

# Vitae:

The University of Massachusetts Medical School annual report for the year 2001

Vol. 24 No. 2





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### A MESSAGE FROM THE CHANCELLOR /DEAN

The year 2001 is one that will be recalled for its soaring highs and unimaginable lows. Our country suffered incredible sorrow in September, but its citizens' immediate and overwhelming response to the tragedy was so stirring that the simple gesture of giving on a grand scale may prove the defining story that will be told of the last twelve months.

Acts of contribution—whether they be in the form of teaching students, caring for the underserved, or researching causes of disease—typify the mission of UMass Medical School. The events of this past year brought that mission into even greater focus for our faculty, students and employees, sharpening our commitment to the health of individuals and communities. We reflect upon the following experiences at UMMS in 2001:

On October 19, the new research laboratory building was dedicated and its doors opened to faculty, staff, friends and benefactors, who joined in observance of this historic event that has changed the face of the campus and reinforced our dedication to the highest level of research. The pages of this annual report describe investigators such as Scott Waddell, whose love of science is matched by his enthusiasm for the collaborative environment at UMMS.

Our commitment to provide a unique educational experience that distinguishes our graduates from those of other institutions, was enhanced with the addition of Linda Pololi, the Medical School's new vice chancellor for education. As described in the following pages, Dr. Pololi, a scholar of the educational process, is devoted to humanizing the learning experience to the benefit of faculty, students and the patients they will treat. We look to her to further engender the objective of a compassionate approach to health sciences education.

Dr. Pololi will join colleagues who are—in the words of chair of Family Medicine & Community Health Daniel Lasser, profiled in this report—“creative, energetic and diverse,” continually broadening our services to the commonwealth as they teach our students to respectfully care for each individual patient and conscientiously respond to overarching public health issues—particularly those concerning the underserved.

In 2001, UMMS was again awarded one of the highest honors of state service, the Manuel Carballo Governor's Award for Excellence in Public Service—the fourth such tribute in the last six years. As detailed in this report, the work of the latest recipient, UMMS child psychologist Geri Fuhrmann, is indicative of what we aspire to achieve as the only public medical school in the state—the promotion of community partnerships.

These examples of the Medical School's many contributions have won us the support of generous friends, like Jack and Shelley Blais, who have embraced our community and deeply involved themselves in the dynamic future of this campus through their unprecedented philanthropy. This annual report also details the Blaises' story of giving—as well as those of others—that will help us to recall 2001 as a year that launched new opportunities for growth towards national distinction.

**Aaron Lazare, MD**



LINDA POLOLI, MBBS

BY ANDREA L. BADRIGIAN

# An Institution's Values

*"The education we provide should have the hallmarks of humanistic care and scientific rigor, and be delivered using the most appropriate teaching methods."*

There is an "informal, hidden curriculum" in medical school, and Linda Pololi, MBBS, has devoted her career to exploring it and cultivating a humanistic learning environment for the good of faculty, students and all of us as current and prospective patients.

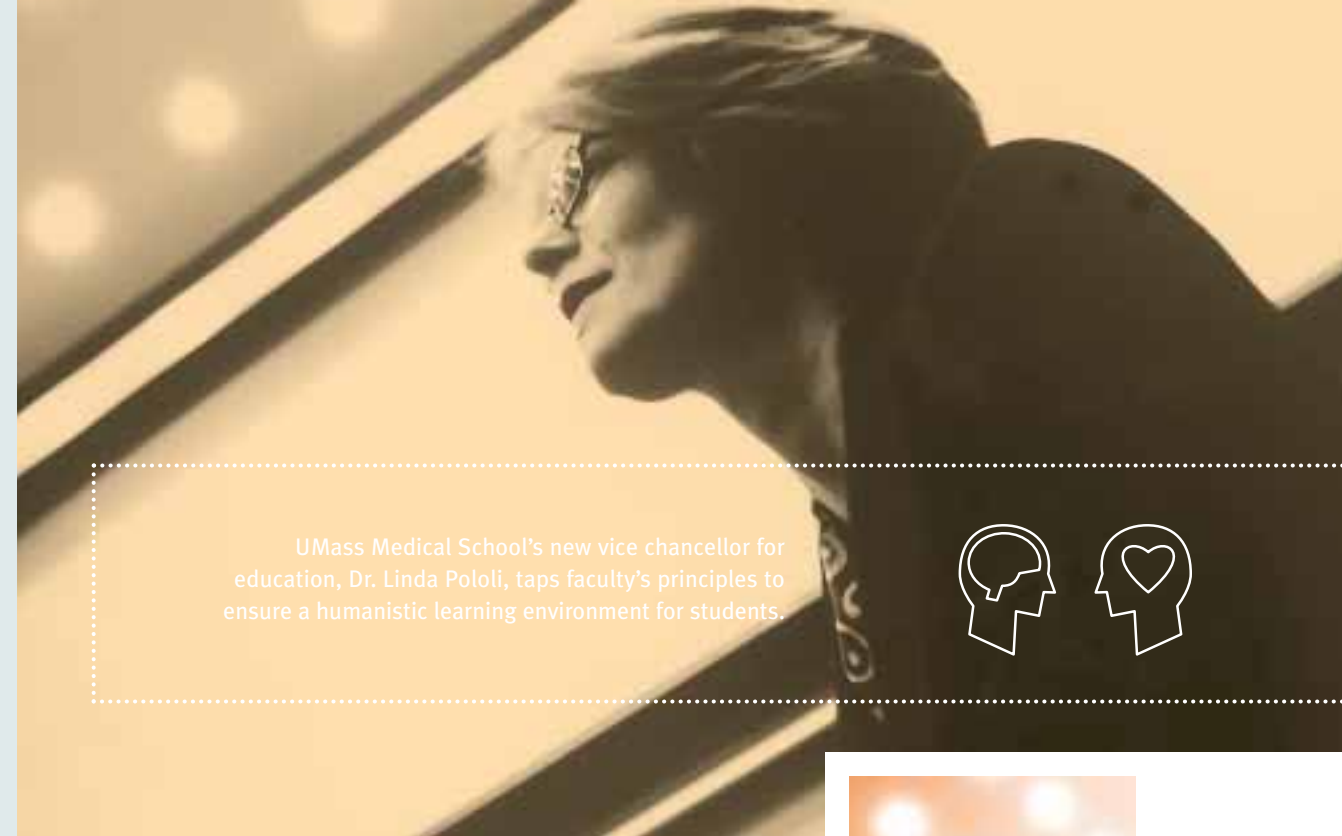
"Education of medical students consists of two main parts," explained Dr. Pololi, appointed in 2001 as UMass Medical School's vice chancellor for education. "There is specific knowledge to acquire and skills to master. But in order to produce the physicians our society expects and deserves—those who are compassionate and socially responsible—students must also learn and take to heart the values of humanistic care as modeled by the institution that trains them. This

informal, hidden curriculum is often not voiced; instead it is revealed through an established set of behaviors, attitudes and principles."

Pololi is intensely interested in how people learn and what facilitates the most effective outcome for students. She has recognized that a personal, humane experience in medical school is essential for teaching the "human dimensions" of care by creating an ideal parallel—compassionate doctor to trusting patient follows from facilitative, respectful teacher to motivated student. UMMS, having already instituted outstanding curricular initiatives such as the Physician, Patient and Society course and the Standardized Patient Program, is looking to Pololi to bring her expertise to further ingrain the objective of a humanistic approach to health sciences education.

