News of the University of Massachusetts Medical School

focus

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Kiefe appointed chair of Quantitative Health Sciences

Catarina I. Kiefe, PhD, MD, a highly regarded scientist in the fields of health care quality measurement and outcomes research, has been recruited as chair of the newly created Department of Quantitative Health Sciences (QHS). Dr. Kiefe comes to UMMS from the University of Alabama at Birmingham School of Medicine, where she was professor of medicine and biostatistics, director of the Division of Preventive Medicine and founding director of the Center for Outcomes and Effectiveness Research.

"One of our strategies as a world-class academic health sciences center is to design the health care system of the future," said Chancellor Michael F. Collins. "Having the expertise here on campus to analyze our own effectiveness in linking research with improved care delivery is crucial to our ability to progress and make a positive impact in Central Massachusetts and across the state and region."

A cornerstone of the institution's strategic investment in clinical and translational research, the newly formed Department of Quantitative Health Sciences will play an integral role in the University of Massachusetts' five-campus Center for Clinical and Translational Science (CCTS). In addition to developing its own population health-oriented research programs, the new department will serve a key function in providing methodological support and medical informatics expertise to collaborative projects.

A clinical epidemiologist and internist who has published extensively in the fields of health care quality measurement and outcomes research, Kiefe earned her doctorate in mathematics from the State University of New York at Stony Brook, her medical degree from the University of California, San Francisco, and completed residency training in internal medicine at the University of Minnesota Hospitals. Currently, she is a member of the American Heart Association's Council on Epidemiology and has served on multiple NIH and VA scientific advisory and review panels. Kiefe is co-editor in chief of *Medical Care*, a leading scientific journal in health services research. Her primary research interests are in health disparities and measuring and improving health care.

"I am excited to be joining UMass Medical School, a dynamic and collaborative institution on a steep upward trajectory," said Kiefe. "I am particularly energized by the unique role QHS will have in linking the innovative research UMass Medical School is known for with comprehensive, state-of-the-art clinical care. I look forward to working with the school's unique resources to build a new model for the interaction between quantitative reasoning and the improvement of health care." ■

Catarina Kiefe, PhD, MD

> **"I am excited to be joining UMass Medical School,** a dynamic and collaborative institution on a steep upward trajectory."
>
> Catarina Kiefe

UMMS researchers isolate gene mutations in patients with inherited ALS

Researchers at UMass Medical School have discovered a new gene whose mutations cause familial amyotrophic lateral sclerosis (ALS), a fatal neurological disorder. Discovery of the *FUS/TLS* gene mutation, which accounts for about five percent of inherited ALS cases, is described in the February 27, 2009, issue of *Science*. "This discovery discloses new types of molecular defects that kill motor neurons and at the same time implicates defective pathways previously identified in other genetic forms of ALS," said senior study investigator Robert H. Brown Jr., MD, DPhil, chair and professor of neurology. "Understanding the mechanisms that trigger motor neuron death leads to new cellular models of ALS and ultimately accelerates the search for a treatment for this devastating disease."

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, death from respiratory failure. The cause of most cases of ALS is not known. Approximately 10 percent of cases are inherited. In 1993, a team of researchers led by Dr. Brown discovered the first gene linked to familial ALS, a protein antioxidant known as superoxide dismutase, or *SOD1*.

The current *Science* study details the discovery of the *FUS/TLS* gene mutation among four members of a family from a small Cape Verde island. The familial relationship between the patients' grandparents suggested that the disorder was a result of a recessive gene inherited from both parents. Study of several candidate genes on chromosome 16, which has been linked to ALS in previous studies, revealed a single mutation in the *FUS/TLS* gene on both copies of chromosome 16 in the affected family members. Three asymptomatic family members from the Cape Verde family also had two mutated copies of *FUS/TLS* but had not reached the age of ALS onset. Several unaffected family members had just a single copy of the *FUS/TLS* mutation, and no mutations were found in a control group of nearly 1,500 North American individuals.

