UNIVERSITY of MARYLAND
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DEAN'S MESSAGE: What's On My Mind

"The emergence and continued growth of personalized and preventive medicine in the very near future will catalyze fundamental changes at many different levels in the future of health care and health systems."

What's on my mind this month are our graduates and how exciting it is to enter into the medical, allied health and scientific research enterprise today.

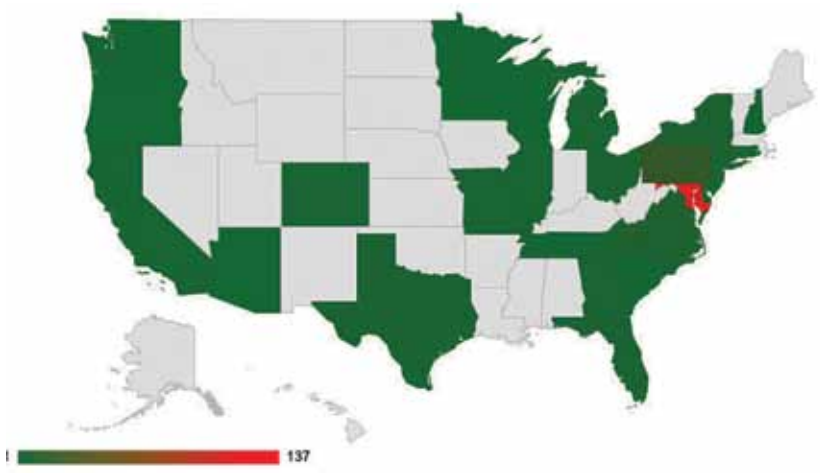
We celebrate commencement this month, the ceremonial passage of student to scholar—for our medical, graduate and allied health students. This is a bittersweet time for all faculty and staff who have spent years training our students and now send these leaders of tomorrow out into the world. As I congratulate all the graduates, I also challenge them to keep long-term a commitment to excellence.

Many of you may have heard me speak before on how I see this time as the **"Second Golden Age" of medicine and science, where the focus will be on improving our understanding of health and human diseases at their most basic levels in order to develop more tailored therapies.** Seize the opportunity that this special period in time offers to heal the whole person—from his or her genes on up.You will soon have at your disposal a great diversity of technologies and options with the potential for making dramatic differences in the health and well-being of people worldwide. However, learning how to apply these innovations is just part of the equation for becoming an effective research investigator and healthcare professional in the 21st Century. The emergence and continued growth of personalized and preventive medicine in the very near future will catalyze fundamental changes at many different levels in the future of health care and health systems.You will be far better served if you anticipate these changes and start preparing yourselves for them now.

For those of you in the medical and allied health fields, **I urge you not to shy away from becoming involved in research but also to embrace such efforts as part and parcel of comprehensive health care delivery.** The new advances in medicine that your fellow students and graduates in research programs are making, such as genomics and stem cell technologies, will need to be applied in the appropriate settings and examined for their efficacy in improving overall wellbeing. As healthcare professionals, you will play an extremely important role in the "translation" of new discoveries into clinical practice. If you cannot contribute directly to research by doing it yourself, I encourage you to advocate for research, generate new ideas for research, familiarize yourself with the research and critique it, and help recruit patients into clinical trials.

To our graduates and current students working in research laboratories, I challenge you to aim high in your search for ways to eliminate diseases and conditions that burden our communities, such as cancer, asthma, diabetes, hypertension, and a host of other chronic conditions. I have no doubt that you will continue to be innovative leaders in your respective fields, and **I am confident in your ability to look at the double-sided coin of health and disease as a puzzle to be solved and not a hurdle that cannot be overcome.** You are incredibly fortunate to be at a point in your careers where you will not only benefit from the progress that has been made in biomedical research in recent years, but to play an active role in bringing the next set of wonderful tools to fruition.

Where our graduates are going—by state



As you know, we are coming out of a terrible economic downturn that is likely to last for a few more years. There is no shortage of "gloom and doomsayers" who will forecast the worst of times in the future and reminisce about the "good old days" while casting aspersions on the times to come. However, I am not one of them. Even though these are difficult times, they also are exciting times. The geneticist and Nobel laureate, Barbara McClintock, once said of her work, *"I was just so interested in what I was doing I could hardly wait to get up in the morning and get at it."* My charge to you is to keep this same passion for your specialties fueled, while maintaining a spirit of cooperation and community responsibility.