Most recently the head of the Office of Faculty Development at East Carolina University School of Medicine and director of ECU's National Center of Leadership in Academic Medicine, Pololi has put

programs in place that now serve as national models. At ECU, she aimed to establish a school-wide culture that values learning for the faculty and nurtures the individual by providing for personal and professional growth and development of academic and teaching skills. "My overarching goals have been to support continuing faculty vitality and change the culture of learning for faculty in the school, so that they may, by experiencing this learning environment themselves, be able in turn to provide it for students and patients." To say that response has been overwhelming is an understatement. "In the academic year 2000-2001, all of our programs were fully enrolled, and we provided 2,434 hours of faculty training time, mostly in small groups. Faculty from all clinical and basic science departments have participated as well as from the School of Nursing and the School of Education."



UMass Medical School's new vice chancellor for education, Dr. Linda Pololi, taps faculty's principles to ensure a humanistic learning environment for students.

In 1998, ECU's Office of Faculty Development was designated and funded by the U.S. Public Health Service as one of four vanguard National Centers of Leadership in Academic Medicine. Pololi, as director and principal investigator, set out to develop and implement model mentoring programs for faculty that could subsequently be duplicated at other schools across the nation. Her innovative programs, Mentoring Skills, Personal Mentoring and Collaborative Mentoring, have enthused ECU faculty as they have rediscovered a strong purpose and commitment to their academic careers, strengthened the bonds of collegial stimulation and support, and learned from the experiences of senior faculty.

"These are challenging times for junior faculty especially; the promise of scholarship and teaching that led them to academic medicine is often hampered by the current reimbursement structure in health care. Continued support and



guidance as faculty develop their careers is critical." Yet, answering the familiar question, "Where would you like to be in five years?" is only part of the program, according to Pololi. The Collaborative Mentoring Program in particular encourages participants to plan their career development based on their values. "Once one's values have been clarified, then all future decisions should follow from those values. And voicing these values in collaborative groups is very beneficial to the individual and the institution. It's very stabilizing across departments and divisions."

Pololi's record of success in creating collaborations made her the ideal candidate for UMMS and the position of vice chancellor for education, in which she will



optimize the institution's educational offerings by taking advantage of the collective strengths and resources of all three graduate schools.

"I am so excited to be here, to build on the wonderful work of a talented and committed faculty. And, I love that the Medical School is a public institution, allowing us the privilege and honor to take our knowledge out into the community and assist it. Further, I recognize and appreciate the strong sense of social justice that is held by the faculty and students—the willingness to seek out diversity in all sectors, bringing richness to the whole. Weaving these values all through the curriculum and into everything we do is integral to our continued institutional success and our own personal fulfillment."



BY ANDREA L. BADRIGIAN

# The (Cheer) Leader



DANIEL LASSER, MD



Daniel Lasser, MD, chairs—and cheers—a department of energized individuals who successfully achieve an objective to integrate the perspective of the family physician with a broad public health view.



*“I’m really proud of the fact that we have figured out how to teach students while we take care of patients.”*

Over 20 years ago, Daniel Lasser, MD, entered a room at UMass Medical School prepared to present a talk on quality to family medicine residents. As the new director of the residency program, he expected his initial introduction to the group would go smoothly.

But, as the “grilling of the new guy” commenced, with questions such as “Can we trust you?” and “Will you consult us before making decisions?” a casual observer would have reported that the meeting went anything but smoothly. For Dr. Lasser, however, it couldn’t have been more energizing. “My response was ‘what terrific energy. ...What a great place to be.’”

In 2001, Lasser, as chair of the Department of Family Medicine & Community Health, is still energized

by the “diverse, talented and creative people” he works with. Entering his fourth year as head of one of the founding academic departments at UMMS—one that, through its educational and clinical programs, strives to integrate the perspective of the family physician with a broader public health view—Lasser is a self-described “cheerleader” for his faculty and staff. “A department is only as good as the people in it; if I point them in the same direction, and let them do what they do best, they’ll do incredible things for their students, patients and society. And if I do my job well enough, they won’t miss me while I’m away.”

When viewing the achievements and sheer scope of the department’s programs and affiliations on paper, one would wonder if Lasser ever “gets away.” The chair is known to unveil his “roadmap,” a large whiteboard in his office covered with written references to the educational, research and public service components of Family Medicine & Community Health, a microcosm of the Medical School’s institutional mission.

Cases in point: department faculty instruct students in all four years of the curriculum, playing a major role in UMMS’ ranking of 4th in 2001 among the nation’s medical schools in the quality of its primary care training. Its position as one of the top schools in the Northeast in the percentage of students choosing family practice and primary care careers may be reflected in the popularity of the department’s flagship Family Medicine clerkship, which is consistently rated by third-year students as their best clinical clerkship. Dedicated faculty preceptors, characterized as “motivating,” “accessible” and “respectful” by students, instruct at numerous clinical settings throughout the state, including the Great Brook Valley Health Center in Worcester, where Lasser has practiced for a decade. “I’m really proud of the fact that we have figured out how to teach students while we take care of patients—at busy sites that even include community health center

models for delivering primary care, mental health and dental care, immunizations, social services, even interpreter services,” Lasser noted.

Because family physicians are the principal source of health care for rural as well as urban populations, the department introduced the Rural Health Scholars Program in 2000. The program examines rural health issues and equips and encourages medical students to practice in rural or small town areas. To better meet the health care needs of the underserved in urban areas, the department implemented the innovative educational program Pathway on Serving Underserved and Multicultural Populations. Massachusetts is the principal destination for a variety of ethnic groups, and UMMS students learn firsthand through the Pathway the role of culture within the context of medical care as they travel to countries of origin, and later apply their cross-cultural skills in practice. “This program shapes the attitudes of students, helping them to



understand their responsibilities as physicians in their community and, indeed, in global health.”

The department’s large-scale impact grows from its research endeavors as well, which have accelerated during Lasser’s tenure. In 1998, the department embarked on a five-year program to expand its research activity. “We decided not to limit our investigations to clinical or primary care questions,” explained Lasser. “Our research is focused on health issues that affect entire populations and impact public health policy. That’s why, for example, Dr. Linda Weinreb does her work with homeless populations, and Dr. Joe DiFranza with adolescents and tobacco?” Both Weinreb and DiFranza are nationally recognized for shining a spotlight on the issues concerning these groups, as are an increasing number of department faculty in their respective research

areas. “Significant changes in public health, like the establishment of local ordinances that limit adolescent access to tobacco, or the pressure that led to the elimination of the Joe Camel advertising campaign, those came out of Joe DiFranza’s work. They are solid examples of the impact that research can have upon the health of communities.”

Lasser notes that words that start with “c”—continuity, comprehensiveness, coordination, caring, commitment—are “the backbone of family medicine and community health. Those are mission-based words that I like to trot out whenever I can.” Yet, the “p” word, pride, also defines Lasser’s motivations to create even stronger programs and partnerships for the department, adding to his roadmap. Far from dissuading him, as the scenario of 20 years ago might have done, “The people I work with still bring me here everyday, no question.”





