Northwestern Medicine Magazine

A publication for the alumni and friends of Northwestern University Feinberg School of Medicine, Northwestern Memorial HealthCare and the McGaw Medical Center of Northwestern University

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New urology chair excels at wearing many hats

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Celebrating another tremendous year Tomorrow's

therapies

here today

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Better measures, better care

Р.25

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LIVE FROM CHICAGO, IT'S FEINBERG NIGHTI ASPIRING DOCTORS SATIRIZED THE MEDICAL SCHOOL EXPERIENCE AT THE 97TH ANNUAL STUDENT SKETCH COMEDY SHOW IN VIVO TO RAISE FUNDS FOR CHICAGO YOUTH PROGRAMS. ENTITLED "FEINBERG NIGHT LIVE, " THE SHOW WAS HELD NOVEMBER 14. READ MORE ONLINE AT MAGAZINE.NM.ORG.

Northwestern Medicine

Magazine

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Accomplishments

MAGAZINE.NM.ORG: Additional Content Online

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BROADLY SPECIALIZED

New urology chair leads with rare combination of skills

COVER ART: Artistic rendering of an up close look at a prostate cancer cell. Feinberg's new urology leader, a noted surgeon and scientist, has found that African-American men are at higher risk for developing more aggressive tumors.

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DELIVERING BREAKTHROUGH

Innovative treatments poised to become tomorrow's standard of care at Northwestern Medicine

O Image Slideshow

MEASURE **BY MEASURE**

Surgical Outcomes and Qualit Improvement Center focuses on enhancing patient care

Video

Northwestern Medicine Leadership



By all measures, 2015 was another impressive year for Northwestern Medicine: we continued expansion of our health system, broke ground on new construction that will transform the face of the size and scope of our research program and during the latter part of the year, we welcomed two distinguished new department chairs.

Now, as we look back on the achievements of the last year and welcome new leaders to the Northwestern Medicine family, it's also important to reflect on the values that lie at the heart of our shared Northwestern Medicine vision – access to world-class care informed by science and delivered with a focus on listening, empathy and caring.

In September, Maciej (Matt) Lesniak, MD, was named the Michael J. Marchese Professor and chair of the departments of Neurological Surgery at Feinberg and Northwestern Memorial Hospital. Matt is a renowned neurosurgeon, with a welldeserved reputation for investigating and carrying out creative approaches to treat adults with both malignant and benign brain tumors. He is exactly the sort of innovative physician-scientist that embodies Northwestern Medicine's ideals.

In December, Edward (Ted) M. Schaeffer, MD, PhD, joined Northwestern Medicine as chair of the departments of Urology at Feinberg and Northwestern Memorial Hospital. An internationally-recognized physician-scientist with deep expertise in urologic oncology, he conducts leadingedge research on the molecular biology of lethal prostate cancers. Ted represents an exciting and dynamic addition to our clinical and research efforts, which are already well-known for their excellence.

Throughout 2015, our health system continued to evolve and become more

integrated to serve our patients. We welcomed KishHealth System into the Northwestern Medicine family, later in the spring we look forward to Marianjoy Rehabilitation Hospital joining Northwestern Medicine and construction continues on the new Lake Forest Hospital, scheduled for completion in the spring of 2018.

Of course, the construction of the Louis A. Simpson and Kimberly K. Querrey Biomedical Research Center, which broke ground last May, is another landmark achievement for Northwestern Medicine, Northwestern University and the entire research enterprise. Over the next three years, as we watch this impressive new building take shape, we'll also be planning for the new faculty, students and research programs that will be housed inside.

As our health system continues to grow, our shared mission and values remain consistent: Patients are at the core of everything we do. All of us - from physicians to nurses, faculty to staff - are working together to improve health. Likewise, our unique partnership means that breakthrough discoveries are happening a stone's throw away from the patient bedsides where those new treatments will be delivered.

We look forward to another year of impressive achievements in 2016, and are deeply grateful to our physicians, nurses, faculty, staff, students and trainees, without whom none of it would be possible.

With warm regards,

Eric G. Neilson, MD

Vice President for Medical Affairs and Lewis Landsberg Dean, Northwestern University Feinberg School of Medicine

Dean M. Harrison President and CEO Northwestern Memorial HealthCare

Campus News

Hospira Foundation Gift Expands Cancer Research

GENEROUS DONATION CREATES UNIQUE TRANSLATIONAL CANCER BIOLOGY PROFESSORSHIP

A recent \$5 million gift from the Hospira Foundation to Northwestern University Feinberg School of Medicine will establish the Hospira Foundation Professorship in Translational Cancer Biology at the Robert H. Lurie Comprehensive Cancer Center of Northwestern University. The professorship is the first of its kind at the University.

"This gift from the Hospira Foundation will help expand the groundbreaking research conducted at the Lurie Cancer Center and accelerate the development of innovative new treatments," says Eric G. Neilson, MD, vice president for medical affairs and Lewis Landsberg Dean of Feinberg. "This extraordinary commitment will help ensure that Northwestern Medicine attracts and retains the nation's top physician-scientists and allows them to make lasting impacts on medicine and society as a whole."

From the \$5 million, \$3 million will go toward creating the endowed professorship in perpetuity at Northwestern. The remaining \$2 million will be used to support the research activities of the professor, including defraying the expenses of establishing his or her laboratory and supporting the training of fellows, graduate students and others who play a key role in the professor's research efforts.