In the relentless pursuit of excellence, I am

Sincerely yours,

E. Albert Reece

E. Albert Reece, MD, PhD, MBA
Vice President for Medical Affairs, University of Maryland
John Z. and Akiko K. Bowers Distinguished Professor and
Dean, University of Maryland School of Medicine

Dr. Mark Hyman

University of Maryland School of Medicine
Center for Integrative Medicine
Health & Wellness conference

► BY REBEKAH OWENS

The University of Maryland Center for Integrative Medicine will hold its second annual Health and Wellness Conference on Saturday, May 4, 2013 from 8am–5pm at the Hilton Baltimore on Pratt Street.

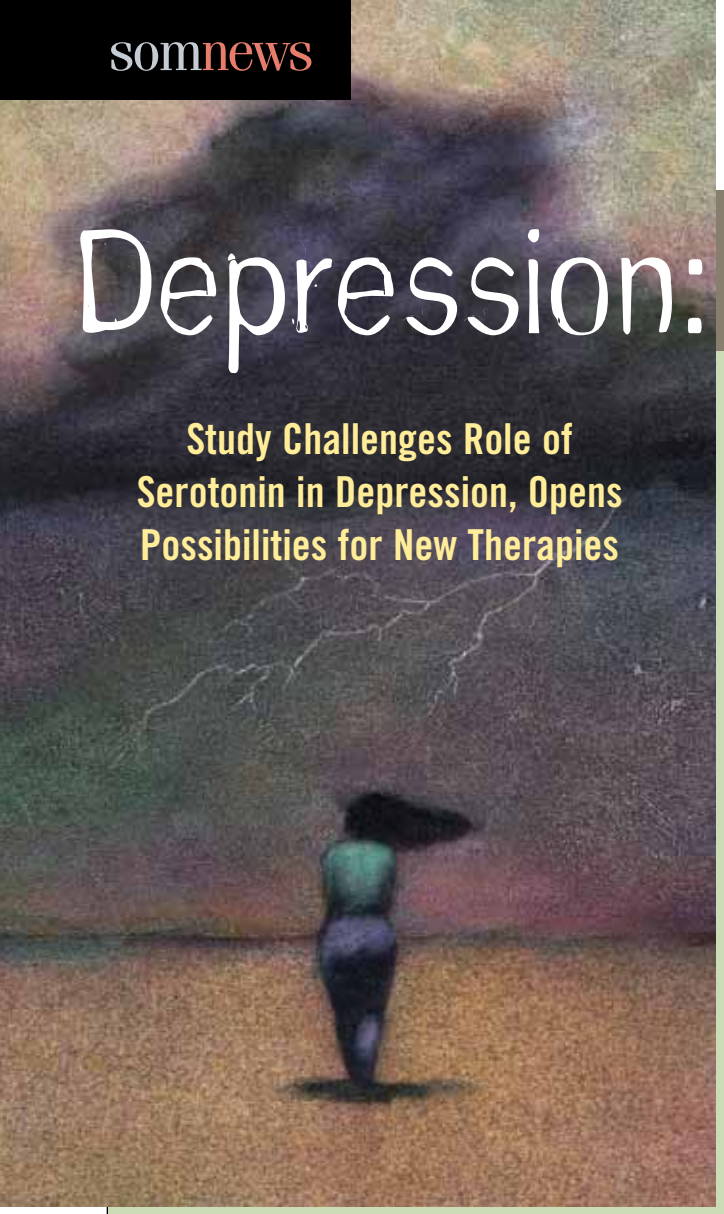
This year's conference keynote will feature wellness advocate and *New York Times* best-selling author, Dr. Mark Hyman, who will speak about "Social Ecosystems and Chronic Disease: Are the Social Threads that Connect Us as Important as the Genetic Threads?"

University of Maryland, Baltimore President Jay Perman, MD, will introduce the lunchtime panel "Changing the Paradigm of Healthcare," which includes the School of Medicine's Thomas Scalea, MD, FACS, FCCM, the Francis X. Kelly Professor of Trauma Surgery and Director of the Program in Trauma. This panel will be moderated by Brian Berman, MD, Professor, Department of Family & Community Medicine and Director, Center for Integrative Medicine.

Throughout the day, University of Maryland faculty and other world-renowned experts will lead a variety of workshops on topics such as integrative pain management; nutrition and supplements; spirituality; stress management; environmental effects on health, and more.