GERI S. W. FUHRMANN, PSYD

BY LYNN C. BORELLA

# Lifting a Child's Burden

*"To me, it's a nice balance; almost every day, there's at least one moment when I think, 'Wow, I've really made a difference here.'"*

Lawyers, judges and mental health professionals must work cooperatively to determine the best outcomes for divorcing parents and their children. Thanks to the efforts of UMMS Associate Professor of Clinical Psychiatry and Pediatrics Geri S. W. Fuhrmann, PsyD, and her colleagues, such collaboration is a reality in Worcester County.

Yet, Dr. Fuhrmann's work as a child psychologist doesn't end in the courtroom; she also counsels hospitalized children and, through an education program she helped co-develop, parents in the midst of separation or divorce.

For successfully balancing these varied roles, Fuhrmann was awarded the Manuel Carballo Governor's Award for Excellence in Public Service in 2001. The fourth Carballo Award presented to a UMMS employee in the last six years, the Carballo is named for the late secretary of Human Services and is presented annually to ten state workers who exemplify "the highest standards" of public service. "Even though I was given the award, I feel it's a shared honor," said Fuhrmann, who was nominated by Paul S. Appelbaum, MD, the Arnold F. Zeleznik Professor of Psychiatry and chair, and Marianne E. Felice, MD, interim CEO of UMass Memorial Health Care and professor and chair of pediatrics. "I am truly grateful to the Medical School for valuing work that is outside the realm of traditional medicine." Fuhrmann joined UMMS in 1985 to work as a staff psychologist evaluating allegations of child abuse or neglect in the patient population. In 1987, interested in reducing the

trauma suffered by children in divorcing families, she established the Child and Family Forensic Center (CFFC). Today, Fuhrmann and her colleagues provide consultation, evaluation, mediation and expert testimony to hundreds of families involved in divorce or maltreatment cases. "The CFFC actually started by happenstance," recalled Fuhrmann. "I received a call from a judge asking me to do an evaluation for the court. I knew I was interested, but there was no mechanism to provide such services. So, I went to Dr. Appelbaum, who had just arrived to start the Law and Psychiatry Program, and asked if he would like someone to start a child branch. He agreed." Another example of serendipitous CFFC program development was the creation of the Worcester Family Court Clinic. This service, which provides triage psychological evaluations for families involved in the legal system, also began with



For her unwavering commitment to the children of Massachusetts, Dr. Geri Fuhrmann achieves public commendation and personal satisfaction.



a call from a judge, this time to Fuhrmann's collaborator Linda M. Cavallero, PhD, associate professor of clinical psychiatry. "One of the many things I like about the CFFC and the Department of Psychiatry is that we are given the latitude to develop programs for unmet needs," stated Fuhrmann. The CFFC's ultimate goal is to sensitize participants in the legal system to the special needs of children. Fuhrmann and her colleagues have accomplished this by offering advice to judges, lawyers and parents about the psychological issues involved in the hope that this information will help them make wise decisions, while improving the overall administration of justice. "I believe there's nothing else I could do that could more directly impact the quality of lives for more children," Fuhrmann added. Another outcome of Fuhrmann's role in the courts was the co-founding of the Parents Apart program with



Assistant Professor of Psychiatry Joseph C. McGill, MSW. This education program was developed to teach parents how to help their children successfully manage the stress of parental divorce. In Massachusetts, where such programs are mandated, Parents Apart is the most widely used model and is nationally recognized for its clinical relevance. "When we first started thinking about such a program, Joe and I found that those that already existed simply told divorcing parents that they needed to cooperate or they could do harm to their kids. That's very difficult for individuals experiencing a bitter divorce. So we developed a program that allows parents to continue parenting

relationships post-separation that reflect their present emotional state and avoid conflict for their children." In 1990, Fuhrmann also began working with W. Peter Metz, MD, associate professor of psychiatry and head of the Pediatric Psychiatry Consultation Liaison Service, to counsel hospitalized children experiencing chronic or life-threatening illnesses, those who have attempted suicide, and many who have experienced traumatic injuries. "Although seemingly different, both divorce and hospitalization have such a huge impact on kids' lives, whether they are facing an illness or a legal decision that could affect where they live or who they see. So, to me, it's a nice balance; almost every day, there's at least one moment when I think, 'Wow, I've really made a difference here.'"

BY KELLY A. BISHOP

# Fly School



SCOTT WADDELL, PHD

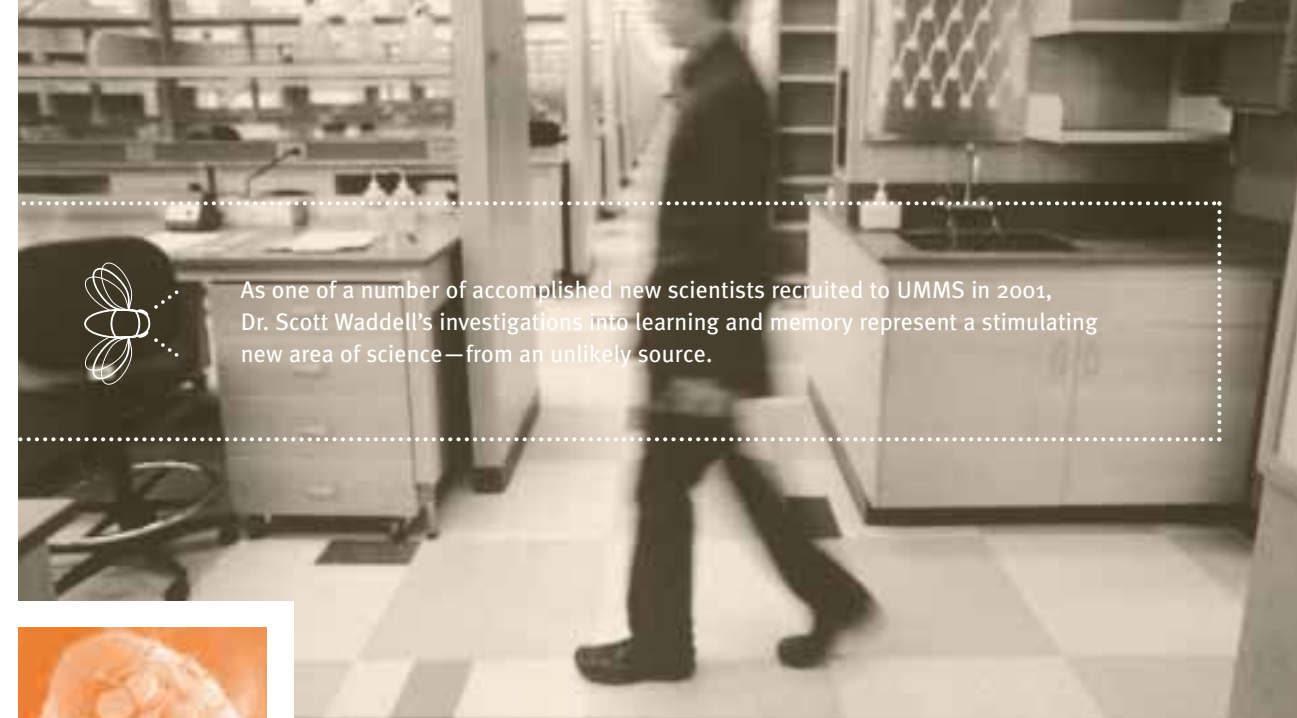
*“By looking to see where these proteins localize in the fly brain, we are identifying the neurons that are central to learning.”*

Who says you can't teach an old fly new tricks? Certainly not UMMS assistant professor of neurobiology Scott Waddell, PhD. While some may see *Drosophila* (the common fruit fly) as an unlikely pupil, Dr. Waddell has spent five years as a “fly teacher,” seeking to understand the cellular and molecular basis of learning and memory.