Robert Brown Jr., MD, DPhil

While it is not certain how the mutation of the *FUS/TLS* gene causes ALS, the cellular functions it controls within the motor neurons are remarkably similar to those found in other gene mutations known to cause ALS. Lucie Bruijn, PhD, senior vice president of research and development for the ALS Association, said, "These findings will open up a completely new avenue of investigation with the potential of developing more promising therapies for ALS." ■

What's Inside

March 2009

Get in *Focus*

Have a story idea, a faculty, student or staff achievement, or a campus-wide event for the calendar? Send it to the *Focus* editor at *focus@umassmed.edu*

Raising TB awareness

On Thursday, March 12, UMass Medical School, in partnership with Eagle Peak Media and WSBE Rhode Island PBS, will present a program focused on increasing understanding of tuberculosis (TB). Most people not working in health care believe TB is a disease of the past, particularly in the United States, but it remains one of the three leading causes of infectious disease and death worldwide.

The centerpiece of the afternoon's activities is a 1:40 p.m. screening of "On the Lake: Life and Love in a Distant Place," the acclaimed feature-length documentary about the tuberculosis epidemic in America in the 1900s and globally today. The film premiered last month in Woonsocket and will be shown on PBS later this month. A Q&A with the filmmakers, G. Wayne Miller and David Bettencourt of Eagle Peak Media, immediately follows.

Most people not working in health care believe TB is a disease of the past, particularly in the United States, but it remains one of the three leading causes of infectious disease and death worldwide.

They hope that the film will drive those in the scientific and health care communities, particularly those in the early stages of their careers, to aggressively fight the epidemic.

Set against the backdrop of the Zambarano State Hospital on Wallum Lake in Rhode Island, "On the Lake" illuminates the impact of TB on patients at Zambarano as well as at other sanatoriums throughout the United States.

Other highlights of TB Awareness Day include *Community-Based Approaches to the Global TB Crisis*, presented by Jennifer Furin, MD, of Harvard Medical School's Department of Global Health and Social Medicine at 1:10 p.m. Dr. Furin is an anthropologist and infectious diseases specialist who is the director of a program in Lesotho, Africa, that has treated thousands for HIV and TB. At 3:20 p.m., UMMS Professor of Medicine Jennifer S. Daly, MD, will present, *Tuberculosis: Massachusetts Epidemiology and Treatment, Now and Then*. Dr. Daly is director of the Gethchell Ward TB Clinic at the Worcester Family Health Center. Finally, UMMS students, Ali Irshad, Rashad Hardaway and Alexander Tucker will present *Treatment and Management of Tuberculosis at the Lemuel Shattuck Hospital* at 3:50 p.m.

The event is co-sponsored by Lamar Soutter Library. For the day's agenda, visit *library.umassmed.edu/whatsnew.cfm*. For more information about the movie and its filmmakers, visit *www.onthelakemovie.com*.

Courtesy of Eagle Peak Media

Set against the backdrop of the Zambarano State Hospital on Wallum Lake in Rhode Island, "On the Lake" illuminates the impact of TB on patients at Zambarano as well as at other sanatoriums throughout the United States.

We are tobacco free

It has been almost a year since the tobacco free policy was implemented for the UMass Medical School (including South Street) and UMass Memorial Medical Center campuses. The policy was adopted because, as a health care leader, we are committed to creating a healthy and safe environment for all who come to our campuses—smoking and use of tobacco is a leading preventable cause of death and disease in the United States. The policy prohibits smoking and the use of tobacco products of any kind in or on any UMMS property, whether owned, leased or assigned, inclusive of buildings, garages, grounds or other spaces. Smoking is also prohibited on adjacent grounds and properties.

The policy was widely embraced by non-smokers and smokers (many of whom have quit), and for the most part, compliance has been widespread. Many members of the UMMS and UMass Memorial community have helped others understand and comply with the policy.

As with most endeavors that require changes in behavior, the policy has met with some resistance among smokers who are unwilling or unable to change their tobacco habits. Some individuals continue to smoke on or near campus and are in clear violation of the spirit and the letter of the policy. As a result of these continued violations, enforcement activities will be stepped up and employees found using tobacco products on campus will be subject to progressive discipline as the policy provides.

