pictured at right.



Relief and celebration at Match Day 2012

Fifty five percent of the School of Medicine’s Class of 2012 matched to primary care residencies, reflecting a strength of UMMS. See the story of Timothy Menz and Tania Visnaskas, who were married the next day. »



Muthee personifies the American dream

Graduate School of Nursing student Phylis Muthee, RN, journeyed far from her native Kenya to achieve her dreams. »



Envisioning an alternative future for medicine

Two School of Medicine students are teaching cancer patients and their care givers about yoga, Tai Chi, meditation and guided imagery. They hope to change how people with cancer manage physical and emotional symptoms during treatment and beyond using complementary and integrative medicine. »

At Convocation 2012, Chancellor Collins heralds a bright future

Chancellor Michael F. Collins looked forward to the bright future at UMass Worcester in his Convocation address in September, saying that confidence is fitting given the outstanding students, gifted faculty and dedicated staff the institution attracts. See full Convocation coverage. »



the Small Brains, Big Ideas workshop hope it will become a sustainable endeavor, with the current UMMS students enlisting newer GSBS students to become involved by sharing their enthusiasm for the mission of the project and the chance to become part of an international community.

Global health research a national priority

Researchers in the laboratory effortlessly collaborate with colleagues around the world as the search for new ideas and creativity trumps artificial borders. Perhaps not surprisingly, of the 29 projects registered with the Office of Global Health in 2011–2012, 76 percent were research related, many involving UMMS researchers collaborating with international colleagues.

The ease of global travel has led to the reality that infectious diseases can spread from one side of the world to the other in a matter of days. SARS, which started in a rural village in China in 2002, reached every continent except for South America and Antarctica before being contained. Treatment resistant TB is a growing problem in India, and infectious disease specialists are wary about the potential for this variation to spread worldwide. The World Health Organization and the Global Fund are providing cheaper anti-retroviral drugs to treat HIV/AIDS, but patients in developing countries who don't follow the correct treatment protocol could encourage the evolution of drug-resistant variations that could make their way back to the United States.



Liberian President Ellen Johnson Sirleaf's visit to UMass Medical School as keynote speaker and honorary degree recipient at Commencement 2012 was just the latest connection in a long association between UMass Medical School and Liberia. For many years, UMMS faculty have been involved in rebuilding the West African country's health care system as it emerges from the ravages of decades-long civil wars.

Beginning with the initial involvement of a small group of people whose work focused on improving HIV care in Liberia, UMMS nursing and medical faculty returned to Liberia as resources became available. These visits increased dramatically in recent years after the signing of a memorandum of understanding between the University of Massachusetts and the University of Liberia in 2007, and with significant grant funding from the United States Agency for International Development (USAID) through the non-profit Higher Education for Development (HED) in cooperation with Health Education and Relief Through Teaching (HEARTT), a foundation that provides overall health care and health training to developing communities and countries.

Recognizing these issues, the U.S. government has increasingly funded global health initiatives. In the past 10 years, the U.S. government has invested \$12.7 billion in global health research and development to create new vaccines, drugs, diagnostics and other products for diseases of the developing world, according a recent report by the Global Health Technologies Coalition and Policy Cures. That money has helped lead to the development of more than half of the 45 new health products in the last decade that have been used to save lives around the world, according to the report.

"The U.S. government and private foundations have markedly increased global health funding over the past several years and are actively soliciting partnerships with academic medical institutions to leverage that money to maximal effect," said Luzuriaga. "We need to position ourselves to capitalize on those funding sources."

Reverse innovation an unexpected benefit

Often lost in the bigger picture are the hidden benefits of traveling to limited resource settings to practice medicine. "Sometimes the reality of our health care system, with the paperwork and the health insurance issues, can drag you down," said Gallagher.

Luzuriaga points to what she calls "reverse innovation," where simple solutions born out of necessity in the developing world can be transferred back to more sophisticated health care settings, saving money by simplifying procedures or practices.

Many collaborative projects create a strong Liberian connection

Today, a multidisciplinary group of individuals are collectively applying the strengths of the UMMS academic health sciences center to improve the health care system and health status for all Liberians.

Initiatives include:

- Working with collaborators at the University of Liberia (UL) and Indiana University to create a HED-USAID funded Center for Excellence in Health and Life Sciences at UL, which offers new academic and research programs in biotechnology, public health, nursing and pre-clinical training in medicine and pharmacology.
- Working with the A.M. Dogliotti School of Medicine to update a new curriculum and core competencies and to improve instruction in the pre-clinical sciences. Deborah Harmon-Hines, PhD, professor of cell & developmental biology, and Anne Gilroy, MA, associate professor of surgery and cell & developmental biology, each spent two weeks there as visiting professors, working with DSM faculty and teaching anatomy.

"When you go to work with colleagues in a low resource setting, you have to be very creative," she said. "It's a powerful way to reconfigure our own health care system—thinking about not what you have available, but what is really necessary to get the job done." As an example, lack of lab infrastructure has highlighted the need to develop point-of-care devices for use in limited resource settings to quickly detect whether HIV has been transmitted from a mother to a baby. Mohan Somasundaran, PhD, research associate professor of pediatrics, and colleagues have NIH funding to develop these point-of-care devices, which could be adapted for rapid diagnosis of infectious agents in U.S. emergency rooms and other clinical settings.

From the heart

The final reason cited for investing in global health initiatives comes from the heart: It's the right thing to do. "We can't give them a million dollars, but we can share our brain trust with a medical school with no students and no facilities," said Gallagher.

"Am I only a pediatrician for American children?" asked Dr. Felice. "The children who live in the United States are going to be influenced by the children from Liberia. It's very important that we pay attention to Africa as it is coming into its own."

- Restoring the medical libraries at UL, with efforts led by UMMS librarians Elaine Martin and Jim Comes. This includes teaching and training UL medical library staff to catalog and organize 7,000 books donated by the Sabre Foundation.
- Leading intensive nursing leadership training sessions to improve the quality of science training at the Tubman National Institute of Medical Arts for nurses and midwives.
- Partnering with HEARTT to organize a pediatric training program at John F. Kennedy Hospital, the major teaching hospital of the University of Liberia.