"This generous gift will allow us to recruit and fund the research of outstanding investigators working to translate cancer biology into new treatments for our patients," says Leonidas Platanias, MD, PhD, director of the Lurie Cancer Center. "We are grateful to Hospira for supporting our efforts to establish the city of Chicago as a global leader in personalized cancer treatment."

The Hospira Foundation was the philanthropic affiliate of Hospira, Inc., which was acquired by Pfizer Inc. in September 2015.

The Hospira Foundation gift counts as part of We Will. The Campaign for Northwestern, a \$3.75 billion fundraising effort to support strategic initiatives throughout the University. The gift also supports the Campaign for Northwestern Medicine, which represents \$1.75 billion of the University's goal and has featured endowed professorships as a key campaign priority. M

Snorfs Build Strong Legacy of Giving



DR. CHARLES AND LESLIE SNORF

Alumnus and retired orthopaedic surgeon Charles R. Snorf, '58 MD, '63 GME, and his wife, Leslie, recently made a \$5 million transformative gift to Northwestern University Feinberg School of Medicine and the Department of Orthopaedic Surgery.

The couple's gift will establish two endowments in perpetuity in the Department of Orthopaedic Surgery – the Charles and Leslie Snorf Professorship and the Charles and Leslie Snorf Research and Education Fund – and will add \$1 million in new scholarship funds to substantially boost the impact and reach of the Snorf Medical Student Scholarship Fund, which the Snorfs created in 1997.

The Snorf Professorship was supported in part by alumni Patrick G. Ryan and Shirley W. Ryan through the Ryan Family Chair Challenge, which matches gifts made by other Northwestern supporters to establish new endowed professorships, or chairs, across a wide range of disciplines. M

Faculty Awards and Honors



Greg Schwartz, PhD, assistant professor of Ophthalmology and of Physiology, received the prestigious National Institutes of Health (NIH) Directors Award for his novel work on retinal physiology and synapse function in September. This \$2 million award is among the most prestigious offered by the NIH. He is combining his expertise in computational physiology, mouse genetics and synaptic physiology to identify the specific "map" of cellular connections within the retina.

Alpesh A Patel, '00

MD, professor of Orthopaedic Surgery, was selected for a prestigious American Orthopaedic Association American-British-Canadian



fellowship. The "ABC" fellowship includes lectures and visits to centers of orthopaedic excellence in the United Kingdom, Australia and New Zealand.

Vahid Yaghmai, MD, '97 GME, professor of Radiology and medical director of Imaging Services, received the 2015 Radiological Society of North America



(RSNA) Honored Educator Award. The organization honored him for his commitment to radiology education through the RSNA, featuring him and all 2015 Honored Educator Award recipients on its website, in the latest issue of RSNA News and at the RSNA 2015 Annual Meeting in Chicago in late November.

Serdar Bulun, MD,

chair of the Department of Obstetrics and Gynecology, has been elected to the National Academy of Medicine (NAM). The National Academy



of Sciences established NAM in 1970 to honor both professional achievement and commitment to volunteer service. It serves as a national resource and source of expertise on issues related to health, medicine, biomedical science and related policy. (More information online.)

Francis Giles, MD,

professor of Medicine in the Division of Hematology/ Oncology, has been appointed chief of the division. Since joining the faculty



in 2013, Dr. Giles has led the launch and growth of the Northwestern Medicine Developmental Therapeutics Institute (NMDTI), which gives patients access to novel therapies. He also started the NMDTI Developmental Therapeutics Fellowship that offers a mentorship environment for clinical investigators. (More information online.)

Marcus Peter, PhD, professor of Medicine in the Division of Hematology/Oncology, and Ali Shilatifard, PhD, chair and Robert Francis Furchgott Professor of Biochemistry and Molecular Genetics, were each chosen to receive a National Cancer Institute (NCI) Outstanding Investigator Award. The seven-year, \$6.4 million grant program was established to support experienced and exceptional investigators. Award recipients are encouraged to use the grant to be more adventurous and to take greater risks so that they can break new ground in their lines of inquiry to advance cancer research. (More information online.)

The Feinberg Academy of Medical Educators (FAME) announced the inaugural winners of the Best Teachers of Feinberg award this fall. This new award recognizes the outstanding efforts of Feinberg School of Medicine faculty members who have proven to be exceptional role models, innovators and teachers. The winners were honored during the closing reception of the 5th annual Medical Education Day on September 25.

The winners and their categories of distinction are:

- » Kristine Healy, MPH, PA-C, assistant professor of Medical Education in the Physician Assistant Program – Physician Assistant Program
- » Christopher Robinson, MS, MBA, CPO, assistant professor of Physical Medicine and Rehabilitation – NU-Prosthetics and Orthotics
- » Lois Hedman, '87 MPT, DScPT, associate professor of Physical Therapy and Human Movement Sciences – Physical Therapy and Movement Sciences
- Thomas Corbridge, MD, professor of Medicine in the Division of Pulmonary and Critical Care and of Physical Medicine and Rehabilitation – Phase 1/Phase 2