Implementing the tobacco free policy was a tremendous undertaking that has resulted in health improvements among patients, visitors and members of the UMMS-UMass Memorial community. Smokers who would like assistance with quitting should call the Employee Assistance Program at 508-856-1327.

achievements

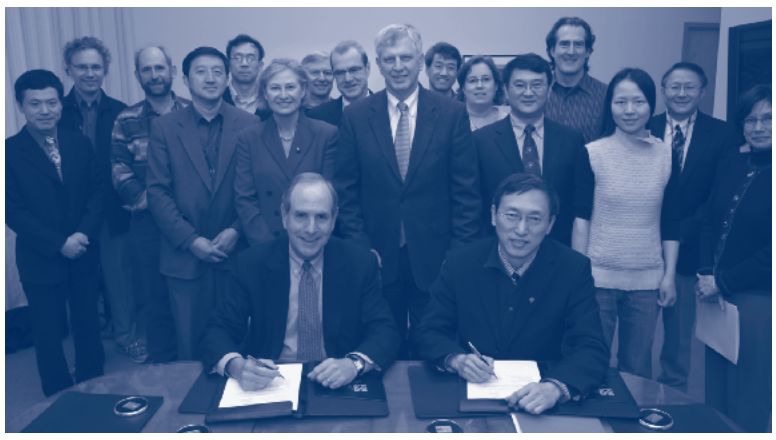
William C. Okulicz, PhD, associate professor of physiology, recently served as a reviewer on the National Institutes of Health Review Panel for the Specialized Cooperative Centers Program in Reproduction and Fertility, which rates the scientific merit of each of the projects within the center's applications as well as the overall merit of each center in order to establish priorities for funding by the NIH.

Hugh Silk, MD, assistant professor of family medicine & community health, has been invited to be a member of the Interim Design Advisory Committee for the Better Oral Health for Massachusetts Coalition. The committee, comprising state oral health leaders from dentistry, pediatrics, MassHealth, Health Care for All, the Oral Health Foundation and others, is charged with developing a state plan for oral health promotion.

Following are faculty who have joined UMMS as professors or associate professors or who have been promoted to those ranks, as reported by the Office of Faculty Affairs:

William Corbett, MD, promoted to clinical associate professor of medicine
Anthony Imbalzano, PhD, promoted to professor of cell biology
Michael Mitchell, MD, promoted to clinical associate professor of pathology
Paul Odgren, PhD, promoted to research associate professor of cell biology
Kelly Smith, PhD, promoted to research associate professor of cell biology
Eva Szomolanyi-Tsuda, MD, promoted to associate professor of pathology

UMMS partners with Tongji University



UMass Medical School and Tongji University School of Medicine (TUSM) in China signed a Memorandum of Understanding last month that will foster the establishment of educational exchange programs and promote development of joint studies, research and training. The goal of the partnership is to create a framework for academic and clinical exchanges involving faculty, post-doctoral fellows, students and clinicians. Representing each institution at the ceremonial signing that took place on the Worcester campus were UMass President Jack M. Wilson, UMMS Chancellor Michael F. Collins and TUSM President Gang Pei, as well as members of both institutions who will serve as liaisons on the UMMS-TUSM Collaboration Coordination Committee.

UMMS partners with Special Olympics for Healthy Athletes

When UMass Medical School Chancellor Michael F. Collins was approached last year by Special Olympics of Massachusetts (SOMA) President and CEO Robert Johnson about forming a partnership, he agreed immediately, understanding that such a partnership could be invaluable to improving the lives of individuals with intellectual disabilities. In December, the Medical School and SOMA signed an Affiliation Agreement outlining several opportunities for collaboration between the two organizations, all centered on the Special Olympics Healthy Athletes Initiative to improve health care access and quality for individuals with intellectual disabilities. "We are transforming ourselves from a sports organization into a health organization," explained Johnson.