"With these partnerships and projects, we are helping Liberia make significant strides toward sustainably rebuilding its health care system so it can provide quality health care for all Liberians," said Katherine Luzuriaga, MD, professor of pediatrics and medicine and associate provost of global health.

By Sandra Gray

Gov. Cellucci continues to support ALS research

Biogen Idec recently donated \$500,000 to the UMass ALS Champion Fund, which supports critical research into ALS and other neurodegenerative diseases at UMass Medical School. Former Massachusetts Gov. Paul Cellucci helped launch the Champion Fund last year.



Work progresses for Sherman Center opening

Scheduled to open in December 2012, the Sherman Center continues to take shape. See what it looks like now.



Institute fosters collaboration in neurodegenerative research

A diverse group of faculty members, including basic biomedical researchers, physician-scientists and clinicians, created the Neurotherapeutics Institute, working together to understand disease at multiple levels, and design forward-thinking lines of investigation to attack central questions of neurodegenerative disease mechanisms and treatment.

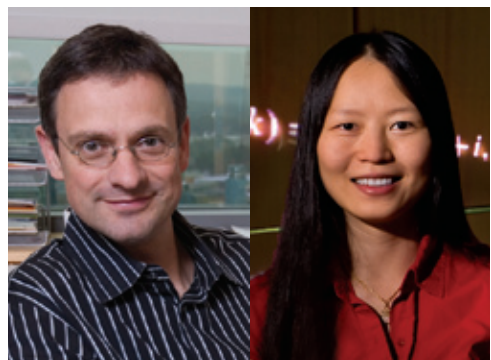


Clinical trial tests less painful breast tissue expander

Joan Greffrath is participating in a new clinical trial for breast reconstruction after mastectomy that is being conducted by John Castle, MD, clinical assistant professor of surgery and plastic surgery director at the UMass Memorial Comprehensive Breast Center.

For more on these stories, including videos, visit: www.umassmed.edu/pockets

'Junk DNA' a valuable treasure for human genome decoders



The first comprehensive decoding and annotation of the human genome was published in September by the ENCyclopedia Of DNA Elements (ENCODE) project, an international consortium of scientists from 32 institutions, including UMass Medical School. The groundbreaking ENCODE discovery appeared in a set of 30 papers in *Nature*, *Genome Research* and *Genome Biology*.

Using data generated from 1,649 experiments—with prominent contributions from the labs of Job Dekker, PhD, (pictured above left) professor of biochemistry & molecular pharmacology and molecular medicine, and

Zhiping Weng, PhD, (pictured above right) professor of biochemistry & molecular pharmacology—the group has identified biochemical functions for an astounding 80 percent of the human genome. These findings promise to change our understanding of how the tens of thousands of genes and hundreds of thousands of gene regulatory elements, or switches, contained in the human genome interact in an overlapping regulatory network to determine human biology and disease.

As little as a decade ago, the human genome was viewed by scientists as a collection of independent genes that contained the instructions for making the proteins that carried out the basic biological functions necessary for life. Driven by this premise, most researchers focused on understanding the relatively small portion of the genome that made up protein-coding genes, while the non-coding portion of the genome—often referred to as “junk DNA”—received little attention. The sequencing of the human genome in 2003 and more recent efforts by the ENCODE consortium, which is funded by the National Human Genome Research Institute of the National Institutes of Health, and others over the last decade, has begun to change researchers' views on the importance of the non-coding portion of the genome.

GEP Pinning marks a path to the future for nurses

In the presence of family, friends and faculty, 32 members of the Graduate Entry Pathway (GEP) Classes of 2014 and 2015 in the Graduate School of Nursing were honored in a tradition that signifies their readiness to become registered nurses. The GEP Pinning Ceremony kicked off Convocation Week 2012 on Sept. 12. Read more about Convocation: www.umassmed.edu/convocation/2012.

This year's pinning, the GSN's eighth, included the first five members of the GEP's newest component, the GEP to DNP (Doctor of Nursing Practice) Pathway.

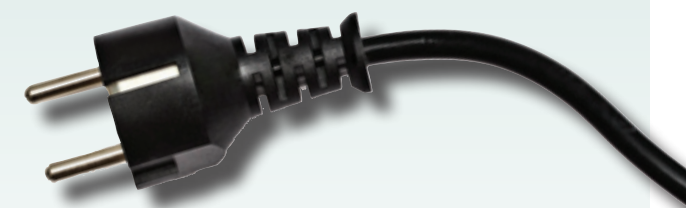
The GEP was established by the GSN in 2004 to address the growing nursing workforce shortage by giving entrance into

the profession to individuals with bachelor's degrees in fields other than nursing. Students first become registered nurses after one year of accelerated coursework, and then continue graduate study to earn master's or doctoral degrees that qualify them to become nurse practitioners, nurse educators and nursing executives.

Presented upon completion of a whirlwind 15 months of hands-on learning coupled with rigorous academics, the custom-designed pin each GEP student received symbolizes professional achievement and personal pride. Several GEP students also received awards for distinguished performance. Stephanie Connors (pictured above at right) was recognized for academic excellence; Molly Moulton and Holly Shumard for clinical excellence; Alexander Menard for embodying the spirit of nursing; and Susan Hernandez for outstanding community engagement.



National Grid gives \$5.6 million rebate for UMMS power plant



UMass Medical School has been awarded \$5.6 million from National Grid—the largest incentive of its kind ever given by the company in the commonwealth—for an energy-efficient 14,000-square-foot expansion of its power plant. The incentive is designed to help UMass Medical School achieve its energy efficiency goals by providing innovative energy solutions

that also will benefit the community through reduced greenhouse gas emissions.

At the heart of the power plant expansion is a high-efficiency, 7.5-megawatt, gas-fired combustion turbine and an associated heat recovery system that will boost the Medical School's capacity to generate electricity on its Worcester campus while reducing its green-

house gas emissions. The expansion, built to support the 500,000-square-foot Albert Sherman Center research and education facility currently under construction, will accommodate the increased demand for electricity, steam and chilled water expected when the state-of-the-art building is completed in December.