- » Sarah Rodriguez, PhD, lecturer of Medical Education in Medical Humanities and Bioethics – Area of Scholarly Concentration
- » Alexander Mackie, PhD, research assistant professor of Medicine in Cardiology – Problem-Based Learning
- » Don McCrimmon, PhD, professor of Physiology and Anesthesiology
 – Science in Medicine
- » Joan Mullan, MD, '94 GME, assistant professor of Medicine in the Division of General Internal Medicine and Geriatrics – Clinical Medicine
- » Monica Rho, '05 MD, '09 GME, assistant professor of Physical Medicine and Rehabilitation – Health and Society
- Catherine Belling, PhD, associate
 professor of Medical Education in
 Medical Humanities and Bioethics
 Professional Development
- » Michael Avram, PhD, associate professor of Anesthesiology – Medical Decision-Making
- » David Salzman, '05 MD, '09 GME, assistant professor of Emergency Medicine and Medical Education – Synthesis and Application Modules
- » John Friedewald, MD, associate professor of Medicine in the Division of Nephrology and of Surgery in the Division of Organ Transplantation – Delivering Optimal Care

Elliot J. Roth, '82 MD, '85, '86 GME, chair and Paul B. Magnuson Professor of Physical Medicine and Rehabilitation and medical director of the Patient Recovery



Unit at the Rehabilitation Institute of Chicago, received the Distinguished Clinician Award from the American Academy of Physical Medicine and Rehabilitation (PM&R) in October. This award honors physicians in the specialty of PM&R who have achieved distinction on the basis of their scholarly level of teaching and their outstanding performance in patient care activities.

Saadia Sherwani, MD, '00 GME, became

vice chair for Clinical Affairs of the Department of Anesthesiology in October. Dr. Sherwani serves as the

medical director for Feinberg 7 Operative Services and chief of Cardiothoracic Anesthesiology. (More information online.)

Robert Bonow, MD, Max and Lilly Goldberg Distinguished Professor of Cardiology, has been named editor-in-chief of *JAMA Cardiology*, a new journal in the



JAMA Network debuting in 2016. The journal will focus on all aspects of cardiovascular medicine, including epidemiology and prevention, diagnostic testing, interventional and pharmacologic therapeutics, translational research, healthcare policy and global health. (*More information online.*)

Rishi Arora, MD, associate professor of Medicine in the Division of Cardiology, has received Proof-of-Concept funding from NUCATS Institute and the Innovation and New Ventures Office (INVO) for a project that aims to validate a new gene therapy for atrial fibrillation. The award is a one-time initiative providing \$100,000 in funding to assist Northwestern inventors in validating promising biomedical research with the goal of moving these novel inventions into self-supporting commercial pathways.

Robert Vogelzang, MD, '81 GME, FSIR, professor of Radiology, has received the 2016 Gold Medal from the Society of Interventional Radiology (SIR). A



past president of SIR, Dr. Vogelzang has served as chief of Vascular and Interventional Radiology at NMH since 1985. In addition to training more than 100 fellows in interventional radiology, he has been actively involved in research and education during his entire career. (More information online.)

Alexis Thompson, MD, MPH, professor of Pediatrics in Hematology, Oncology and Stem Cell Transplantation, and Jane Winter, MD, '82 GME, professor of Medicine in the Division of Hematology/Oncology, have been elected to the executive committee of the American Society of Hematology (ASH), the world's largest professional society concerned with the causes and treatment of blood disorders. (More information online.)

Herbert Meltzer, MD, professor of Psychiatry and Behavioral Sciences, of Pharmacology and of Physiology, was named winner of the 2016 SIRS Lifetime Achievement Award.

Roger Cole, MD, professor of Cardiology in Pediatrics, received a Lifetime Achievement Award from the Children's Heart Foundation (CHF). He was presented the award by Illinois Senator Dick Durbin at the 2015 Red Tie Ball, a gala held to benefit CHF. (More information online.) №

Proteomics to Expand on Chicago Campus



WRITTEN BY: Sarah Plumridge

Proteomics, the large-scale study of proteins, is critical to many research projects at Northwestern University Feinberg School of Medicine.

Plans are in place to expand this area of study on the Chicago campus this year to help scientists use proteins to make breakthroughs in many fields of study, from cancer and neurodegenerative research to organ transplantation and reproductive sciences. Northwestern Proteomics, a research center and core, hopes to add more staff and instruments for translational proteomics research. The core facility offers services ranging from bottom-up to top-down proteomics as well as protein identification and quantification.

"Proteomics is similar to genomics in that it can be applied to many different fields," explains Paul Thomas, PhD, associate director of Northwestern Proteomics. "Where proteomics gains a handle is, that while the genome of a liver, heart or skin cells are all pretty much the same, the proteins within each act as the primary regulators of both the fate and function of cells."

Top-down proteomics allows investigators to access the complete protein sequence and gives them the ability to locate and characterize post-translational modifications. Before this technique was available, scientists needed to break down proteins into small parts and analyze them with mass spectrometry before piecing the information together to learn the protein's function.

At Northwestern, Neil Kelleher, PhD, faculty director of Northwestern Proteomics and a professor of Medicine and of Biochemistry and Molecular Genetics, has established one of the leading groups in the world studying intact proteins through top-down proteomics. Successes in proteomics research at Northwestern have led to a recently awarded \$5.6 million grant from the National Institute of General Medical Sciences (NIGMS) to house the National Resource for Translational and Developmental Proteomics.

This national resource will establish a hub for biomedical projects taking place across the nation and will include a formal program where investigators from other institutions can visit Northwestern to learn top-down proteomics. Kelleher expects about two dozen visitors per year to learn top-down techniques so they can to apply them to their own laboratories.