Continuing education credits are available for physicians, nurses, social workers, psychologists, acupuncturists, occupational therapists, chiropractors, and many other health professionals. Anyone interested in health & wellness is invited to attend.

For more details or to register, go to http://tinyurl.com/CIMwell2013 or call 410-706-6181.



Depression: Miscommunication Between Brain Cells

Study Challenges Role of Serotonin in Depression, Opens Possibilities for New Therapies

► BY KAREN ROBINSON

A NEW STUDY from the University of Maryland School of Medicine suggests that depression results from a disturbance in the ability of brain cells to communicate with each other. The study indicates a major shift in our understanding of how depression is caused and how it should be treated. Instead of focusing on the levels of hormone-like chemicals in the brain, such as serotonin, the scientists found that the transmission of excitatory signals between cells becomes abnormal in depression. The research, by senior author Scott M. Thompson, PhD, Professor and Interim Chair, Department of Physiology, was published online in the March 17 issue of *Nature Neuroscience*.

According to the Centers for Disease Control and Prevention, between 2005 and 2008, approximately one in 10 Americans were treated for depression. The most common antidepressant medications, such as Prozac, Zoloft and Celexa, work by preventing brain cells from absorbing serotonin, resulting in an increase in its concentration in the brain. Unfortunately, these medications are effective in only about half of patients. Because elevation of serotonin makes some depressed patients feel better, it has been thought for over 50 years that the cause of depression must therefore be an insufficient level of serotonin. The new University of Maryland study challenges that long-standing explanation.

"Dr. Thompson's groundbreaking research could alter the field of psychiatric medicine, changing how we understand the crippling public health problem of depression and other mental illness," says E. Albert Reece, MD, PhD, MBA, Vice President for Medical Affairs, University of Maryland, and the John Z. and Akiko K. Bowers Distinguished Professor and Dean, University of Maryland School of Medicine. "This is the type of cutting-edge science that we strive toward at the University of Maryland, where discoveries made in the laboratory can impact the clinical practice of medicine."

The first major finding of the study was the discovery that serotonin has a previously unknown ability to strengthen the communication between brain cells. "Like speaking louder to your companion at a noisy cocktail party, serotonin amplifies excitatory interactions in brain regions important for emotional and cognitive function and apparently helps to make sure that crucial conversations between neurons get heard," says Dr. Thompson. "Then we asked, does this action of serotonin play any role in the therapeutic action of drugs like Prozac?"

To understand what might be wrong in the brains of patients with depression and how elevating serotonin might relieve their symptoms, the study team examined the brains of rats and mice that had been repeatedly exposed to various mildly stressful conditions, comparable to the types of psychological stressors that can trigger depression in people. The researchers could tell that their animals became depressed because they lost their preference for things that are normally pleasurable.

The findings suggest that the search for new and better antidepressant compounds should be shifted from drugs that elevate serotonin to drugs that strengthen excitatory connections.

"In the depressed brain, serotonin appears to be trying hard to amplify that cocktail party conversation, but the message still doesn't get through," says Dr. Thompson. Using specially engineered mice created by collaborators at the Johns Hopkins University School of Medicine, the study also revealed that the ability of serotonin to strengthen excitatory connections was required for drugs like antidepressants to work.

Sustained enhancement of communication between brain cells is considered one of the major processes underlying memory and learning. The team's observations that excitatory brain cell function is altered in models of depression could explain why people with depression often have difficulty concentrating, remembering details, or making decisions. Additionally, the findings suggest that the search for new and better antidepressant compounds should be shifted from drugs that elevate serotonin to drugs that strengthen excitatory connections.

"Although more work is needed, we believe that a malfunction of excitatory connections is fundamental to the origins of depression and that restoring normal communication in the brain, something that serotonin apparently does in successfully treated patients, is critical to relieving the symptoms of this devastating disease," Dr. Thompson explains.

Scott M. Thompson, PhD

► BY VERONICA ANDERSON

DR. BENNIE H. JENG

New Chair for the Department of Ophthalmology & Visual Sciences

University of Maryland School of Medicine Dean E. Albert Reece, MD, PhD, MBA, has appointed Bennie H. Jeng, MD, MS, a leading expert in cornea and external disease, to serve as the Chair of the School's Department of Ophthalmology and Visual Sciences. Dr. Jeng replaces Ophthalmology and Visual Sciences Interim Chair Scott E. Strome, MD, who is also Chair of the Department of Otorhinolaryngology-Head & Neck Surgery.