Gov. Cellucci thanks Boston Marathon runners

Former Gov. Paul Cellucci thanked members of the 2012 UMass ALS Champion Fund Boston Marathon team for successfully raising more than \$80,000 to support amyotrophic lateral sclerosis (ALS or Lou Gehrig's Disease) research at UMass Medical School. Runners interested in competing in the 2013 Boston Marathon while raising money for the UMass ALS Champion Fund should contact Katie Friend at katie.friend@umassmed.edu.

Pictured with Gov. Paul Cellucci are six of the nine members of the team. Front, from left: Anna Serquina, Gov. Cellucci, Matthew Sbrogna. Back, from left: Michael Traverse, Charlie Desourdy, Philip Frattaroli and Rob Carlin.

Two discoveries by UMMS researchers point to potential for new ALS treatment

A team of scientists, including faculty at UMass Medical School, has discovered a gene that influences survival time in amyotrophic lateral sclerosis (ALS, also known as Lou Gehrig's disease). The study, published in *Nature Medicine*, describes how the loss of activity of a receptor called EphA4 substantially extends the lifespan of people with the disease. When coupled with a UMMS study published in *Nature* identifying a new ALS gene (profilin-1) that also works in conjunction with EphA4, these findings point to a new molecular pathway in neurons

that is directly related to ALS susceptibility and severity.

“Taken together, these findings are particularly exciting because they suggest that suppression of EphA4 may be a new way to treat ALS,” said Robert H. Brown Jr., DPhil, MD, the *Leo P. and Theresa M. LaChance Chair in Medical Research* professor and chair of neurology and a co-author on the study.

ALS is a progressive, neurodegenerative disorder affecting the motor neurons in the

central nervous system. As motor neurons die, the brain's ability to send signals to the body's muscles is compromised. This leads to loss of voluntary muscle movement, paralysis and eventually respiratory failure.

“It is exciting that these two studies identify the same pathway in ALS,” said John Landers, PhD, associate professor of neurology and lead author of the profilin-1 study. “We hope this discovery will accelerate efforts toward finding a treatment for ALS.”

Delirium prevention before cardiac surgery could help patients avoid long-term confusion

Older patients undergoing cardiac surgery often experience changes in cognitive function, such as memory problems or an inability to focus, in the days immediately following their operations.

While these changes are usually temporary, for unknown reasons a significant number of cardiac patients will encounter long-term cognitive problems lasting as long as a year after their surgeries.

New research establishes a link between postoperative delirium and prolonged loss of cognitive function in cardiac surgery patients. Led by investigators at UMass Medical School, Beth Israel Deaconess Medical Center and the Aging Brain Center at Hebrew SeniorLife, the findings suggest that interventions to prevent delirium in advance of surgery could help cardiac patients avoid long-term cognitive consequences.

A state of confusion that can develop following illness, infection or surgery, delirium is one of the most common complications in hospitalized patients over age 65. "Our findings now suggest that postoperative delirium, once thought of as an acute, transient cognitive disorder, may have longer-term effects on cognitive function in patients undergoing cardiac surgery," said co-author Jane Saczynski, PhD, assistant professor of medicine.



Putting pre-med students on a pathway to success

Sixty-seven University of Massachusetts freshmen who are inaugural members of the new UMass Baccalaureate MD Pathway Program got a preview of what lies ahead when they visited UMass Medical School in April. Accompanied by their pre-health advisors, they participated in the first Five Campus Baccalaureate MD Pathway Symposium.

Developed collaboratively by the leadership of the system's five campuses, the UMass Bacc MD Pathway is designed to increase the early identification and recruitment of qualified pre-medical students from the University's undergraduate campuses who represent the cultural and economic diversity of the state's population.

"With this initiative, the University of Massachusetts will better serve the commonwealth by retaining great minds and encouraging them to remain and serve communities across the state," said Michele Pugnaire, MD, senior associate dean for medical education and professor of family medicine & community health. While an intended outcome of the pathway is to increase the number of physicians who will practice primary care in underserved areas and with underserved populations in the commonwealth, all pathway participants will receive guidance to help them in their selection of a medical career, whether in primary care or other specialties.

Approval of fourth-year curriculum marks a milestone

A milestone was quietly reached in February when the Educational Policy Committee unanimously approved the final phase of the new School of Medicine curriculum, symbolizing the culmination of years of careful work by more than 500 members of the UMass Medical School community.

When the process of redesigning the curriculum began in 2004, the goal was beyond ambitious: to completely re-imagine medical education from top to bottom with involvement from as many stakeholders as possible, from first-year students to senior staff. The resulting Learner-centered Integrated Curriculum, or LInC, incorporates innovations in teaching and learning as well as the latest national standards for medical education, and is designed to

address the six competencies required of all School of Medicine graduates: physician as professional, scientist, communicator, clinical problem solver, patient and community advocate, and person.

"The completion of LInC illuminates the collaborative environment of UMass Medical School," said Terence R. Flotte, MD, the *Celia and Isaac Haidak Professor of Medicine* and dean of the School of Medicine, who joined UMMS in 2007 and quickly became an essential leader of the curriculum redesign process. "More than 400 faculty from across the UMass Medical School community collaborated to create the new curriculum, which is designed to meet the changing needs of health care."



Once again, UMMS tops in nation for primary care education

UMass Medical School was ranked seventh in primary care education among the nation's 126 medical schools and 23 schools of osteopathic medicine by weekly news magazine *U.S. News & World Report* in its 2013 edition of the "Best Graduate Schools" issue, released in March. UMMS has been listed near the top of the category since 1994, when the magazine began publishing the much-anticipated rankings. Of note, UMMS is the only school in the top 50 that accepts only in-state students into its medical degree program. *U.S. News* ranked UMMS 48th among top research schools, 79th in nursing and 46th in the biological sciences.