Perhaps surprisingly, fruit flies can be taught complex associations and, remarkably, they remember such associations for comparatively long periods of time. Waddell and colleagues are hoping to identify the neural networks that underlie the encoding of learned information with the anticipation that their research will eventually further the understanding of similar processes in man.

Teaching flies is straightforward: flies are trained in a tube where they are exposed to an odor coupled with a mild electric shock. The flies are then exposed to an entirely different odor without the shock. The trained flies are then moved to a “choice-point” in a plastic maze where they can choose between the two odors they experienced in training. While naive flies split 50-50 between the two tubes, trained flies choose the odor that was not presented with the shock 90 percent of the time, enabling Waddell and colleagues to calculate a score and quantify the learning performance.

To further delineate this sort of associative learning (like a child touching a hot stove) from what we generally think of as memory, the time between the first exposure to the odors and the memory test can be varied. “With our flies, what we generally refer to as learning is really two-minute memory: any period of time after two minutes we call memory,” Waddell explained. “Memory can be one hour, one day, and if we train flies in a specific way, we can get them to remember for a week. The same training protocol repeated six to 10 times with 15-minute rest intervals results in week-long memory.” Quantification of learning and memory provides a starting point from which Waddell can then mutagenize, or genetically alter, flies to identify those that have learning or memory deficits.



As one of a number of accomplished new scientists recruited to UMMS in 2001, Dr. Scott Waddell's investigations into learning and memory represent a stimulating new area of science—from an unlikely source.



A graduate of the University of Dundee in Scotland and the University of London, Waddell came to UMMS from the Massachusetts Institute of Technology, where he was a postdoctoral fellow in the lab of William G. Quinn. Quinn identified the first known fly learning mutants in the mid-1970s. He gave them quirky, descriptive names like *dunce*, a mutant with reduced learning capacity, and *amnesiac*, a mutant that learns well but forgets quickly. These mutant genes provided an entry point to the molecules that mediate learning. “We are able to isolate mutants that have reduced learning capacity and from there we identify the proteins that are encoded by these mutated genes,” Waddell said. “By looking to see where these proteins localize in the fly brain, we are identifying the neurons that are central to learning.”

In the course of their research, Waddell and colleagues have discovered that these genes are expressed in the neurons that comprise the “mushroom bodies,” fly brain structures that are critical for learning and higher cognitive function and that are named for their mushroom-like appearance. With the relatively small size of the fly brain, and current microscope technology, Waddell can examine the entire fly brain at high resolution. This illustrates one of the primary benefits of working with the tiny, winged creatures. “We can examine the whole fly brain in one piece under the microscope. This is significantly better than the incredibly small piece of the mammalian brain that we can examine with the same technology.”

While his research in the fruit fly has clear relevance to studies in other organisms, Waddell's immediate goal is to further understand learning and memory at the cellular and molecular level by identifying other genes that play a role in neural processes. “The fly is an ideal model in that it can carry out quite amazing tasks, and yet it is still relatively small and simple. I think we are likely to understand the fly brain before we understand our own,” he said. Adding with a smile, “But that might be my bias as a fly educator.”



# The Year in Review

“Under Dr. Lazare’s leadership, the Medical School has achieved objectively ranked academic prominence and unprecedented research growth. It is a model for how successful a public institution can be, if understood, nurtured and—most importantly—well led.”

*University of Massachusetts President William M. Bulger in his address at Convocation, formally recognizing the decade-long tenure of Aaron Lazare, MD, as chancellor and dean of the University of Massachusetts Medical School.*



◀ WILLIAM BULGER WITH DR. LAZARE

“I remember going up to get a couple of volunteers to stand guard and direct traffic. I found 50 doctors and nurses and paramedics waiting to help. I said to them, ‘Guys, I need some help directing traffic downstairs. I need two of you to keep people in order. None of this is medical care. You will simply be giving directions to bathrooms, food and the triage desk.’ All 50 stepped forward to help.”

*UMMS alumnus Aaron Burrows, MD '99, senior medical resident at Saint Vincent’s Hospital in Manhattan, on one of many scenes of heroism he witnessed as a leader of a triage team on September 11, 12 and 13, 2001.*



◀ AARON BURROWS, MD (SECOND FROM RIGHT), WITH COLLEAGUES AT THE STUYVESANT H.S. TRIAGE CENTER



▼ DANA ANDERSEN, MD

“This was a great opportunity to let the graduate student body know about my thesis research and, more importantly, to expose them to basic immunology concepts and the types of experiments immunologists perform.”

*Andrew T. Miller, fourth-year student in the Graduate School of Biomedical Sciences, who presented “The Role of ITK in CD4 Lymphocyte Effector Function” as the student speaker representing the Program in Immunology & Virology at the sixth annual UMMS Research Retreat. Designed to introduce new faculty and share research news within the Medical School community, the 2001 event was attended by 350 faculty, postdoctoral fellows, students and staff.*

“We must hold fast to what is good, to the goodness of creation, a belief held in common by all religious faiths that we are truly brothers and sisters.”

*Reverend Thomas Hunt, former UMMS chaplain, reflecting on the events of September 11 as part of “A Day of Remembrance” at the Medical School. Representing the institution’s rich religious and ethnic diversity, the day-long event included readings in many languages, instrumental music and singing, and opportunities for quiet meditation and community response.*

“Your eyes are burning and your feet are hurting; your body just hurts from your feet to your nose. It’s physically and emotionally trying. But we have a very definite role here, and that just keeps everyone going.”

*Commanding Officer Gregory Ciottone, MD, on the efforts of the UMass Memorial Disaster Medicine Assistance Team (DMAT-MA2) in New York City in the aftermath of the September 11 terrorist attacks. More than 50 health care and emergency services members of DMAT-MA2 spent nearly two weeks providing medical support to the 20,000 rescue personnel working at Ground Zero. Deployed again in October after three of the processing machines at New York City’s central mail distribution facility cultured positive for anthrax, 12 members of DMAT-MA2 helped the U. S. Department of Public Health and the Centers for Disease Control to triage, educate and treat more than 8,000 postal employees. The team so improved the process of attending to the vast number of people needing immediate medical attention that the government agencies adopted the system as a model and have since used it in the Trenton, New Jersey, distribution center, another large postal facility contaminated with anthrax.*

“As physicians, we are the patient’s agent. We can be effective only if we find out what the patient thinks and values. We need to take the time to do so. As educators, we can teach these skills to our younger colleagues. I look forward to joining UMMS and the compassionate surgeons who act on behalf of their patients.”