The NIGMS grant includes eight core biomedical projects – four involving Feinberg principal investigators: Michael Abecassis, MD, chief of Organ Transplantation in the Department of Surgery, Shuo Ma, MD, PhD, associate professor of Medicine in the Division of Hematology/Oncology, John Wilkins, MD, assistant professor of Medicine in the Division of Cardiology and of Preventive Medicine,



PROTEOMICS CENTER OF EXCELLENCE MEMBERS (FROM LEFT) PAUL THOMAS, IOANNA NTAI, NEIL KELLEHER AND PHIL COMPTON WILL HELP TO EXPAND THIS AREA OF STUDY ON THE CHICAGO CAMPUS.

and Teresa Woodruff, PhD, chief of Reproductive Science and Medicine in the Department of Obstetrics and Gynecology.

Thomas and Kelleher have been working with Hande Ozdinler, PhD, assistant professor of Neurology, to apply top-down proteomics techniques to isolate populations of healthy and diseased upper motor neurons at different ALS disease stages and to determine the protein content within neuron populations. Supported with an ALS Association grant, they have been able to look at proteins involved in the progression and formation of ALS in mouse models. "This information could be used to identify early detection markers for diseases in which upper motor neurons are affected," according to Thomas.

Adds Ozdinler, "Previously, it was impossible to investigate the protein content of distinct neuron populations. Thanks to Northwestern Proteomics, we can study very detailed aspects of protein biology in diseased neurons." M

New Curriculum 'Graduates' First Medical School Class

WRITTEN BY: Sarah Plumridge

Launched four years ago, the medical school's new curriculum has provided the Class of 2016 with earlier patient interactions, more team-based learning and an additional focus on professional development. The traditional model – two years of classroom instruction with two years of clinical learning – was replaced with a three-phase integrated curriculum that will shape the medical education of Feinberg students for years to come.

"I'm excited to be graduating the first class," says Patricia Garcia, MD, '91 GME, MPH, professor of Obstetrics and Gynecology in the Division of Maternal Fetal Medicine and of Medical Education. Formerly co-chair of the Curriculum Renewal Steering Committee, she oversaw the implementation of the first three years of the new curriculum. "The real impact of the new curriculum is in training a new generation of 21st century physicians and seeing how the skill sets they learned here will come to fruition."

New students spend their first week of medical school in interactive lectures, small group discussions and hands-on activities. The Introduction to the Profession Module exposes them to relevant and tangible issues.

"This curriculum is really in touch with what it means to be a doctor now," says Noelle Martinez, a second-year medical student. "The first week of M1 year, you get your first patient interaction. The next week you are starting to do vitals with patients in clinics and your skills progress from there – it's amazing."

For the first 20 months of instruction, medical students complete phase 1 of the curriculum, learning about organ systems. During phases 2 and 3, they complete clerkships that span multiple disciplines. Career advising has been implemented earlier, so students can make more informed career choices.

At intervals throughout the three phases, there are Synthesis and Application Modules to review key concepts and assess learning. Other additions include the Area of Scholarly Concentration, a mentored research experience culminating with a thesis, and the Education-Centered Medical Home, a longitudinal clinical experience exposing students to outpatient medicine.

"You see patients week to week or month to month, and I feel like these are my own patients," says Alexandra Jones Adesina, a fourth-year medical student. "Exposed to different perspectives, you get to see how diverse populations think about medicine and what their cultures and backgrounds bring to the table." M

Learning Health Policies at Street Level

WRITTEN BY: Sarah Plumridge

First-year medical students connected with local Chicago communities and policy leaders to learn about implementing better health policies to improve the overall health of communities.

As part of the Health & Society element of Feinberg's medical school curriculum, students visited 18 of Chicago's 77 neighborhoods to assess determinants of health, including social environment, physical environment and health services in the context of an assigned health policy issue. Working in groups to develop policy briefs and assess their community impact, the students presented their findings and recommendations last November.

"It was a unique experience and gave me a chance to see a community that I wouldn't have been aware of on my own," says Sami Hashmi, a first-year medical student who visited North Lawndale, a neighborhood on the west side of Chicago.

Hashmi and his group assessed health care for undocumented and uninsured immigrants. Speaking with a representative from the Illinois Coalition for Immigrant and Refugee Rights, the students also met with community leaders, residents and health providers. Shares Hashmi, "Even though someone has a low income, it doesn't mean they have to receive low-quality care."

Hashmi's group recommended expanding Medicaid to include individuals eligible for Deferred Action for Childhood Arrivals (DACA) on a national level. DACA is an immigration policy that allows certain undocumented immigrants to receive a renewable two-year work permit and exemption from deportation. Implementing this policy

Even though someone has a low income, it doesn't mean they have to receive low-quality care.

would increase the health of the community by increasing immunity and improving trust between undocumented immigrants and the healthcare system, according to Hashmi and his fellow students.

"It is important that our future physicians are sensitive to health policies and their impact on communities' health," says Virginia Bishop, MD, MPH, assistant professor of Preventive Medicine in the Division of Behavioral Medicine, and faculty coordinator of the project.

Other student groups presented on policies focused on environmental health, sin tax, e-cigarettes, food scarcity, gun violence and incarcerated youth. M

Research Briefs



Reducing the Side Effects of Parkinson's Treatment

Northwestern Medicine researchers have identified a novel strategy for reducing the side effects of uncontrolled movement or dyskinesia caused by the drug levodopa, commonly used to treat the stiffness, tremors and poor muscle control of Parkinson's disease.

Parkinson's is the second most common neurodegenerative disease in the United States. As the condition progresses, the dose of levodopa required to alleviate symptoms rises and side effects begin to appear. The most prominent of these is uncontrolled movement.