UMass Medical School, which had accepted just 100 students per year since the 1970s, expanded the class to 125 beginning with the class of 2013 to help increase the pool of physicians, particularly primary care providers, trained to meet the needs of the commonwealth and the nation. Traditionally, more than 50 percent of each year's graduates enter a primary care residency program. In addition, more than half of each class stays in the state for residency, totaling 260 new medical residents in the last five years alone.



Clinical trial for rabies monoclonal antibody begins

A pivotal clinical trial for an anti-rabies human monoclonal antibody (RMAb) being developed through a collaborative partnership between MassBiologics of UMass Medical School and the Serum Institute of India, Ltd., is starting to enroll patients. The study, sponsored by the Serum Institute, will evaluate the efficacy of post-exposure prophylaxis following rabies exposure with RMAb and vaccine compared to standard treatment of human rabies immune globulin (hRIG) and vaccine. Post-

exposure prophylaxis for rabies that includes a monoclonal antibody should provide a more affordable, safer alternative to prevent the disease, which is a world-wide public health problem impacting 10 million people and resulting in some 55,000 deaths each year.

"We are extremely pleased that this potentially life-saving product has moved forward to the pivotal clinical trial," said Deborah Molrine, MD, associate professor of pediatrics and deputy

director of clinical and regulatory affairs at MassBiologics. "Rabies is a major public health problem in Asia and Africa, and we are hopeful that the findings of this study may result in a treatment option readily available in those areas where it is needed most."

The study being conducted in India will enroll 200 patients who have had a high-risk exposure to a suspected rabid animal.

Cell intruder alert system relies on memories from past generations



Organisms employ a fascinating array of strategies to identify and restrain invasive pieces of foreign DNA, such as those introduced by viruses. For example, many viruses produce double-stranded RNA during their life cycle and the RNA interference (RNAi) mechanism is thought to recognize this structural feature to initiate a silencing response.

UMass Medical School researchers have identified a mechanism related to RNAi that scans for intruders not by recognizing aberrant features of the foreign sequence, but rather by comparing the foreign sequences to a memory of previously expressed native RNA. Once identified, an “epigenetic memory” of the foreign DNA fragments is created and can be passed on from one generation to the next, permanently silencing the gene.

A remarkable feature of this phenomenon (referred to as RNA-induced epigenetic silencing, or RNAe), is that the animal carries a memory of previous gene expression. This memory of active genes serves as an “anti-silencing” signal, which protects native genes from RNAe and under some circumstances appears to adopt foreign genes as self. These findings provide new insights into how identical organisms can have the same DNA sequence but opposite patterns of gene expression and thus dramatically different phenotypes.

“There is growing evidence that many organisms can track and respond epigenetically to gene expression patterns. Our findings provide insight into a whole new level of sophistication in the recognition and memory of gene expression programs,” said Craig C. Mello, PhD, Howard Hughes Medical Institute Investigator, the *Blais University Chair in Molecular Medicine*, distinguished professor of molecular medicine and cell & developmental biology and 2006 Nobel Laureate.



UMMS to manage medical services for NC federal inmates

The Federal Bureau of Prisons has awarded UMass Medical School a contract to manage comprehensive medical services for approximately 4,900 inmates at the Federal Medical Center (FMC) located in Butner, N.C. The agreement, valued at \$24.7 million for the first year, represents the Medical School's largest federal correctional health contract to date. The contract also has options for four additional years that could increase the overall award to more than \$136 million through 2016.

The Medical School's Health and Criminal Justice Program, part of its Commonwealth Medicine division, will manage the contract.

“We are extremely pleased to have the opportunity to share our health and management expertise at the Butner facility,” said Joyce A. Murphy, executive vice chancellor for Commonwealth Medicine. “This builds on our impressive correctional health experience at the state and federal levels, and will allow us to extend that work and specialized knowledge to the FMC Butner population.”

The contract calls for UMMS to coordinate both inpatient and outpatient physician and hospital services. The Medical School will manage care at the correctional facility and in community settings, through a partnership with Duke University Health System, which will provide most of the direct care services.



Klempner named head of MassBiologics Laboratory

Mark S. Klempner, MD, has been appointed executive vice chancellor for MassBiologics at UMass Medical School. Dr. Klempner comes to MBL from the Boston University School of Medicine, where he was the Conrad Wesselhoeft Professor of Medicine and professor of microbiology. Klempner, who is an associate editor for the *New England Journal of Medicine*, also served as the first director of the National Emerging Infectious Diseases Laboratories.

“Mark Klempner is an internationally known figure at the intersection of infectious disease research and the development of therapeutics and vaccines,” said Chancellor Michael F. Collins. “Not only is he an outstanding scientist whose research has had a real world impact on improving lives, he’s clearly a visionary executive who understands how to lead a complex organization with focus, insight and, importantly, measurable effectiveness.”

From 2003 to 2011, Klempner served as principal investigator of a grant from the National Institute of Allergy and Infectious Diseases to design and build one of two National Biocontainment Laboratories. Known as the National Emerging Infectious Diseases Laboratories, these laboratories study newly emerging infectious diseases such as hemorrhagic fever viruses and re-emerging diseases such as tuberculosis and influenza.

“He’s clearly a visionary executive who understands how to lead a complex organization with focus, insight and, importantly, measurable effectiveness.”

— Michael F. Collins, MD
CHANCELLOR



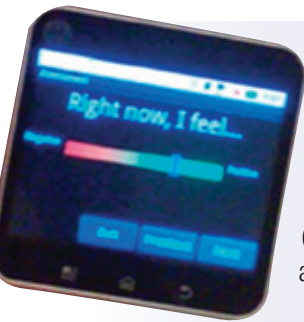
Small brains lead to big ideas

Scientific workshop highlights the value of using invertebrates in research

When recent Graduate School of Biomedical Sciences graduate Yuly Fuentes, PhD, (pictured left) was growing up in Chile, she had no idea that huge scientific discoveries could be made studying extremely small organisms. Now that she's completed her PhD in neurobiology, she wants to spread the word and create opportunities for budding scientists in her native Chile and other Latin American countries where science struggles because of underfunding.