*Newly appointed Professor and Chair of Surgery Dana K. Andersen, MD, speaking to members of the Medical School community and the public at a presentation on end-of-life care by H. Brownell Wheeler, MD, founding chair of the Department of Surgery and the Harry M. Haidak Distinguished Professor of Surgery Emeritus. Andersen comes to UMMS from Yale University School of Medicine, where he was chief of the Section of Surgical Gastroenterology and vice chair of the Department of Surgery.*

“My intention is to do everything I can to make UMass Memorial Health Care and its academic partner, UMass Medical School, live up to the ideals these institutions stand for. Central New England deserves a health care system second to none, and I look forward to this challenge very much.”

*Marianne E. Felice, MD, pediatrician-in-chief for the UMass Memorial Children’s Medical Center and professor and chair of pediatrics at the University of Massachusetts Medical School, on her appointment as interim chief executive officer for UMass Memorial Health Care. Felice will lead UMMS’ clinical partner during the search for a new CEO. Professor of Pediatrics Peter E. Newburger, MD, has been selected to serve as interim chair of the Department of Pediatrics during Felice’s tenure at UMass Memorial.*



◀ MARIANNE FELICE, MD

"We are at the dawn of a new scientific revolution, one in which the men and women who will work in this beautiful building will bring us ever closer to new cures, new discoveries and new areas of scientific inquiry: the discoveries that will take place here at the University of Massachusetts Medical School in the next decade are certain to make a difference in the lives of the people of the commonwealth and the nation."

University of Massachusetts Trustee Peter K. Lewenberg at the dedication of the new research laboratory building on the UMMS campus.



UMMS DEPARTMENT CHAIRS AND DEANS CELEBRATE THE DEDICATION.

"What is unique about the award is that I am starting my faculty position with a significant source of flexible funding, allowing me to immediately hire two people. It takes an incredible amount of pressure away because in six months, when I apply for my first NIH grant, I will have the work of myself and two others to support my application."

New UMMS Assistant Professor of Molecular Medicine Heidi A. Tissenbaum, PhD, on the impact of receiving a 2001 Burroughs Wellcome Fund Career Award in the Biomedical Sciences, which provides \$500,000 over five years to foster the development and productivity of biomedical researchers early in their careers. The Medical School is privileged to have recruited two of the 23 North American recipients of the prestigious award: William R. Kobertz, PhD, assistant professor of biochemistry & molecular pharmacology, also received one of the private foundation's grants in recognition of outstanding achievement in graduate and postgraduate research.



SHAN LU, MD, PHD

"It's important to note that we are not going to expose healthy volunteers to the AIDS virus in this trial. Instead, we'll focus on the safety of the vaccine itself, and we'll see what effect the vaccine has in regard to stimulating human immune responses."

Associate Professor of Medicine Shan Lu, MD, PhD, on the goals of a two-year, multi-center trial of an experimental HIV vaccine that he is directing at UMass Medical School and UMass Memorial Medical Center. The vaccine is a product of one of the largest pre-clinical vaccine research programs in the history of pharmaceutical giant Merck & Co., Inc., and has been shown to prevent laboratory monkeys exposed to a virulent strain of HIV from getting sick.

"This was a world-class scientific symposium, one which sets the stage for the world-class research that will be carried out in the new building."

John L. Sullivan, MD, director of the UMMS Office of Research and professor of pediatrics and molecular medicine, on the Scientific Symposium that brought four of the country's premier investigators to Worcester to address UMass faculty and students. One of the events surrounding the opening of the research laboratory building, the symposium was broadcast via satellite to the other four campuses of the University of Massachusetts.

"I think we all agree that Dr. Lazare's is the only name that should be on that building."

John F. "Jack" Blais on his pledge with his wife Shelley to give \$15 million to UMMS to name the new research laboratory building after Chancellor and Dean Aaron Lazare. Announced at a dinner celebrating the dedication of the 360,000-square-foot building, the pledge is the largest gift from an individual in the history of the University of Massachusetts and supplements the couple's previous donations of \$5 million to the Campaign for Research and \$1 million to the Chancellor's Discretionary Fund.

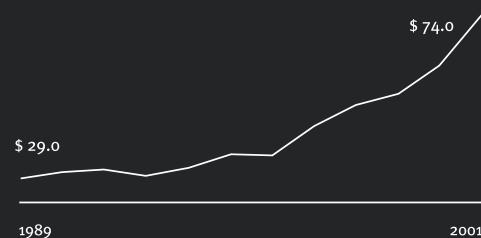


HEIDI TISSENBAUM, PHD

WILLIAM KOBERTZ, PHD



THOMAS JESSELL, MD, AT THE SYMPOSIUM



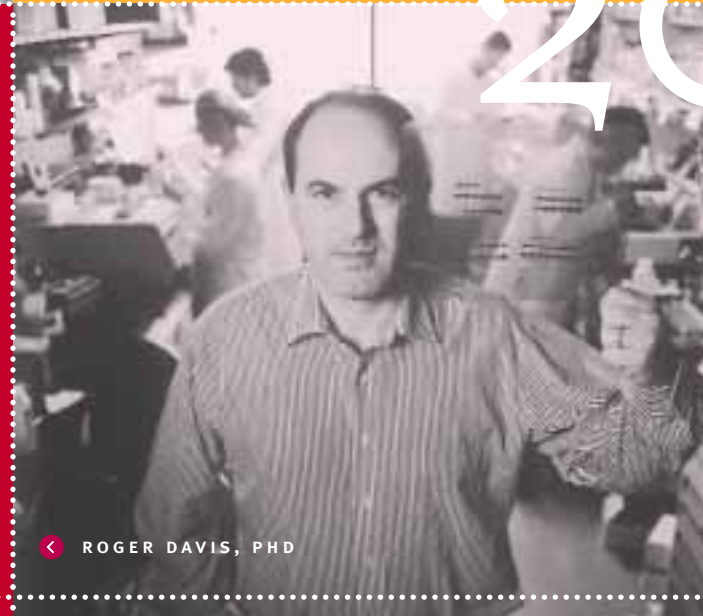
FIGURES IN MILLIONS OF DOLLARS

"Key to our progression in the ranks has been our ability to attract and retain outstanding national and international faculty. And as we expand our research endeavor, we expect our NIH funding growth to continue."

Chancellor and Dean Aaron Lazare on UMMS' position at 39th of 125 U.S. medical schools in funds received from the National Institutes of Health (NIH). NIH grants and contract awards to the Medical School increased more than 23 percent in fiscal year 2001.

"I am pleased to receive recognition that acknowledges the dedication and accomplishments of the students, research assistants and postdoctoral fellows in my research group."

Roger J. Davis, PhD, professor of molecular medicine and Howard Hughes Medical Institute Investigator, on being named one of the world's most cited scientists by the Institute for Scientific Information (ISI). Davis is featured on the ISI HighlyCited.com Biochemistry and Biology listing. Fellow Howard Hughes Medical Institute Investigator Michael R. Green, MD, PhD, professor of molecular medicine and director of the Program in Gene Function & Expression, is recognized on two of the site's lists: Biochemistry and Biology, and Genetics and Cell Biology. Citation is a key measure of influence in science and technology; once complete, the ISI HighlyCited.com database will include the publication and achievement records of 250 pre-eminent researchers in 21 categories.