"Dr. Jeng is a distinguished National Institutes of Health-funded physician-scientist, accomplished in both world class patient care and outstanding biomedical research," says Dean Reece, who is also Vice President for Medical Affairs, University of Maryland, and the John Z. and Akiko K. Bowers Distinguished Professor, University of Maryland School of Medicine. "I feel confident that this is the ideal choice to elevate our Department of Ophthalmology to the top tier of programs nationwide, leading our faculty to success in both the clinical practice and research. Under his leadership, I believe that the department will become a major area of growth and success within the School of Medicine. I am thrilled that Dr. Jeng will join our distinguished faculty. Many thanks to Dr. Strome for keeping the department strong and growing. During his time as chair, Dr. Strome successfully maintained the department's tradition of excellence, providing strong leadership for our talented faculty. I feel certain that Dr. Jeng will be able to build upon and expand our already robust program."

Dr. Jeng will join the University of Maryland School of Medicine from the University of California, San Francisco (UCSF) where he worked as a Professor of Ophthalmology and Co-Director of the Cornea Service. He also served as Chief of the Department of Ophthalmology at the San Francisco General Hospital, and was the Director of the Francis I. Proctor Foundation/UCSF Cornea Fellowship Program.

"I am honored that Dean Reece and the medical school and hospital leadership have entrusted me with this important post, and I am extremely excited to work with everyone at the University to expand and develop the programs within the Department of Ophthalmology and Visual Sciences," says Dr. Jeng. "Given the enormous successes of the University of Maryland School of Medicine, it is truly an exciting time for the department, and I am very pleased to be a part it."

Dr. Jeng completed his undergraduate work at Washington University in St. Louis and then earned his medical degree from the Perelman School of Medicine at the University of Pennsylvania. Following an internship at the Cleveland Clinic, he completed his ophthalmology residency training at the Cole Eye Institute of the Cleveland Clinic, where he served as Chief Resident in his last year. He then did his fellowship training in cornea, external diseases, refractive surgery, and uveitis at the Franics I. Proctor Foundation/UCSF. Upon completion of his fellowship, he returned to the Cleveland Clinic to serve on the faculty, during which time he established a busy medical and surgical cornea practice. During his time at the Cleveland Clinic and UCSF, Dr. Jeng obtained a K12 grant from the National Institutes of Health to fund his research in treating severe ocular surface diseases. He also currently has R01 funding through the U.S. Food & Drug Administration to study a novel compound in healing persistent epithelial defects.

Dr. Jeng is a physician-scientist who has published more than 60 peer-reviewed manuscripts and 15 book chapters. He has delivered more than 100 invited lectures in the U.S. and around the world, including in Kuwait, Australia, and Korea. He also serves on the editorial boards of both *JAMA Ophthalmology* and *Eye*. Dr. Jeng has been an active member on numerous committees for the American Academy of Ophthalmology, and currently serves on the cornea subcommittee of the Annual Meeting Program Committee, as well as the Ophthalmic News and Education (ONE) Network committee. He is a member of the Medical Advisory Board and the Research Committee for the Eye Bank Association of America, and has served on various committees for the Association for Research in Vision and Ophthalmology. Dr. Jeng has taught cataract surgery at various courses across the country, and has also been the recipient of resident teaching awards while on faculty at the Cleveland Clinic and at UCSF.

The University of Maryland School of Medicine has a long history of innovation in Ophthalmology and Visual Sciences. The School served as the foundation for one of the first ophthalmology services in the country, and the first chair in the nation for diseases of the eye and ear was established at the University of Maryland School of Medicine in 1873. This formal establishment of an ophthalmic presence provided a rich environment for careful clinical observations and surgical innovation that continues today.

► BY KAREN WARMKESSEL

Fish Peptide Identified That May Inhibit Cancer Metastasis

Cod-derived agent shows potential as dietary therapy to complement standard treatments for prostate cancer

Hafiz Ahmed, PhD

Researchers at the University of Maryland School of Medicine have identified a peptide, or protein, derived from Pacific cod, that may inhibit prostate cancer and possibly other cancers from spreading, according to preclinical research published online in the *Proceedings of the National Academy of Sciences (PNAS)*.