A team lead by D. James Surmeier, PhD, chair and Nathan Smith Davis Professor of Physiology, found neurons in the brain responsible for the side effects have a distinctive surface receptor that normally helps balance the effects of levodopa therapy. When animal models of Parkinson's disease were given a compound that boosts functioning of this receptor, the motor side effects of levodopa treatment were dramatically reduced.

Details of this international study were published last fall in the journal *Neuron*.

Although this new compound – an M4 muscarinic receptor positive allosteric modulator – is not currently approved for human use, it is in development with the goal of clinical trials, a phase I trial possibly starting by 2017.

"The eventual drug developed could make a significant improvement in the quality of life for people with Parkinson's," says Surmeier. №

Other authors of the study are Paul Greengard, PhD, at Rockefeller University, Richard Neubig, MD, PhD, of Michigan State University and Jurgen Wess, PhD, of the National Institutes of Health. Other Northwestern co-authors include Weixing Shen, MD, PhD and Zhong Xie, PhD, research associate professors in Physiology, and Joshua Plotkin, PhD, postdoctoral scholar.



Healthy Eating Not Wasted on the Young

People who ate more fruits and vegetables as young adults were less likely to develop coronary atherosclerosis 20 years later, according to a recent study published in *Circulation* and co-authored by Philip Greenland, MD, Harry W. Dingman Professor of Cardiology and director of the Center for Population Health Sciences.

"This study gives additional support to the importance of healthy eating beginning as early as age 18," says Dr. Greenland. "Often, people only become concerned about healthy eating when they're older, but a healthy diet with fruits and vegetables throughout life is a key part of preventing disease."

The investigators analyzed data from 2,500 black and white men and women aged 18 to 30 years old who answered questions about their eating habits. Twenty years later, they had heart scans that detected coronary calcium, a good indicator of heart attack risk.

The study found that people who said they ate an average of seven to nine servings of fruit and vegetables a day were 25 percent less likely to have significant coronary calcium in their arteries at the 20-year follow-up compared to those who only ate two to four servings a day.

The data for this research came from the Coronary Artery Risk Development in Young Adults (CARDIA) Study, which is supported by National Heart, Lung, and Blood Institute (NHLBI) grants HH-SN268201300027C, HHSN268201300025C, HHSN268201300026C, HHSN268201300028C, HHSN268201300029C and HH-SN268200900041C, the Intramural Research Program of the National Institute on Aging (NIA) and an intra-agency agreement between the NIA and NHLBI, grant AG0005.



New Player in Lung Cancer Progression

Lung cancer causes more deaths than any other cancer worldwide, mainly due to metastasis – when lung cancer spreads to other parts of the body. In a recent study, Northwestern Medicine scientists showed for the first time that the Myosin 9b gene is correlated with lung cancer tumor formation and metastasis. Myo9b, the protein that the gene encodes, was seen in approximately 90 percent of lung cancer tissue samples in the study, and higher levels of it predicted shorter patient survival. The finding suggests that silencing expression of Myo9b in cancer cells could help patients suffering from metastatic lung cancer.

"These observations suggest the exciting possibility of developing Myo9b as a new biomarker for cancer, especially lung cancer," says principal investigator Jane Wu, MD, PhD, Dr. Charles L. Mix Research Professor of Neurology and of Psychiatry.

The study, published in the *Journal of Clinical Investigation*, builds on previous research showing the involvement of a family of genes called Slit in tumor suppression in breast, brain and pancreatic cancers. Collaborating with investigators in China, Dr. Wu's team first demonstrated that the Slit2 gene reduces tumor formation and metastasis in both cell cultures and mouse models of lung cancer.

The scientists next studied the gene-signaling pathway that enables Slit2 to suppress cancer cell migration. Here, they found Myo9b, a protein previously seen solely in immune cells. Dr. Wu's group not only detected Myo9b in lung tissue cancer cells, it also discovered that there was too much of it in the majority of the samples surveyed. **M**

Dr. Wu's research team is supported by National Institutes of Health grants R01CA175360 and R01AG033004.



Reverse Engineering the Retina May Help Restore Vision

The retina is not simply the innermost layer of the eye; it's also a tissue with more than a hundred types of neurons that help the brain process visual surroundings.

With a five-year, \$2.3 million grant from the National Institutes of Health, Gregory Schwartz, PhD, assistant professor of Ophthalmology and of Physiology, aims to map out all the neural circuits through which the retina transmits information such as color, contrast, motion, direction and location. His findings could eventually inform clinical interventions for blindness, including sophisticated retinal prosthetics to restore vision.

"We want to reverse engineer the retina so that we can help others build an artificial one," he says.

Using mouse models, the Schwartz lab stimulates circuits in the retina using their natural input – patterns of light – to record their natural output – electrical signals from the ganglion cells.

Working with Amurta Nath, a PhD student in the Northwestern University Interdepartmental Neuroscience Program (NUIN), Schwartz recently discovered orientation-selective cells in the retina – neurons that tell the brain whether an object is oriented vertically or horizontally. Members of his lab have also found cells that decrease their firing based on positive and negative contrast and traced a circuit within the retina that is responsible for this property.

Additional members of Schwartz's team include postdoctoral fellows Jason Jacoby, PhD, Adam Mani, PhD, and Jillian Goetz, PhD; NUIN student Sam Cooler, Neurobiology graduate student Todd Appleb and lab manager Susan Wohlgenant.

This research is supported by grant 1DP2EY026770 from the National Eye Institute at the National Institutes of Health.