Through the affiliation UMMS will support the initiative goal of improving the health of Special Olympics athletes by conducting screenings at competitions and other health-related events; making referrals to local health practitioners when needed; training students, health care professionals and others about the needs and care of people with intellectual disabilities; conducting research on their health status and needs; and advocating for improved health policies and programs. In turn, UMMS participants will learn about the health needs of Special Olympics athletes while reaching out to an underserved population.

Underscoring the importance of the partnership to the institution, the chancellor charged Commonwealth Medicine with establishing a team to develop a Healthy Athletes action plan. Projects include developing SOMA Health Promotion Teams to address issues such as nutrition, sun safety and tobacco cessation. Classes taught by UMMS faculty for health care professionals who treat or interact with patients with intellectual disabilities are slated to begin this year at the new SOMA headquarters under construction in Marlborough, with supplementary online training modules planned for 2010. And the SOMA Winter Games, held in and around Worcester on Feb. 29 and March 1, provided a kickoff volunteer opportunity, with more than 200 UMMS employees participating.

The agreement also specifies that at least one seat on the SOMA honorary board be held by a UMMS representative. Arthur Pappas, MD, professor of orthopedics & physical rehabilitation and pediatrics and former chair of the Department of Orthopedics & Physical Rehabilitation, is the first incumbent. A pioneer in the field of sports medicine focusing on the orthopedic care of handicapped children and professional and amateur athletes, Dr. Pappas was a founder of the Massachusetts Hospital School for severely handicapped children.

Commonwealth Medicine's Eunice K. Shriver Center, which has long been associated with Special Olympics, will provide an exceptionally valuable perspective as the expanded partnership grows. "The Shriver Center is a key resource within UMMS for developing training materials and distance learning programs on behalf of the intellectually disabled," noted James Gleason, PT, MS, associate director for The Shriver University Center for Excellence in Developmental Disabilities, which has extensive experience developing educational programs for medical and allied health professionals in the field. Gleason also serves Special Olympics as education and research coordinator for FUNFitness, the physical therapy component of Healthy Athletes screenings.

"Whether through education, research or direct clinical care, UMass Medical School is uniquely positioned to assist SOMA in fulfilling its goals, while at the same time advancing the missions of the University and the Medical School," said Joyce A. Murphy, MPA, vice chancellor and chief operating officer for Commonwealth Medicine. To learn more about Special Olympics of Massachusetts and the Healthy Athletes initiative, visit *www.specialolympicsma.org* and *www.specialolympics.org/healthy_athletes.*

Courtesy of Special Olympics of Massachusetts

The affiliation agreement outlines opportunities for collaboration between UMMS and Special Olympics of Massachusetts to improve health care access and quality for individuals with intellectual disabilities.

> **"We are transforming ourselves from** a sports organization into a health organization."
> Robert Johnson, President and CEO
> Special Olympics of Massachusetts

employees infocus

March *Employee of Distinction Award*

Vitals

Nina Bhabhalia
Research Associate
Program in Gene Function and Expression
Year started: 2003
Hometown: Boylston

Professionally Speaking

Keeping refrigerators running, centrifuges spinning and shelves stocked with fresh batches of re-agents ready to grow the next tissue culture may sound routine, but these activities are essential to keeping the scientific investigations in the Program for Gene Function and Expression (PGFE) running and are among the accomplishments for which Research Associate Nina Bhabhalia has been named March Employee of Distinction. "Because of her continuous effort to maintain our laboratory environment in the best condition, we can focus on our research," wrote Fumihiko Urano, MD, PhD, associate professor in PGFE.

Having taken years away from laboratory work to raise her family after earning a microbiology degree, Bhabhalia oversees the PGFE laboratory with the same practicality and organization it takes to run a home. Her nominators praised Bhadhalia for going above and beyond the call of duty, but from her perspective, ensuring that everyone has what they need when they need it is simply part of her responsibilities. Bhabhalia is happy to make herself available, whether for regularly scheduled activities or in response to special requests. "I see the dedication of the scientists and the students and am inspired to be a part of the bigger mission," she said.

Points of Pride

Bhabhalia facilitates maintenance of the PGFE equipment through her strong relationships with vendors and suppliers, especially the Medical School's Facilities and Environmental & Building Services departments. "We get a lot of in-house support with moves, installations and repairs," she said.