"The use of natural dietary products with anti-tumor activity is an important and emerging field of research," says senior author Hafiz Ahmed, PhD, Assistant Professor in the Department of Biochemistry & Molecular Biology at the University of Maryland School of Medicine and a scientist at the Institute for Marine and Environmental Technology (IMET). "Understanding how these products work could allow us to develop foods that also act as cancer therapeutics and agents for immunotherapy."

Most people who succumb to cancer die because tumor cells invade the surrounding tissue and migrate into the nearby blood and lymph vessels, a process known as metastasis. For example, prostate cancer typically spreads to the bones, lungs and liver. Cancer cells that metastasize to other parts of the body grow new blood supplies and eventually overcome the person's organ systems.

"This study is among the first to explore the therapeutic utility of a bioactive cod TFD-containing glycopeptide to inhibit prostate cancer from progressing," says Dr. Ahmed, who also is affiliated with the University of Maryland Marlene and Stewart Greenebaum Cancer Center (UMGCC). The TFD (Thomsen-Friedenreich disaccharide) antigen in the fish protein is hidden in normal human cells but is exposed on the surface of cancer cells and is believed to play a key role in how cancer spreads.

Polar fish, such as northern cod, express glycoproteins that are rich in the TFD antigen, which protect them from freezing. The research team developed a special form of TFD, called TFD100, purified from Pacific cod.

Using animal models, the researchers found that TFD100 binds to galectin-3, a protein that is over-expressed in prostate cancer cells and blocks its interaction with the TFD antigen found on the surface of the cells. Galectin-3 (gal3) enables cancer cells to adhere to the walls of blood vessels and also kills activated T-cells, a type of white blood cell, which helps the cancer cells to spread throughout the body and evade the immune system. The researchers observed that TFD100 prevents cancer cells from attaching to the vessel walls, suppresses T-cell death, and boosts the immune response.

"Because the gal3-TFD interaction is a key factor driving metastasis in most epithelial cancers, this high-affinity TFD100 should be a promising anti-metastatic agent for the treatment of various cancers, including prostate adenocarcinoma," the researchers conclude in the study, which was published online March 11 in *PNAS*' Early Edition.

"This research breaks new ground in our ongoing quest to discover new ways to prevent cancers from metastasizing to distant parts of the body," says E. Albert Reece, MD, PhD, MBA, Vice President for Medical Affairs, University of Maryland, and the John Z. and Akiko K. Bowers Distinguished Professor and Dean, University of Maryland School of Medicine. "If we could one day offer patients a natural dietary supplement, derived from fish proteins, which could help to block that process, we could have a significant impact on improving patients' outcomes and survival."

Co-investigator Dhan V. Kalvakolanu, PhD, Professor, Department of Microbiology & Immunology, notes that additional research is needed to develop a dietary supplement from the cod peptide that could complement chemotherapy and other standard treatments. "No single drug on its own is going to offer protection against advanced cancers. We need a multi-pronged approach to successfully treat this disease," he says.

The study was conducted by researchers from Dr. Ahmed's laboratory, in collaboration with Dr. Kalvakolanu and other investigators at UMGCC and IMET. Prasun Guha, PhD, a postdoctoral fellow in Dr. Ahmed's laboratory, was the study's lead author. The research was funded by grants from the National Institutes of Health, the U.S. Army Medical Research and Materiel Command, the Council of Higher Education (Turkey), and the University of Maryland Start-Up fund.

► BY KAREN ROBINSON

Potential Strategies for Survival on Mars

Shiladitya DasSarma, PhD

Research from the University of Maryland School of Medicine has revealed key features in proteins needed for life to function on Mars and other extreme environments. The researchers, funded by NASA, studied organisms that survive in the extreme environment of Antarctica. They found subtle but significant differences between the core proteins in ordinary organisms and *Haloarchaea*, organisms that can tolerate severe conditions such as high salinity, desiccation, and extreme temperatures. The research gives scientists a window into how life could possibly adapt to exist on Mars.

The study, published online in the journal *PLoS One* on March 11, is titled "Amino Acid Substitutions in Cold-Adapted Proteins from *Halorubrum lacusprofundi*, an Extremely Halophilic Microbe from Antarctica." It was led by Shiladitya DasSarma, PhD, Professor, Department of Microbiology & Immunology, and a research scientist at the Institute of Marine and Environmental Technology (IMET).