Media Spotlight

WHY DOUBLE KNEE REPLACEMENT MIGHT [NOT] BE BEST

THE WALL STREET JOURNAL - OCTOBER 12, 2015

More patients with two bad knees are opting for a controversial procedure that replaces both at the same time. A study in the *Journal of Arthroplasty* compared cases matched for risks in simultaneous bilateral and unilateral knee surgeries of nearly 44,000 patients. It found no significant difference in rates of infection, hospital re-admission or death. But bilateral procedures were associated with increased risk of subsequent surgery within 30 days. "We decided it is not a safe practice," says study co-author **David Manning, MD**, associate professor of Orthopaedic Surgery at Feinberg, "and it adds risk, so we don't do it." He recommends staged procedures over time for patients who need both knees replaced.

WHAT MEN SHOULD KNOW ABOUT RHEUMATOID ARTHRITIS

EVERYDAY HEALTH - OCTOBER 13, 2015

Although rheumatoid arthritis (RA) is primarily thought of as a "woman's" disease – they're three times as likely to develop the condition – it affects men, too, according to the Arthritis Foundation. "No one knows why more women than men are diagnosed with RA. They also often present symptoms of it earlier, too. That could be because they develop RA sooner than men or because they're quicker to seek treatment," says **Eric M. Ruderman, MD**, professor of Medicine in the Division of Rheumatology at Northwestern. RA typically strikes people between ages 34 and 60. Increased risks include smoking, hormonal factors and possible genetic links.

JUST ONE ENERGY DRINK SENDS STRESS HORMONE LEVELS SOARING

U.S. NEWS & WORLD REPORT - NOVEMBER 8, 2015

A new study shows that just one energy drink can cause potentially harmful spikes in both stress hormone levels and blood pressure in young, healthy adults. Energy drinks can contain up to five times more caffeine than a typical cup of coffee, and emergency room visits involving energy drinks doubled between 2007 and 2011, according to the U.S. Substance Abuse and Mental Health Services Administration. "They are not benign, these products, and there's no limit to how these products are consumed by individuals," says **Linda Van Horn, PhD, RD,** professor of Preventive Medicine in the Division of Nutrition at Feinberg and a spokeswoman for the American Heart Association.



Healthy Global Citizens Critical to World Economies

WRITTEN BY: Nora Dunne

The United Nations (UN) General Assembly adopted 17 sustainable development goals last fall that its 193 member states will use to frame political agenda over the next decade and a half. The third goal, "to ensure healthy lives and promote well-being for all at all ages" represents the latest global effort to realize universal health – an objective that renowned economist and UN advisor Jeffrey Sachs, PhD, believes can be accomplished by 2030.

"Health is a fundamental human right. It has been recognized as a human right now for more than 60 years, but it hasn't been realized," says Sachs, keynote speaker at Northwestern's Global Health Interdisciplinary Symposium held November 19. "There's reason to take hope from trends that are, if not universal, very widespread around the world," he says. "To put it quantitatively, in 1990, about 12.5 million children died under the age of 5, and those deaths were almost entirely from readily preventable or treatable causes. ... This has come down by half." Sach notes, though, that 6 million continue to die before the age of 5 and that statistic remains "a tragedy and a blight on our global society."

Twice named one of *Time* magazine's most influential world leaders, Sachs is an expert in sustainable development, a bestselling author, a syndicated columnist and a special advisor to the UN's secretary-general. He heads the Earth Institute at Columbia University, where he is also the Quetelet Professor of Sustainable Development, Health Policy and Management.

Sachs walked through the obstacles, from poverty to market power, that stand in the way of achieving health for all, internationally as well as in the United States. He emphasized that small

MAN THANKFUL FOR A NEW BREATH OF LIFE

WGN CHICAGO - NOVEMBER 30, 2015

Patrick Halko, 32, recently underwent a successful double-lung transplant at Northwestern Memorial Hospital. Eight years prior, he was diagnosed with a rare and life-threatening blood disease. A stem cell transplant cured his blood disease but attacked his body — first his skin, then his lungs. His last chance was a lung transplant, performed by **Ankit Bharat**, **MBBS**, assistant professor of Surgery in the Division of Thoracic Surgery and of Medicine in Pulmonary and Critical Care at Feinberg. According to Dr. Bharat, Patrick took an active role. "...he was walking on the vent, he was up on the chair conversant and participating in his care."

DO YOUNG DOCTORS NEED MORE SLEEP?

SLATE - DECEMBER 2, 2015

Many doctors and members of the public began to worry that long hours and sleeplessness among residents might pose a risk for patients. In recent years, the governing body that oversees graduate medical training has set rules limiting the hours that just-out-of-med-school physicians can work, but some argue that the limits are not in the patients' best interest. According to **Karl Bilimoria, MD, MS,** John Benjamin Murphy Professor of Surgery in the Division of Surgical Oncology and associate professor of Medical Social Sciences at the Feinberg School of Medicine, the rules are a problem for surgeons in particular because young doctors find themselves forced to hand off patients in the middle of urgent situations.