ROGER DAVIS, PHD

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# Facts and Figures

53

Millions of dollars in extramural research funding received by UMMS in 1991

110.9

Millions of dollars in extramural research funding received by UMMS in 2001

150

The number of prospective research staff who attended the 2000 UMMS Research Job Fair

254

The number of prospective staff who attended the 2001 Job Fair, an increase of almost 70 percent

39

UMMS' ranking among the country's 125 medical schools in the amount of peer-reviewed funding received from the National Institutes of Health

2

UMMS' ranking among the Northeast's public medical schools in the amount of funding received from the NIH

350

Percentage increase in patent applications by the Office of Commercial Ventures and Intellectual Property since 1996

1500

Number of Worcester Public Schools' students who have benefited from the intellect of UMMS employee, faculty, and student mentors involved in the Worcester Pipeline Collaborative

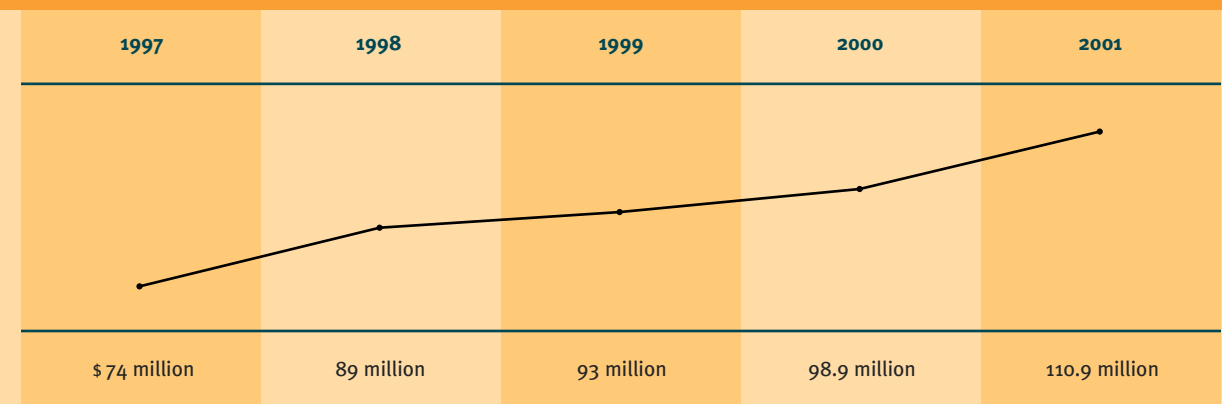
## FUNDING AND REVENUE

Fiscal Year	2001	2002 (Projected)
State appropriation to schools	\$ 36.5 million	\$36.9 million
State contracts*	24.6 million	25.3 million
Research (sponsored activity)	110.9 million	129.6 million
Public Service	59.0 million	93.5 million
Other revenue sources**	98.3 million	83.1 million
<b>Total</b>	<b>\$ 329.3 million</b>	<b>\$ 368.4 million</b>

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

\*\*Examples are continuing education and student fees, biologic labs and newborn screening programs and other non-state revenue sources.

## RESEARCH FUNDING INCREASE — LAST FIVE YEARS



## COMMERCIAL VENTURES AND INTELLECTUAL PROPERTY

Fiscal Year	1996	1997	1998	1999	2000	2001
Invention Disclosures	39	56	43	49	101	111
U.S. Patent Applications	18	28	30	24	60	81
Licensing Agreements	5	5	14	17	21	24
Sponsored Research Agreements	\$ 1,965	3,397	2,494	3,349	1,669	7,004

\$ in thousands

Facts and Figures

EDUCATIONAL PARTNERS AND AFFILIATES

- UMass Memorial Health Care
- UMass Memorial Medical Center  
*(Hahnemann, Memorial and University campuses)*
- UMass Memorial—Clinton Hospital
- UMass Memorial—HealthAlliance Hospitals
- UMass Memorial—Marlborough Hospital
- UMass Memorial—Wing Memorial Hospital and Medical Centers
- Athol Memorial Hospital
- Barre Regional Family Health Center
- Berkshire Medical Center
- Community HealthLink
- Day Kimball Hospital
- Fallon Community Health Care
- Family Health Center—Queen Street
- Fitchburg Family Practice
- Hahnemann Family Health Center
- Harrington Memorial Hospital
- Heywood Hospital
- Holyoke Health Center
- Holyoke Hospital
- Hubbard Regional Hospital
- Lawrence Family Health Center
- Metrowest Medical Center
- Milford-Whitinsville Regional Hospital
- Noble Hospital
- South County Pediatrics
- St. Elizabeth's Hospital
- St. Vincent Hospital at Worcester Medical Center
- Tri-River Family Health Center
- Westboro State Hospital
- Worcester State Hospital

EDUCATION

- Number of Faculty**
- Full-time **732**
- Part-time **78**
- School of Medicine**
- MD students **397**
- MD/PhD students **16**
- Alumni **2,420**
- Residents & fellows **541** in UMMS programs
- Graduate School of Biomedical Sciences**
- PhD students **187**
- MD/PhD students **16**
- PhD Biomedical Engineering/Medical Physics *(a joint program with WPI)* **6**
- Alumni **183**
- Graduate School of Nursing**
- MS students **39**
- Post master's students **6**
- PhD students **12**
- Part-time students **68**
- Alumni **472**
- Continuing Medical Education Certificates** **18,750**
- Allied Health Program students** **537**

# The Year in Philanthropy



## The Campaign for Research

'AWE-INSPIRING' GIFT ECLIPSES ALL PREVIOUS INDIVIDUAL DONATIONS

In a surprise announcement made at the October 2001 dinner celebrating the dedication of UMass Medical School's research laboratory building, Jack and Shelley Blais pledged an additional \$15 million to the Campaign for Research, so that, in Mr. Blais' words, "this beautiful building can have a name—in honor of Dr. Aaron Lazare."

Earlier in the year, the couple matched the pledge of \$5 million to UMMS made by the Massachusetts AFL-CIO for cancer research facilities. On October 23 at Worcester's Centrum Centre, where more than 500 faculty, staff, researchers and friends of UMMS had gathered to celebrate the completion of the research laboratory building, Mr. Blais asked to say a few words: "My wife Shelley and I have been so impressed with the accomplishments at UMass Medical School under the leadership of Aaron Lazare, but we thought the only thing 'wrong' with the beautiful new research building was that it didn't have a name. We want this building to have a name: the Aaron Lazare Medical Research Building. I think we all agree that his is the only name that should be on that building."

On October 19, at a special Convocation honoring Dr. Lazare's 10th anniversary as chancellor of UMMS, the Blaises announced a surprise \$1 million gift to the institution in honor of Lazare. Overall, the Blaises' generosity amounts to \$21 million, the largest gift from an individual in the history of the University of Massachusetts.

"Jack and Shelley Blais are perhaps the most remarkable people I have ever met," said the chancellor. "They have over the past year embraced the Medical School community and deeply involved themselves in the future direction of this campus. Their generosity and their dedication to our mission of curing disease through medical research will have an impact for generations to come. These are unforgettable events in the history of the University of Massachusetts." *(continues)*



Chancellor and Dean Aaron Lazare (left) and UMass President William Bulger (right) hold the ribbon as Nancy Edman Feldman, Jack and Shelley Blais and Mass. AFL-CIO President Robert Haynes officially dedicate the new research building.