According to Dr. Fuentes, invertebrate model systems are the source of many discoveries in neurobiology research and many other areas of scientific inquiry and are well suited for use in parts of the world where funding for science is very limited, because their use and maintenance is relatively inexpensive and they are amenable to genetic manipulation that can yield tremendous results.

Supported by the UMMS Department of Neurobiology, Fuentes has teamed up with scientists Jimena Sierralta, PhD, of the University of Chile, and John Ewer, PhD, of the University of Valparaiso (since 2010), to introduce young Latin American scientists, including graduate and undergraduate students and junior faculty, to this rich scientific resource and at the same time help foster a global community of invertebrate researchers similar to the community at UMass Medical School.



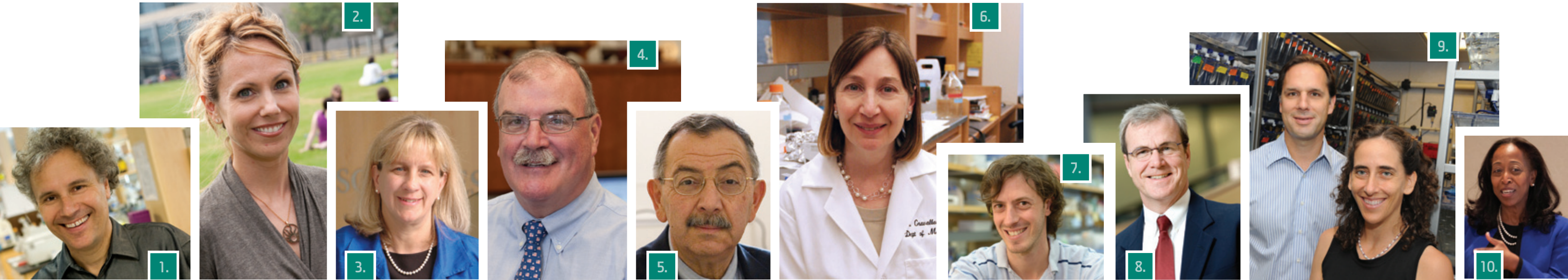
Monitoring substance abuse? There’s an app for that.

Clinical researchers at UMass Medical School are combining emerging technologies, such as artificial intelligence, smartphone programming, biosensors and wireless connectivity, to create a device that detects physiological stressors associated with drug cravings and responds with user-tailored behavioral interventions that can prevent substance abuse relapses.

According to the study’s authors, many behavioral interventions used to treat patients are ineffective outside the controlled clinical settings where they are taught. This failure can be attributed to several factors,

including a patient’s inability to recognize biological changes that indicate increased risk of relapse and an inability to change their behaviors to reduce health risk.

Edward Boyer, MD, PhD, professor of emergency medicine and lead author of the study, worked with colleagues at UMMS and at the Massachusetts Institute of Technology to design a mobile device, called iHeal, equipped with technologies that could make behavioral interventions for substance abusers more effective outside the clinic. The device combines sensors to measure physiological changes and detect trigger points for risky health behaviors, with smartphone software tailored to respond with patient-specific interventions.



1. Ambros wins Janssen Award for Biomedical Research

Victor R. Ambros, PhD, the *Silverman Chair in Natural Sciences* and professor of molecular medicine, and his longtime collaborator Gary B. Ruvkun, PhD, of Massachusetts General Hospital and Harvard Medical School, were awarded the 2012 Dr. Paul Janssen Award for Biomedical Research for their co-discovery of microRNA (also known as miRNA), tiny molecules that are now understood to play a powerful role in gene expression and regulation.

Since their discovery in 1993, these regulatory molecules have been implicated in a wide range of both normal and pathological activities including embryonic development, blood-cell specialization, muscle function, heart disease and viral infections. Their discovery has opened new fields of research and has implications for the development of new therapeutic treatments and diagnostic tools.

The award, which includes a \$100,000 prize, was presented to Drs. Ambros and Ruvkun in a ceremony followed by a scientific symposium at the New York Academy of Sciences.

2. Pagoto wins UMass innovation grant for eHealth research

Sherry Pagoto, PhD, associate professor of medicine, and research collaborator Deepak Ganesan, PhD, associate professor of computer science at UMass Amherst, are among the UMass researchers who received 2012 UMass President's Science and Technology Initiatives Fund grants. Co-principal investigators Drs. Pagoto and Ganesan will receive \$185,000 to explore mobile health technologies, such as wearable jewelry and smartphones, for patients with a variety of health conditions, including an initial study to develop wearable sensor software with real-time data analysis and patient feedback.

3. GSN dean Seymour-Route wins Conceison Award

Graduate School of Nursing Dean Paulette Seymour-Route, PhD, RN, received the Mary B. Conceison Award for Excellence in Nursing Leadership, presented by the Organization of Nurse Leaders-Massachusetts & Rhode Island at its annual meeting in June. The award is presented annually to a nursing leader who exemplifies the ideals of Mary B. Conceison, who was known for her advocacy in promoting nursing as a profession and her role in forming the Organization of Nurse Leaders. Dr. Seymour-Route was honored for her many pivotal leadership roles in nursing and the impact she has had on the field of nursing in Massachusetts.

4. Vice provost Sullivan retires

John L. Sullivan, MD, professor of pediatrics and molecular medicine and the inaugural recipient of the Chancellor's Medal for Distinguished Service, retired in June as vice provost for research. Dr. Sullivan, who joined UMMS in 1978, most recently had a leadership role in attaining a Clinical and Translational Science Award from the National Institutes for Health. His scientific work as an internationally recognized viral immunologist who focused on the molecular components of HIV, beginning in the years when the virus was first being identified, was groundbreaking.

5. Aghababian elected president of Mass. Medical Society

Richard V. Aghababian, MD, professor of emergency medicine and the founding chair of the Department of Emergency Medicine, was elected president of the Massachusetts Medical Society in May. He succeeds Lynda Young, MD, clinical professor of pediatrics, as the top officer of the society, the statewide membership organization representing nearly 24,000 physicians and medical students in the commonwealth, and publisher of the *New England Journal of Medicine*.