KIDS WITH ALLERGIES MAY HAVE A HIGHER RISK OF HEART DISEASE

TIME MAGAZINE - DECEMBER 8, 2015

Children with asthma, eczema or hay fever showed higher rates of obesity, hypertension and high cholesterol compared to those without allergies. Reporting in the *Journal of Allergy and Clinical Immunology*, **Jonathan Silverberg**, **MD**, **PhD**, **MPH**, professor of Dermatology, of Medical Social Sciences and of Preventive Medicine, as well as director of the Northwestern Medicine Multidisciplinary Eczema Center, found that these risk factors for heart disease may prime these young people for heart problems later in life. Biologically, allergic diseases may involve more inflammation, which is increasingly implicated in the development of cardiovascular conditions. Says Dr. Silverberg, "We didn't used to think that allergic inflammation from asthma and eczema were driving heart disease, but we are starting to see more of a connection between the two."

7 CONCUSSION IS TOP INJURY AMONG CHEERLEADERS

CHICAGO TRIBUNE - DECEMBER 10, 2015

Concussion tops the list of injuries suffered by high school cheerleaders as the once-tame sideline activity becomes more daring and competitive, a new U.S. study finds. Feinberg School's **Cynthia LaBella, MD**, associate professor of Pediatrics in Academic General Pediatrics and Primary Care and medical director of the Institute for Sports Medicine at the Ann and Robert H. Lurie Children's Hospital of Chicago, says "[Cheerleading] has evolved, but we just need to make sure the procedures on how we monitor injuries and athletes' skills ... evolve with it." She advocates more research on the types of injuries sustained in the pursuit of promoting school spirit and whether certain safety measures are effective. №

investments can lead to dramatic improvements in health and that good health in turn leads to economic development.

"To deploy a functioning, low-cost, primary health system in a low-income setting requires about \$70 to \$80 per person for a year," he says. "The remarkable fact is that this is too high a price for the poorest countries to pay on their own. ... The point I've been trying to make for 15 years is we need to fill the financial gap. It's not a lot."

Feinberg's Institute for Public Health and Medicine, the Center for International Human Rights at the Pritzker School of Law's Bluhm Legal Clinic and other Northwestern organizations sponsored the symposium.

"The future of global health is an interdisciplinary future," says Osefame Ewaleifoh, a fourth-year PhD/MPH student and one of the event's organizers. "Our goal for this symposium was to bring together experts in economics, law, design and policy, among others, to stimulate a new interdisciplinary conversation on global health."



LEADING ECONOMIST AND UNITED NATIONS ADVISOR JEFFREY SACHS BELIEVES DRAMATIC IMPROVEMENTS IN HEALTH CAN COME FROM SMALL INVESTMENTS.



"Feinberg had an exceptional year in 2015," says Eric G. Neilson, MD, vice president for medical affairs and Lewis Landsberg Dean. "Our scientists produced leading-edge medical research that advanced medical knowledge, and our educational programs admitted an impressive group of students who will lead the next generation of physicians and physicianscientists. We recruited impressive new leadership and continued to add to the ranks of our distinguished faculty, and with our health system partners, we are bolstering our reputation as one of the finest academic medical centers in the country. I can't wait to see what we can achieve in 2016."



PIPELINE PROGRAM FOSTERS MENTORSHIP IN MEDICINE

Students, residents and faculty members from groups underrepresented in medicine kicked off a new pipeline program aimed at preparing medical students for residency and future careers. Northwestern McGaw Underrepresented Residents and Fellows Forum partnered with the Latino Medical Student Association and Student National Medical Association to launch the initiative's first networking event at the beginning of 2015. The goal: to match students with resident and faculty mentors for their professional development and to bring the community of underrepresented medical trainees together.

NEW HEALTH DISPARITIES LECTURE SERIES

In March, students and faculty attended a presentation by David Ostrow, MD, PhD, a leader in lesbian, gay, bisexual and transgender health as part of a new lecture series: Diverse Perspectives of Physician Scientists. Hosted by the Medical Scientist Training Program Student Council, the lecture series aims to foster conversations between researchers and current trainees and share the experiences of those who identify as an underrepresented minority and/or serve populations where health disparities exist.

ship program at Feinberg.

FIRST PT CLINICAL ROTATION IN CHILE

A group of doctor of physical therapy students traveled to Chile for a clinical rotation focused on respiratory therapy. They were the first Feinberg students to take part in the program since Northwestern University and the University of San Sebastian established an academic partnership in 2012. The South American experience broadened the students' skill set. In Chile, unlike in the U.S., physical therapists, or kinesiologos, also take on the role of respiratory therapists.

TRAINING FACULTY AT AFRICAN UNIVERSITIES

Northwestern Medicine mentors will help junior faculty at three universities in Nigeria develop research skills during a five-year program funded by the National Institutes of Health (NIH). The program is part of the NIH's Medical Education Partnership Initiative, which awarded in 2015 more than \$36 million to 11 institutions in sub-Saharan Africa. The region bears nearly a quarter of the globe's disease burden, but has just 3 percent of its health workforce and 1 percent of its research output, according to the World Health Organization and the World Bank.

CME EDUCATION EXPANDS FUTURE OFFERINGS

Feinberg's Office of Continuing Medical Education welcomed its first medical director: Clara Schroedl, '06 MD, '09 GME, instructor of Medicine in the Division of Pulmonary and Critical Care Medicine. In this role, Dr. Schroedl plans to expand and improve current education offerings through innovation and technology and incorporate more diverse teaching methods, including simulation modules, audience response systems and small-group learning.