She manages the PGFE budget like she manages the lab, negotiating prices and researching new vendors to get the most purchasing power from grant dollars. Noting that the PGFE is an internationally diverse group, and having herself come to the United States from India as a young woman, Bhabhalia reflected, "It helps to share experiences we had when we first came to this country."

Calendar

information infocus

COMECC Means Community

2008 campaign update

Once again, UMass Medical School employees demonstrated their support and concern for the neediest members of our community by donating generously to the 2008 Commonwealth of Massachusetts Employees Charitable Campaign (COMECC).

The results of your goodwill? Approximately $350,000 contributed as of February 4 and employee participation at its highest rate ever—46 percent. In fact, 27 individual departments had participation rates of 80 percent or higher, which was an increase from last year. Also notable is the amount the School of Medicine student auction raised—nearly $10,000. The donation will be shared by the Make-A-Wish Foundation and the Worcester Youth Center, a United Way-funded program.

To those who were able to donate, your participation in COMECC—particularly in the midst of challenging economic times—truly exemplifies your commitment to advancing the health and well-being of our community.

On the move

The Financial Aid and Registrar's offices will be moving from their current location near the Credit Union to the corridor where GSN, GSBS and Office of Research are located. In order to facilitate the move, the offices will be closed on March 12, 13, 16 and 17.

■ The Lamar Soutter Library, in collaboration with the Diversity and Equal Opportunity Office, is hosting the National Library of Medicine's traveling exhibit *Opening Doors*, which chronicles the history of African-American surgeons. The exhibit will be on display from Sunday, Feb. 1, through Friday, March 27, in the library.

■ On Thursday, March 12, UMMS, in partnership with Eagle Peak Media and WSBE Rhode Island PBS, will present a program focused on increasing understanding and awareness of TB. Taking place in the Faculty Conference Room from 1 to 4 p.m., the event features an advanced screening of the documentary *On the Lake: Life and Love in a Distant Place* and a Q&A with the filmmakers, as well as presentations by TB experts. For details, please see the related article on page 2.

■ The tenth annual Primary Care Days Conference will be held Thursday, March 12, and Friday, March 13, at the Doubletree Hotel in Westborough. The conference is designed for physicians, physician assistants, nurse practitioners and physicians-in-training specializing in general medicine, family medicine, pediatrics, geriatrics and ob-gyn. For details about the conference or to register, visit *www.umassmed.edu/primarycaredays*. Sponsored by the UMass Memorial Department of Medicine & Community Health; Department of Medicine Division of General Internal Medicine; Boston University and the UMMS Office of Continuing Medical Education.

■ The Lamar Soutter Library's Artist in Residence Series presents *Perspectives*, featuring the artwork of UMass Worcester students. The show is on display on the first floor of the library from Monday, March 2, through Friday, April 10, with an opening reception on Monday, March 9, at 5 p.m. For more information contact Cindy Lai via global e-mail.

■ The Seven Hills Symphony will hold their spring concert on Sunday, March 8, at 5 p.m. The concert at the First Unitarian Church in Worcester will feature performances by the young musicians who won the Concerto Competition that Seven Hills sponsored last fall. For more information, contact Joanna Chaurette via global e-mail or visit *www.shsymphony.org*.

■ Save the date! The third annual Commonwealth Medicine Academic Research Conference, *Transforming Health Care: The Impact of Translational Research*, will be held Thursday, April 16, at the Doubletree Boston/Westborough Hotel. The conference will feature a keynote presentation by John Saultz, MD, assistant dean of the School of Medicine, Oregon Health and Science University, and a special roundtable discussion on Massachusetts legislative initiatives, chaired by Chancellor Michael F. Collins. Continuing education credits will be offered. For more information, visit *inside.umassmed.edu/commed/CHPR/Academic_Conference*.