Researchers found that *Haloarchaeal* microbes contain proteins are acidic, with their surface covered with negatively charged residues. Most ordinary organisms contain proteins that are neutral on average. The negative charges found in the unusual organisms keep proteins in solution and help to hold on tightly to water, reversing the effects of high salinity and desiccation.

In the current study, the scientists identified additional subtle changes in the proteins of one *Haloarchaeal* species named *Halorubrum lacusprofundi*. These microbes were isolated from Deep Lake, a very salty lake in Antarctica. The changes found in proteins from these organisms allow them to work in both cold and salty conditions, when temperatures may be well below the freezing point of pure water. Water stays in the liquid state under these conditions much like snow and ice melt on roads that have been salted in winter.

"In such cold temperatures, the packing of atoms in proteins must be loosened slightly, allowing them to be more flexible and functional when ordinary proteins would be locked into inactive conformations" says Dr. DasSarma. "The surface of these proteins also have modifications that loosen the binding of the surrounding water molecules."

"These kinds of adaptations are likely to allow microorganisms like *Halorubrum lacusprofundi* to survive not only in Antarctica, but elsewhere in the universe," says Dr. DasSarma. "For example, there have been recent reports of seasonal flows down the steep sides of craters on Mars, suggesting the presence of underground brine pools. Whether microorganisms actually exist in such environments is not yet known, but expeditions like NASA's Curiosity rover are currently looking for signs of life on Mars."

"Dr. DasSarma and his colleagues are unraveling the basic building blocks of life," says E. Albert Reece, MD, PhD, MBA, Vice President for Medical Affairs, University of Maryland, and the John Z. and Akiko K. Bowers Distinguished Professor and Dean, University of Maryland School of Medicine. "Their research into the fundamentals of microbiology are enhancing our understanding of life throughout the universe, and I look forward to seeing further groundbreaking discoveries from their laboratory."

Dr. DasSarma and his colleagues are conducting further studies of individual proteins from *Halorubrum lacusprofundi* with funding by NASA. The adaptations of these proteins could be used to engineer and develop novel enzymes and catalysts. For example, the researchers are examining one model protein, β-galactosidase, that can break down polymerized substances, such as milk sugars, and with the help of other enzymes, even larger polymers. This work may have practical uses such as improving methods for breaking down biological polymers and producing useful materials (see Karan et al. *BMC Biotechnology*, 2013;13:3).

► BY KAREN ROBINSON

Even Minor Head Injuries May Have Lasting Impact

The University of Maryland School of Medicine's Gunjan Parikh, MD, and collaborators have found that brain imaging done soon after mild traumatic brain injury (mTBI) can detect tiny lesions that may eventually provide a target for treating people with mTBI. Dr. Parikh, a Visiting Professor in the Department of Neurology, presented the findings at the American Academy of Neurology's 65th Annual Meeting in San Diego, March 16–23.

Studies of brain tissue performed after a person has died have shown that different types of lesions are associated with exposure to repetitive mild TBI. "Our study suggests that imaging may be used to detect and distinguish between these lesions in a living person, and this finding has important implications for treatment," said Dr. Parikh, who conducted the study at the National Institutes of Neurological Disorders and Stroke.

The study involved 256 people with an average age of 50 who were admitted to the emergency department after mild head injuries. Advanced imaging showed that—of those 104 with evidence of hemorrhage—20 percent had microbleed lesions and 33 percent had tube-shaped linear lesions. Microbleeds were distributed throughout the brain, whereas linear lesions were found mainly in one area, were more likely to be graded as severe, and were more likely to have injury to adjacent brain tissue.

The investigators hypothesized that the linear lesions seen on MRI may represent a type of vascular injury that is often seen in brain tissue studies of people with more severe TBI. "If that theory is confirmed, it may provide an opportunity to develop treatment strategies for people who have suffered a mild TBI," said Dr. Parikh.

Graduate Program Spotlight: The Department of Physical Therapy and Rehabilitation Science

► BY VERONICA ANDERSON

As one of the oldest physical therapy education programs in the country, the Department of Physical Therapy & Rehabilitation Science (PTRS) at the University of Maryland School of Medicine has attracted and graduated top-tier students for more than 50 years. Uniquely positioned within the School of Medicine, PTRS functions as a "School within a School," with separate departmental oversight of programs, admissions, student affairs and alumni.