Dr. Aghababian has a long record of distinguished service with the state medical society. He served as president-elect and vice president, respectively, for the last two years, and was secretary-treasurer for two years prior to that.

6. Gravallesse named to executive leadership program

Ellen M. Gravallesse, MD, professor of medicine and cell & developmental biology and chief of the division of rheumatology in the Department of Medicine, has been named a fellow of the Hedwig van Ameringen Executive Leadership in Academic Medicine (ELAM) Program for Women at Drexel University College of Medicine.

Dr. Gravallesse specializes in caring for patients with rheumatoid arthritis and studies the mechanisms by which inflammation in the soft tissue lining joints leads to joint cartilage and bone destruction. She is internationally known for major discoveries in the area of bone research and the pathogenesis of joint destruction as a result of rheumatoid arthritis.

Gravallesse will be a member of the 18th incoming class for ELAM, the only program in the United States dedicated to preparing senior women faculty for positions of leadership at academic health centers.

7. Fuxman Bass named 2012 Pew Latin American Fellow

Juan I. Fuxman Bass, PhD, a post-doctoral scholar at UMass Medical School, was named a 2012 Pew Latin American Fellow in the Biomedical Sciences by The Pew Charitable Trusts. The program provides support for young scientists from Latin America to pursue postdoctoral training in the United States and establish their own labs upon returning to their home countries. Dr. Fuxman Bass joins 10 other researchers named to this year's class.

8. Dean Flotte recognized for leadership in biomedical research

Terence R. Flotte, MD, the *Celia and Isaac Haidak Professor in Medicine*, executive deputy chancellor, provost and dean of the School of Medicine, and professor of pediatrics and microbiology & physiological systems, was honored by the Massachusetts Society for Medical Research for his leadership in gene therapy research and education.

Dr. Flotte is an internationally renowned gene therapy investigator whose research has been funded by the National Institutes of Health, the Cystic Fibrosis Foundation and the Juvenile Diabetes Research Foundation. A recipient of numerous honors, Flotte was most recently elected to a five-year term on the Advisory Council of the American Society of Gene & Cell Therapy and named associate editor of the journal *Human Gene Therapy*.

9. Painter receives Cancer Research Institute fellowship

Recent Graduate School of Biomedical Sciences graduate Corrie Painter, PhD, has received an Irvington Institute Fellowship from the Cancer Research Institute to study cancer immunology in the lab of Craig Ceol, PhD, assistant professor of molecular medicine and cancer biology. The Cancer Research Institute awards only a handful of Irvington Institute Fellowships annually, in a highly competitive process based on the qualifications and experience of both the applicant and the proposed sponsor, as well as the nature and feasibility of the proposed research and the training environment.

Dr. Painter, who earned her PhD in 2011, did her thesis research on protein biochemistry, specifically immune proteins, in the lab of Lawrence Stern, PhD, professor of pathology and biochemistry & molecular pharmacology. In Dr. Ceol's lab, she will be using zebrafish melanoma models, seeking to understand how immune cells are involved in the development of tumors.

10. King honored as outstanding mentor

Jean King, PhD, professor of psychiatry, received the Outstanding Mentoring Award during the 2012 Women's Faculty Awards presentation in June. Sponsored by the Women's Faculty Committee, the awards honor faculty members for outstanding community service, excellence in education, achievement in health and science, excellence in clinical care and outstanding mentoring.

Other award winners were: Matilde Castiel, MD, assistant professor of medicine and family medicine & community health, who received the Outstanding Community Service Award; Jackie Coghlin-Strom, MD, MPH, assistant professor of family medicine & community health, who received the Sarah Stone Excellence in Education Award; Deborah Molrine, MD, MPH, associate professor of pediatrics, Women in Science and Health Achievements Award; and Barbara Olendzki, RD, MPH, LDN, assistant professor of medicine, and Catherine A. Phillips, MD, clinical associate professor of neurology, who both received the Excellence in Clinical Service Award.

1977

Morris Kopels, MD, joined the medical staff at Saratoga Hospital in Saratoga Springs, N.Y.

1978

Daniel M. Doyle, MD, was honored as the 2012 Community Clinician of the Year by his peers at the Berkshire District Medical Society.

1980

Russell L. Kerschmann, MD, was appointed laboratory director at Ascend Clinical.

1981

Joyce Monac, MD, is a founding partner in an all-women pediatric group, Swansea Pediatrics.

1984

Marian Earls, MD, was presented with the Sanctae Crucis Award, the highest non-degree recognition bestowed by the College of the Holy Cross on an alumnus.

1986

Timothy J. Babineau, MD, has been named president and chief executive officer of Lifespan, Rhode Island’s largest hospital system.

1992

Mark Grise, MD, joined the new Sacred Heart Cardiology Group in Pensacola, Fla.

1993

Daniel J. McCullough, MD, MPhil, was featured on the front page of the *Wall Street Journal* discussing new quality-based contracts.

Deborah Field, MD, received an award at UMass Medical School’s 14th annual Educational Recognition Awards Ceremony.

Eric Alper, MD, has been named the new medical director of information services for Lifespan, which is Rhode Island’s largest health care system. His photographs were also featured as part of the Artist in Residence series at Lamar Soutter Library.

1995

Donald L. Bigwood, MD, joined Saint Vincent Hospital’s staff as a child/adolescent psychiatrist and medical director.

1997

Peter LaCamera, MD, joined the staff at Steward Family Hospital.
Gabriel Wilson, MD, moved to San Antonio, Texas, with his wife, Kanami, and four-year-old son, Yuki. Gabe is now medical director of the emergency department at Christus Santa Rosa Hospital, Westover Hills, near San Antonio’s Sea World.

2002

Christina H. Hernon, MD, received an award at UMass Medical School’s 14th annual Educational Recognition Awards Ceremony.

2003

Leah Doret, MD, joined the medical team at Reliant Medical Group’s department of family practice in Westborough.

2007

Jillian Smith, MD, received an award at UMass Medical School’s 14th annual Educational Recognition Awards Ceremony.

Kate Dorney, MD, is a fellow at Boston Children’s Hospital.