(FAR LEFT)  
Jack Blais presents a \$1 million check to Chancellor and Dean Aaron Lazare for the Discretionary Fund.

(CENTER)  
Dedication ceremonies for the new research building

(RIGHT)  
The Yamins with Vice Chancellor Tom Manning and Chancellor and Dean Lazare

## JACK AND SHELLEY BLAIS (CONT'D)

The Blais were initially introduced to UMMS by Anna Pierce, who has worked to raise funds to support cancer research at the institution since her daughter Ali's death from liver cancer. It was the courageous story of Ali and her father, John, which originally drew the Blais to support research at UMass Medical School. Ali, a high school freshman, succumbed to cancer in 1996; her father died of a heart attack less than a year later while training for a marathon he was planning to run in order to raise money for the endowment fund created in her memory.

The announcement of the Blais' latest gift came on an October evening that focused on UMMS' research goals as well as its achievements. The new \$100 million research laboratory building was dedicated on October 19. The 360,000-square-foot glass and steel structure, which now anchors the 67-acre campus, will accelerate the growth of UMMS' research endeavors and secure Worcester's place as the center of biomedical advances in the region.

Mr. Blais described the couple's motivation and commitment to UMass Medical School during a packed press conference at the Governor's Office in Boston on October 24. University of Massachusetts President William Bulger and Acting Governor Jane Swift, together with UMass Board of Trustees Chair Grace Fey, Trustee Karl White and Chancellor and Dean Aaron Lazare, lauded their generosity. "The Blais family is making a gift to the University of Massachusetts, but is, in a larger sense, giving the gift of life to present and future generations," said President Bulger, adding: "UMass Medical School is one of the greatest medical schools in the country, so much so that it merits the confidence of someone like Jack Blais."

A mechanical engineer who built his fortune by turning concepts into reality, Mr. Blais pledged his first gift in December 2000 to help the Medical School raise the \$5 million needed to construct, outfit and recruit researchers to new laboratories for Peter E. Newburger, MD, professor of pediatrics and molecular genetics & microbiology, who oversaw Ali Pierce's treatment. But instead of simply encouraging friends and colleagues to contribute, Mr. Blais continued to build on his own momentum: soon after writing the first check, he increased his commitment to \$3 million. At the kick-off event for the Campaign for Research in May, he made an additional \$2 million surprise gift, saying, "The more I see of UMass Medical School, the more impressed I am—and the more I want to do to help."

*Jack and Shelley Blais provided a week to remember in October 2001 for the UMass Medical School and UMass Memorial Health Care communities. On October 23, the couple pledged \$15 million to name the Medical School's new research laboratory building after Chancellor and Dean Aaron Lazare. This followed a \$1 million donation by Mr. Blais to the Chancellor's Discretionary Fund at Convocation exercises on Oct. 19. The dedication of the John H. Pierce Pediatric Cancer Research Laboratories in the research building followed on October 25—the Blais contributed \$2.5 million toward construction and outfitting of the laboratories named for John Pierce, who died of heart failure while running to raise funds to benefit children with cancer. This contribution complemented a previous \$500,000 gift by the couple to the Ali Pierce Endowment Fund, named for John's daughter Ali, who succumbed to liver cancer. Also on October 25, the UMass Memorial Children's Medical Center celebrated the dedication of Shelley's Place, the pediatric care unit playroom at the University Campus of UMass Memorial Medical Center that bears Mrs. Blais' name. The Blais began their overwhelming philanthropic odyssey in the latter part of the year 2000, with their initial gift to the Campaign for Research. The rest, as they say, is history.*

## PARENTS GIVE TO CAMPAIGN FOR RESEARCH

In 1970, the year UMass Medical School opened, Dr. Joseph Yamin was a student at Worcester's Assumption College. Several of his classmates at the time were considering applying to the new institution—"we knew it would be a prize to get in," noted Dr. Yamin. Though he went on to dental school, the Leominster orthodontist has monitored the momentum of excellence at the Medical School over the decades, exemplified by the recent opening of the research laboratory building. He and wife Maureen knew they wanted to be, in their words, "part of something bigger than ourselves," and provided a major gift to the Campaign for Research, the successful UMMS initiative that has helped fund construction of the facility and the recruitment of scientists—from premier universities and institutes nationwide—who are revolutionizing their fields.

"UMass Medical School's reputation has grown incredibly in a short time," described Dr. Yamin. "This reputation is enhanced throughout the state and nation with the new building and the exceptional scientists conducting research here. We had a desire to give back to an institution that will continue to benefit the local community, the country, the world."

Research is just the latest area at UMMS in which the Yamins have become keenly interested in recent years. Their son Jay is a third-year medical student here. As Dr. Yamin explained, "Jay studied political science and economics as an undergraduate, but realized his calling

was medicine. This was something he truly wanted, and UMass Medical School recognized his dedication and his gifts. We are so pleased he is studying here.

"There is a palpable enthusiasm that permeates the entire Medical School community," Dr. Yamin continued, "and we believe it is reflective of [Chancellor and Dean] Aaron Lazare's leadership. The professors are mentors and role models; they have zeal for providing a quality education and for their students' success. Jay takes pride in being part of a student body typified by outstanding character, dedication and collaborative studying, which strengthen the bonds among students. What the Medical School provides for the education of its students and the health of the community in no way takes a second seat to institutions in Boston."

The Yamins' own enthusiasm for all UMMS offers was clearly in evidence during a tour of the research building in December, their first glimpse at the state-of-the-art facility they helped support. "We were very impressed with the fact that, from concept to completion, the research building only took two years to complete. Yet, not a single item was overlooked in the planning of this building, which guarantees its unique status now and into the future."



The UMass Memorial Foundation Board of Directors bid farewell to outgoing chairman M Howard Jacobson at a dinner in May 2001. The inaugural chairman was thanked for his dedicated guidance during the first two years of the Foundation's existence. His wife Frances and daughter Joanne are pictured with Mr. Jacobson and the ceremonial chair he received as a token of appreciation.



Sen. Ted Kennedy and his wife Victoria Reggie (left) join Blue Cross Blue Shield's Al Haynes—brother of Mass. AFL-CIO President Bob Haynes—AJ Kirwin and Carolyn Howard at the Walk to Cure Cancer.

### BLUE CROSS BLUE SHIELD PAYS TRIBUTE TO WORKING FAMILIES

In recognition of the working people of Massachusetts and their commendable dedication to one another as demonstrated by the Massachusetts AFL-CIO's impressive participation in the 2001 Walk to Cure Cancer, Blue Cross Blue Shield of Massachusetts was compelled to match that commitment with its own contribution to the third annual event. As presenting sponsor, the region's leading health insurer has pledged \$150,000 over three years to support cancer research at UMMS through the Walk to Cure Cancer.

According to Fredi Shonkoff, senior vice president of Corporate Relations for the company, it was the unique collaboration between UMMS, an institution committed to improving the health of the citizens of the commonwealth, and the Massachusetts AFL-CIO, an organization dedicated to improving the welfare of working families, that inspired the pledge. "We were thrilled to pay tribute to the working families of the Massachusetts AFL-CIO through our partnership with the Walk to Cure Cancer," she explained.