Ranked in the top 10 percent of all physical therapy educational programs in the United States, PTRS offers students the opportunity to pursue advanced degrees in two areas: a Doctor of Physical Therapy (DPT) or a research-focused PhD in Physical Rehabilitation Science.

From a historical perspective, the PTRS DPT program was among the first doctoral level physical therapy education programs in the country. The DPT program was developed to prepare students to enter the work force as independent entry-level physical therapy practitioners. Currently, the program features a demanding hybrid block curriculum that includes human dissection and gross anatomy; didactic and psychomotor learning; and clinical education in a variety of settings with diverse patient populations. During the three-year post-baccalaureate program, students learn through integrated coursework and multidisciplinary team teaching the skills needed to examine and evaluate patients with physical impairments, functional limitations and disabilities, with the goal of promoting quality-of-life, illness prevention and wellness.

A significant draw for students completing the DPT program at the School of Medicine is the opportunity to learn from active researchers and expert clinician faculty. This rich collaborative learning environment helps students develop the professional and personal attributes that are required in a competent, holistic, and ethical physical therapist.

Graduate outcomes for the DPT program reflect this successful confluence, as students consistently have a first-time Board licensure pass rate on the National Physical Therapy Examination (NPTE) of greater than 95 percent—a rate that is well above the national average. The DPT class of 2012 achieved an incredicble 100 percent exam passage rate, said a proud Mary Rodgers, PT, PhD, FAPTA, FASB, the George R. Hepburn Dynasplint Professor and Chair of the PTRS department.

For students looking to pursue a career in research, the PhD program in Physical Rehabilitation Science trains scientists to advance the physical rehabilitation field to improve the lives of people with functional impairments. Working with departments within the School of Medicine and two sister universities, the PhD program affords students a comprehensive interdisciplinary learning experience.

Graduate students admitted into the program complete coursework in the primary core area of neuromotor control and rehabilitation and a complimentary sub-disciplinary area (applied physiology, rehabilitation biomechanics, or epidemiology) that serves as the foundation for their dissertation research.

Faculty members who teach in the PhD program pursue funding from the National Institutes of Health (NIH) and other external sources to support research employing a variety of approaches focused broadly on neuromotor control and rehabilitation. Students have had the opportunity to participate in research that has innovated stroke rehabilitation techniques. They have investigated underlying neuroplasticity in stroke and have examined the neuromechanical bases of balance impairment leading to falls among older adults. Students also have explored rehabilitation interventions using robotics and faculty-developed and -patented devices, functional electrical stimulation, and motor-learning principles, all of which can have immediate translational benefits for patients.

"Faculty members in the PhD program act not only as teachers, but also as outstanding mentors for our pre-doctoral students," says Dr. Rodgers. "Our graduates have gone on to successful research careers based upon the training and support they have received from these faculty."

PTRS Students Join APTA of Maryland's Advocacy Day in Annapolis

► BY ALEXANDRIA GANZERMILLER

Nearly 70 students and faculty members from the Department of Physical Therapy and Rehabilitation Science (PTRS) traveled to Annapolis on February 28 with other members of the Maryland chapter of the American Physical Therapy Association (APTA) for Advocacy Day on the Hill. Showing strength in numbers, the PTRS contingent joined nearly 100 other physical therapy and physical therapy assistant students, as well as members of APTA, in speaking with legislators and/or their aides.

The purpose of this annual event was to discuss professional Physical Therapy practice issues, with a focus on specific bills before the legislature that impact fiscal accountability and public safety.

Two particular bills of interest included the proposed dry needling regulations and potential licensure of kinesiotherapists. Dry needling is not a new technique for physical therapists but one that has been questioned more recently by other health care providers, particularly acupuncturists. The specific new regulations outline additional educational requirements, training, and practice guidelines for physical therapists who perform this technique. Concerns about the potential licensure of kinesiotherapists were described, making note of the public safety perspective and fiscal impact.

"This was a very good opportunity to get us actively involved in the behind-the-scenes of our profession. The decisions of these legislations are what determine our career and how we can practice," said Kristen Joyce, a second-year student. "I think we were very successful in sharing our concerns with these legislators, and hopefully we can see some positive changes for our growing profession in the near future."

"It is so exciting to see so many of our students participating in our Day on the Hill," said Linda Horn, Assistant Professor in the department, and President-Elect of the APTA of Maryland. "Advocating for our profession of physical therapy shapes what [APTA] does—and the students are our future."

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