2009

Sam Ayala, MD, was promoted to chief resident at the Jacobi ER Residency Program. He also recently celebrated the birth of his son.

2010

Julianne Marvin, MD, has recently become engaged to Carlos Munoz. A September 2013 wedding is planned.

2011

Charles Kurkul, MD, was presented with the Stony Brook Medicine Intern Teacher of the Year award and received a certificate of recognition from the Veterans Affairs Medical Center for outstanding performance on inpatient service.

Graduate School of Nursing

1988

Carol A. Bova, PhD, RN, ANP, received an award at UMass Medical School’s 14th annual Educational Recognition Awards Ceremony.

1997

Jill M. Terrien, PhD, APRN-B, received an award at UMass Medical School’s 14th annual Educational Recognition Awards Ceremony.

2000

Eileen F. Terrill, PhD, ANP-BC, received an award at UMass Medical School’s 14th annual Educational Recognition Awards Ceremony.

**Wherever life takes you . . . Stay connected**

Like ‘University of Massachusetts Medical School Alumni’ on Facebook and stay connected to UMMS and other alumni.

UMass Medical School Alumni Online Community:
alumni.umassmed.edu

Office of Alumni Relations: alumni@umassmed.edu or
508-856-8300.

Reunion classes endow scholarships



Members of the Class of 1987 with Chancellor Michael F. Collins during Reunion activities in May

Class Year	Reunion Class	Participation	Total Class Giving
1977	35th	50%	\$31,725
1982	30th	45.5%	\$89,735
1987	25th	50%	\$34,143
1992	20th	45.2%	\$17,320
1997	15th	38.2%	\$29,970
2002	10th	47.7%	\$22,140
2007	5th	29.5%	\$6,670



Since 1962, the University of Massachusetts Medical School has been a place where exceptional people advance education, science and health care. We are passionate about our mission to train tomorrow’s doctors, nurses and scientists, advance patient care and improve health delivery systems around the commonwealth and the world. As alumni, your partnership and continuous support is essential to our mission. This past year, you have demonstrated your commitment by setting records for all three schools for alumni participation in the alumni annual funds. Thank you!

Please partner with your alma mater once again by making your annual gift to the alumni funds today. Help carry over the momentum and continue the tradition of distinction by making a direct contribution to our important mission. Your annual participation is essential to our success.

For more information, please email giving@umassmed.edu or call 508-856-5520.

The School of Medicine’s 2012 reunion classes chose to pioneer a new philanthropic initiative to ensure that the best medical education remains financially within reach for all, and together they have made this inaugural Annual Class Gift Campaign extremely successful. To celebrate their Reunions and their time at UMass Medical School, they chose to honor current and future students by establishing the transformative gift of an endowed scholarship. Combined, the reunion classes established six endowed scholarships, one current-use scholarship and two additional family endowed scholarships. These scholarships will be awarded annually to promising medical students based on financial need. In addition to these scholarship initiatives, alumni have also been very generous in supporting a variety of needs throughout our academic health sciences center.

Thank You!

UMass Medicine Winter Ball

Friday, December 7, 2012
Mechanics Hall, Worcester, MA

For more information:

events@umassmed.edu

508-856-3665

www.umassmed.edu/development/winterball.aspx

School of Medicine Reunion

Celebrating Class Years 1978, 1983, 1988, 1993, 1998, 2003, 2008

Saturday, May 4, 2013

UMass Medical School

For more information:

alumni@umassmed.edu

508-856-8300

You aspired to pursue a degree in the medical profession. After years of hard work and sacrifice, your dream became a reality.

Help the next generation of UMass Medical School students realize their dream.

Remember UMass Medical School in your will.

For more information, please contact:

Carolyn Flynn

Office of Gift Planning

ogp@umassmed.edu

1-877-775-1992

www.umassmed.edu/development/giftplanning



2012 Year in Review Financials

Education

3,085 Number of faculty (including voluntary)
323 Basic science full- and part-time faculty
2,570 Clinical full- and part-time faculty
192 Nursing faculty

School of Medicine

484 MD students
35 MD/PhD students
3,290 Alumni

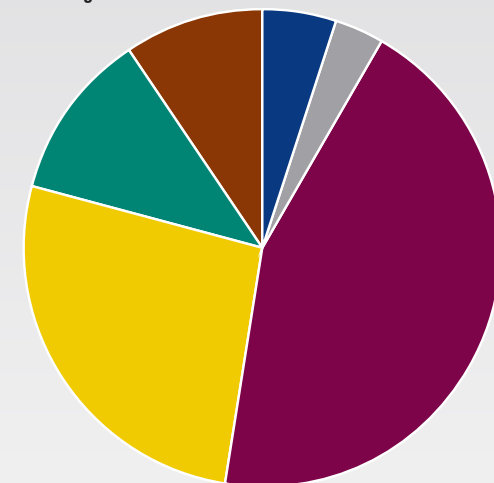
Graduate School of Biomedical Sciences

338 PhD students
35 MD/PhD students
21 Clinical & Population Health Research students
5 Master of Science in Clinical Investigation students
638 Alumni

Graduate School of Nursing

51 MS students
87 Graduate Entry Pathway students
21 PhD students
28 Doctor of Nursing Practice
861 Alumni

FY '12 Funding and Revenue



\$870.2 million Total

\$43.7 million ■ State appropriation
 \$30.5 million ■ State contracts*
 \$383.9 million ■ Public service
 \$232.7 million ■ Research (sponsored activity)
 \$99.0 million ■ Sales and services**
 \$80.4 million ■ Other revenue***

*Provide mental health and pediatric services for those who cannot afford private care.

**Examples include MassBiologics and New England Newborn Screening Program.

***Mass Life Sciences capital revenue of \$34.1 million not included

Total Research Funding – Fiscal Year Ending:

June 20, 2009 \$204,634,908
 June 30, 2010 \$255,314,898
 June 30, 2011 \$287,991,128*
 June 30, 2012 \$249,677,737

*Includes \$39 million in American Recovery and Reinvestment Act funding.