Blue Cross Blue Shield of Massachusetts has a longstanding legacy of community giving. Since its founding 64 years ago by a group of community-minded business leaders, the company has consistently

contributed to a host of charitable organizations and has been involved in a number of community partnerships aimed at bringing new ideas and energy to address health-related and social issues to cities and towns across the commonwealth. In a modern expression of that commitment, in February 2001 the company launched the Blue Cross Blue Shield of Massachusetts Foundation with an endowment of \$55 million over the next four years. The Foundation's mission is to expand access to health care, and in December 2001 awarded grants of \$10,000 to \$75,000 to 47 organizations to spark innovation and strengthen services and policy initiatives for uninsured and low-income individuals and families in Massachusetts.

Year after year, the Walk to Cure Cancer adds a chapter to its story of success, with more than 6,500 walkers in 2001 donating their time and energy to raise approximately \$700,000 for cancer research. The Labor Day event continues to draw the enthusiastic participation of individuals and companies from across Central Massachusetts, providing an inspiring demonstration of the community's commitment to finding the cure.

*For more about participation in the 2002 Walk to Cure Cancer, contact Cathy LaRocca at 508-856-5520, or visit [www.walktocurecancer.com](http://www.walktocurecancer.com).*



Thomas McCullough

### MCCULLOUGH JOINS UMMF

Exemplifying the UMass Memorial Foundation's commitment to increase and diversify its fund-raising efforts in support of charitable giving to UMass Medical School, Thomas P. McCullough was appointed Director of Corporate and Annual Giving in 2001, serving in the UMMS Office of Development, which facilitates the foundation's mission.

A graduate of the Boston University College of Communications, McCullough began his nonprofit career working in public relations for Boston University Medical Center. After a position as public relations manager at St. Mary's Medical Center in Long Beach, California, McCullough returned to Massachusetts, where he was public information manager and then director of Annual Giving and Development Operations at the Joslin Diabetes Center, responsible for the administration of its \$3.5 million Annual Giving Program. He most recently served as deputy director of the Department of Economic Development for the Commonwealth of Massachusetts, the principal liaison between various

trade councils and the state. His varied roles have put him in direct and constant contact with business leaders throughout Massachusetts and New England.

As director of Corporate and Annual Giving, McCullough is responsible for the strategic development and implementation of all efforts related to corporate and annual giving, including identifying prospective corporate partners and cultivating individual and foundation support for an annual fund. "The programs and services of this institution are extremely impressive by any standards," McCullough said. "My overriding goal is to help individuals and corporate leaders in our community understand and support the contribution we make in all of the arenas we touch—from world-class patient care and research to regional economic impact."

### THE MISSION OF THE UMASS MEMORIAL FOUNDATION

The UMass Memorial Foundation accepts donations on behalf of the University of Massachusetts Medical School and UMass Memorial Health Care. Through the careful and responsible stewardship of these funds, the Foundation is dedicated to forming vital partnerships between contributors and medical professionals, in order to improve the health and well-being of our communities and world through advancements in research, innovations in patient care and the education of tomorrow's medical professionals.

### PLAN A GIFT

Gifts, bequests and trusts are important sources of support for the University of Massachusetts Medical School and UMass Memorial Health Care. Such gifts provide funding for a wide range of programs, including those that expand treatment options for patients, increase the scope of pioneering biomedical research, and strengthen educational programs for physicians, nurses and scientists.

Gifts can be made in cash, securities or other property and can take many forms: outright gifts, pledges, bequests or various life income arrangements. Contributors may designate their gifts to be used for specific purposes or make unrestricted gifts providing greater flexibility for planning and administering programs in patient care, education and research.

Providing for the Medical School or UMass Memorial Health Care in your estate plan is a significant statement about your commitment to the health and well-being of future generations. We are pleased to provide the following sample bequest language:

"I give, devise and bequeath to the UMass Memorial Foundation, a non-profit organization located in Worcester, Massachusetts, the sum of \$\_\_\_\_\_ [or description of property] to be used for its general purposes [or a specific purpose]."

The Foundation provides information about specific programs and activities, and staff is available to consult with benefactors and their advisors about various gift ideas. For further information, please contact:

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# The Last Word:

**“The Graduate School of Nursing will be a center of excellence for the preparation of clinicians, educators, leaders and scientists where research, practice and service are the keystones of education for the commonwealth and beyond.”**

In the fall of 2000, the Graduate School of Nursing re-articulated its vision in response to the rapidly changing health care environment and the critical nursing workforce shortage. One year later, I am delighted to report that we are on a roll.

New students are coming into our programs with ever-higher Graduate Record Exam scores. One hundred percent of our 2001 Master's Program graduates passed their nurse practitioner certification exams. Enrollment in the Worcester PhD in Nursing program is up 66 percent. In 2001, the Collaborative PhD Program graduated its largest cohort yet, granting eight PhDs. These gains are especially gratifying against the backdrop of declining nursing school rosters nationwide.

Reflecting our increased focus on research, 85 percent of our second-year doctoral students received grant funding for their dissertation research and seven students were invited to make national presentations. Amongst faculty, invitations to make peer-reviewed presentations, internationally as well as nationally, are up 66 percent; peer-reviewed publications are up 40 percent; grant submissions are up 50 percent, and grants awarded increased threefold, raising contract and project funding from \$1.1 million to \$1.7 million.

But while such impressive numbers can, to some extent, speak for themselves, I am most proud of the people behind them. I believe that, in particular, our growth in scholarly research and ever-expanding web of community outreach initiatives say the most about the dedication and enthusiasm that distinguish our faculty and students and, indeed, the entire Worcester campus.

To support and grow grant-funded, peer-reviewed research, the GSN has recruited Carol Bova, CNP, PhD, a nursing research scientist who will be instrumental in forwarding our research agenda. Recognizing that no one campus can have expertise in every area, we are teaming each faculty member with an expert nursing research mentor from another institution. To cite just one stellar example, we are pleased to welcome to our extended academic family Arlene Butts, ScD, CPNP, RN, who will join us as a visiting professor this spring. She is a Johns Hopkins University researcher who, with four currently funded RO1 grants, is one of the most highly NIH-funded nurse scientists in the country.

Thanks to substantial funding from Worcester's Fairlawn Foundation, we have been able to establish the Worcester Nursing Pipeline Collaborative to increase nursing student enrollments and advance career paths for nurses in the region. It also establishes a scholarship fund that will enable us, for the first time ever, to offer financial support to nursing scholars so that they can provide nursing leadership right here in Worcester.

Of course, we couldn't do it without the unwavering support of administrators and fundraisers. UMass Worcester has always embraced its nurses. In all my travels to nursing schools at academic health centers across the country, I have never seen more true collaboration, partnership and sharing of resources

than on this campus. Today the GSN is more “in synch” than ever with the enhanced research mission of our institution and its commitment to advanced nursing practice as an integral component of its educational mission. GSN faculty members are proactive in their roles as leaders in education and

By Dean Doreen Harper, PhD, CS, ANP, FAAN



care. We are inviting people from our institution and the community to come to the table instead of waiting to be invited. In collaboration with our colleagues in the School of Medicine and Graduate School of Biomedical Sciences, the GSN looks forward to developing the unlimited opportunities for interdisciplinary education and research that will fulfill our shared goal: to provide the best possible health care for the people of the commonwealth.

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*Pictured here and on cover: The central staircase in the new research laboratory building*

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