■ Team leaders and walkers needed! The American Heart Association 2009 Central Mass Heart Walk is scheduled for Saturday, May 2, at East Park in Worcester. Registration begins at 9 a.m., followed by opening ceremonies at 9:30 a.m., with the walk beginning at 10 a.m. There are 1-, 2- and 4-mile walk routes available, all of which are handicap and stroller accessible. If you are interested in becoming a team leader or a walker, send a note to Glady McRell via global e-mail or call her at ext. 6-4400. For more information, visit *www.worcesterheartwalk.org* or call 508-935-3941.

grants infocus

☐ **Harrison G. Ball**, MD, professor of obstetrics & gynecology and radiation oncology: American Geriatrics Society/John A. Hartford Foundation Project, *Geriatrics for Specialists Initiative: Geriatrics Education for Specialty Residents Program*, two years, $40,000

☐ **Daniel N. Bolon**, PhD, assistant professor of biochemistry & molecular pharmacology, National Institute of General Medical Sciences, *Conformational Cycles of Molecular Chaperones*, one year, $309,482; recommended for four more years, $1.2 million

☐ **Marcus P. Cooper**, MD, assistant professor of medicine: National Institute of Diabetes and Digestive and Kidney Disease, *Functional Analysis of PGC1-a Holo-Complex in Diabetes*, one year, $132,570; recommended for one more year, $131,490

☐ **Uri Galili**, PhD, professor of surgery and medicine, National Cancer Institute, *Intratumoral Injection of A-gal Glycolipids in Stage IV Melanoma: Phase I Trial*, one year, $288,380; recommended for one more year, $272,459

☐ **Tripti Gaur**, PhD, instructor in cell biology, National Institute of Arthritis and Musculoskeletal and Skin Diseases, *Wnt Signaling for Improved Fracture Healing*, one year, $81,938; recommended for two more years, $164,438

☐ **Stephen J. Glick**, PhD, research associate professor of radiology, National Cancer Institute, *3D PET Reconstruction Using Generalized Natural Pixels*, one year, $163,750; recommended for one more year, $197,100

☐ **Michael R. Green**, MD, PhD, *Howard Hughes Medical Institute Investigator, the Lambi and Sarah Adams Chair in Genetic Research* and professor of molecular medicine and biochemistry & molecular pharmacology: Damon Runyon Cancer Research Foundation, *Elucidation of Signal Transduction Pathways Controlling Oncogene-induced Senescence and their Protective Roles against Melanoma and Breast Cancer*, three years, $140,000

☐ **John F. Keaney**, MD, professor of medicine and physiology: National Heart, Lung and Blood Institute, *Mitochondrial Biogenesis and Engothelial Cell Phenotype*, one year, $409,375; recommended for three more years, $1.2 million

☐ **Michelle A. Kelliher**, PhD, associate professor of cancer biology and molecular genetics & microbiology: National Institutes of Allergy and Infectious Diseases, *Rip Proteins in Innate Immune Signaling*, one year, $368,344; recommended for four more years, $1,479,844

☐ **Colleen E. McKay**, MA, instructor in psychiatry: American Legacy Foundation, *Incorporating Tobacco Cessation Activities in a Psychosocial Rehabilitation Program*, one year, $99,992

☐ **Joel Richter**, PhD, professor of molecular medicine, National Institute of General Medical Sciences, *Polyadenylation and Translational Control*, one year, $87,135; recommended for one more year, $44,865

☐ **Jie Song**, PhD, assistant professor of orthopedics & physical rehabilitation and cell biology: American Society for Bone and Mineral Research CEA, *A New Therapeutic Strategy Towards the Repair of Hard-to-Heal Skeletal Lesions*, one year, $55,000

☐ **Andrew Tapper**, PhD, assistant professor of psychiatry: National Institute of Alcohol Abuse and Alcoholism, *Neuronal Nicotinic Acetylcholine Receptors and the Response to Alcohol*, one year, $342,619; recommended for four more years, $1.5 million

☐ **Rossella Tupler**, MD, PhD, research assistant professor of molecular medicine: FSHD Global Research Foundation, *Defining the Mechanism Controlling Muscle-specific Gene Expression in FSHD, one year, $120,000*

focus

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