Technology Management – (\$ in thousands)

For Fiscal Year:	2009	2010	2011	2012
Invention disclosures	66	68	60	80
U.S. patent applications	55	64	47	39
Licensing agreements	11	4	5	16
Sponsored research agreements	\$1,029	\$1,337	\$3,085	\$4,888
Licensing revenue	\$71,480	\$38,377	\$34,821	\$52,642

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By Jay Himmelstein, MD, MPH

When I think of health reform, I think of my niece Emily and thousands of cancer survivors like her whose lives are complicated by fears about their health and financial futures. When Emily was diagnosed and eventually received treatment here at UMass Memorial eight years ago, I witnessed first-hand the quality of our health services—and also the fears and financial uncertainties faced by individuals and families attempting to pay for that care in a fragmented and often arbitrary health insurance system.

So I was delighted when we at UMass Medical School were invited by our state partners to help implement national health reform in Massachusetts. Now that the U.S. Supreme Court has affirmed the constitutionality of the Affordable Care Act (ACA), all states are re-evaluating their plans for implementing national health reform, and many are looking to Massachusetts—and UMass Medical School—for leadership and guidance.

The ACA reforms the health insurance market by limiting the ability of health insurers to deny or limit benefits to people like Emily who have pre-existing conditions, and makes insurance more affordable by requiring everyone to participate, providing subsidies to purchase insurance and expanding the Medicaid program.

It is well established that the federal ACA is modeled after the highly successful Massachusetts reforms of 2006. One of the key ingredients to the success of the Massachusetts law was the creation of our health insurance exchange, the Massachusetts Health Connector. Health insurance exchanges set standards for insurance plans and established the first online marketplace where consumers could effectively shop for high quality yet affordable health insurance products.

Building upon the success of the Massachusetts reforms, when the ACA is fully implemented in 2014, state-based health insurance exchanges will set standards and qualify the insurance products offered in a state. These exchanges will also provide a real-time determination of eligibility for Medicaid benefits, identify appropriate subsidies to lower the costs of commercial insurance for individual consumers and businesses, and provide an easy and modern comparison shopping experience for the consumer—similar to what we have come to expect when we shop online for other products, such as airline tickets.

UMass Medical School, in partnership with the Massachusetts Medicaid program MassHealth and the Massachusetts Connector Authority, has received substantial funding from the U.S. Department of Health and Human Services to build the information technology components required by the ACA to be shared with other New England states and beyond. We were encouraged to take on this challenge because of the commonwealth's experience and expertise in setting up our own state's insurance exchange and related systems.

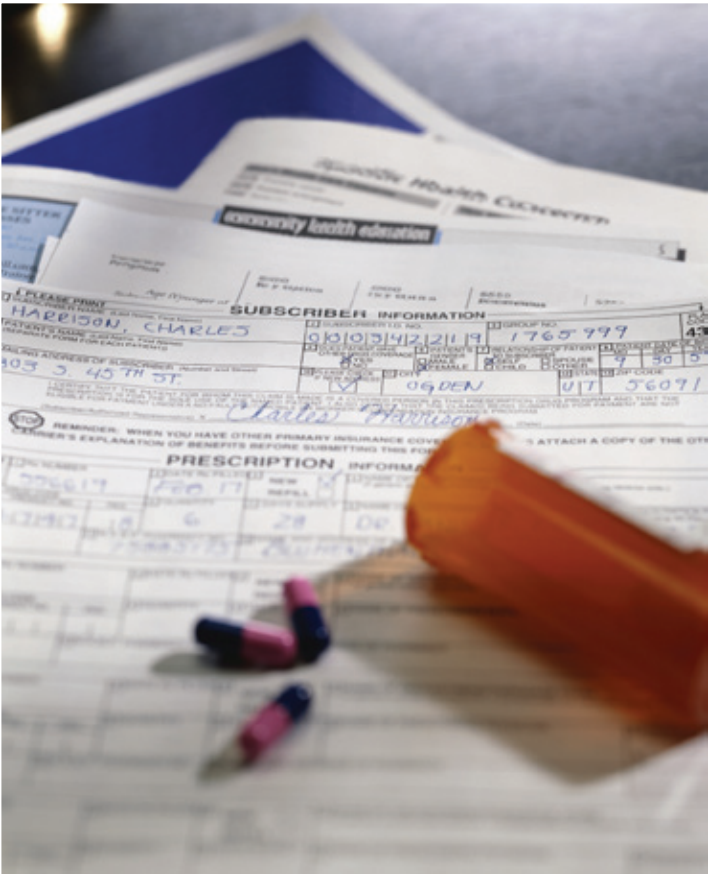
It is worth noting that UMass Medical School is the only university participating in a leadership role for

ACA implementation. Our cooperative agreement with HHS, known as the New England States Collaborative for Insurance Exchange Systems, is the only one that is actively working with other states as design partners in establishing their state-based exchanges.

Residents of Massachusetts and members of the UMass Medical School community should be justifiably proud that our state stepped up to the challenge of innovating and implementing health reform, leveraging our public policy experience, technical expertise and unique university partnerships. The implementation of this monumental law is a once in a lifetime opportunity to make health care accessible—and affordable—for all Americans!

And, I am personally delighted to report that Emily—now cancer free for nearly eight years—has recently married, and as a result of the ACA prohibition on pre-existing conditions, has the freedom to pursue her life and career goals without worrying about losing health insurance coverage.

In addition to his professional interest in the technical infrastructure required for national health care reform, Jay Himmelstein, MD, MPH, has a personal interest in trying to fix the uncertainties inherent in today's health care system: his niece Emily and her fight against cancer. She and Himmelstein are pictured together below and with his son on a hiking trip in New Zealand shortly after her cancer treatments ended.



JAY HIMMELSTEIN, MD, MPH, is professor of family medicine and community health and chief health policy strategist for UMass Medical School's Center for Health Policy and Research. Dr. Himmelstein is currently the principal investigator for the New England States Collaborative for Health Insurance Exchange Systems funded by a \$44 million Cooperative Agreement from the Center for Consumer Information & Insurance Oversight, part of the Centers for Medicare and Medicaid Services within the federal Department of Health & Human Services.



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