RESEARCH BREAKTHROUGUS SUPERAGERS EXHIBIT UNIQUE

SUPERAGERS EXHIBIT UNIQUE BRAIN SIGNATURES

Northwestern Medicine scientists found super-aged brains had many fewer fiberlike tangles than the brains of those who had aged normally. While found in moderate numbers in the brains of elderly, tangles increase substantially in the brains of Alzheimer's disease patients. Defined by their remarkable memories, SuperAgers, aged 80 and above, can recall past events with the ease of individuals decades younger. "The brains of the SuperAgers are either wired differently or have structural differences when compared to normal individuals of the same age," says Changiz Geula, PhD, research professor in the Cognitive Neurology and Alzheimer's Disease Center. Published in Neuroscience, this study was the first to quantify brain differences between SuperAgers and normal older people.

Sending messages from the brain to the spinal cord, upper motor neurons play a key role in ALS pathology.

EXPLORING UPPER MOTOR NEURON DEGENERATION IN ALS

For the first time, scientists revealed a mechanism underlying the cellular degeneration of upper motor neurons, a small group of neurons in the brain recently shown to play a major role in ALS pathology. In a study supported by the Les Turner Foundation, published in *Cerebral Cortex* early last year, Northwestern Medicine scientists offered an explanation for why upper motor neurons are vulnerable to degeneration. Developing a new mouse model for studying these cells, they found that increased stress in the endoplasmic reticulum was one culprit of upper motor neurons, we need to develop therapies that improve their survival," says principal investigator Hande Ozdinler, PhD, assistant professor of Neurology.

'SKIPPING' OVER MUSCULAR DYSTROPHY

An RNA editing technique called "exon skipping" has shown preliminary success in treating a rare and severe form of muscular dystrophy — Limb Girdle Muscular Dystrophy Type 2C — that currently has no treatment. Detailed in the October issue of the *Journal of Clinical Investigation*, the research coaxes cells to "skip" over abnormal sections of the genetic code, so that the body can make functional proteins. Lead investigator Elizabeth McNally, MD, PhD, Elizabeth J. Ward Professor of Genetic Medicine, and her colleagues initially conducted studies in fruit flies and mouse models and then in human cells obtained from individuals with the disease. The new therapy is being developed with the goal of clinical trials and eventual commercial treatments. "We recognize that this is version 1.0. But if we can stabilize individuals with this disease, even if it gives them 10 more years of walking, that's huge," says Dr. McNally.

HEART FAILURE CATEGORIES HELP TAILOR THERAPIES

A major challenge in treating chronic medical conditions is that one size does not always fit all. A disease such as heart failure can affect widely variable patient populations. Sanjiv Shah, '00 MD, associate professor of Medicine in the Division of Cardiology, detailed in *Circulation* his process for teasing out distinct categories of one common heart failure syndrome: heart failure with preserved ejection fraction (HFpEF). To better develop personalized medicine strategies, Northwestern Medicine investigators used "big data" tools and "phenomapping" to classify, for the first time, three specific forms of HFpEF. Not only possessing dissimilar clinical characteristics, they also are very different in terms of outcomes, according to Dr. Shah.

ALZHEIMER'S PROCESS STARTS EARLIER THAN EXPECTED

For the first time, lifelong accumulation of toxic protein has been discovered in younger brains. Previous research had suggested that growing clumps of amyloid – an abnormal protein – likely damage and eventually kill memory-related neurons and lead to Alzheimer's disease. The hallmark of this memory-robbing disease, amyloid clumps start accumulating inside neurons of people as young as 20, a much younger age than scientists ever imagined, reported a surprising Northwestern Medicine study. The research was described March 2015 in the journal *Brain*.

CANCER GENES TURNED OFF IN DEADLY BRAIN CANCER

Northwestern Medicine scientists identified a small RNA molecule called miR-182 that can suppress cancer-causing genes in mice with glioblastoma multiforme, a deadly and incurable type of brain tumor. The study, published last spring in *Genes and Development*, used a nanostructure called spherical nucleic acids (SNAs) to safely deliver miR-182 across the blood-brain barrier to reach tumor cells. There it directly targeted multiple oncogenes at once, increasing cancer cell death and reducing cancer cell growth. "SNAs are a very promising platform to silence the particular genes that drive or contribute to cancer progression in individual patients," says senior author of the study Alexander Stegh, PhD, assistant professor of Neurology and of Medicine.

AUDITORY PAIN PATHWAY MAY SAVE HEARING

Our hearing has a secret bodyguard: a newly discovered connection from the cochlea to the brain that warns of intense incoming noise that causes tissue damage and hearing loss. Scientists believe they have identified in animal studies the ear's own novel defensive pain system. "It's very important for your system to have protection from damaging sound," says senior study author Jaime García-Añoveros, PhD, associate professor of Anesthesiology, of Neurology and of

Even the ear knows when to protect itself from damaging noise.

The ability to classify different types of heart failure allows for a more personalized approach to care.



The amyloid clumps of Alzheimer's disease have been found in surprisingly young brains.

Physiology. The research was highlighted in Nature Reviews Neuroscience and published in Current Biology. "When sensory hair cells in the ear die, they are not repopulated. That's why hearing loss is irreversible. You need to be able to detect dangerous sound, the way your nerve cells alert you to the danger of putting your hand on a hot iron."

PANCREAS ON THE 'CLOCK'

The body's circadian clock follows thousands of genetic pathways that dictate how and when our pancreas must produce insulin and control blood sugars, according to research conducted by principal investigator loe Bass, MD, PhD, Charles F. Kettering Professorship in Medicine and chief of Endocrinology in the Department of Medicine. These findings could eventually lead to new ways to manage diabetes. In the study published in the November issue of Science, the Bass laboratory revealed that the clock's transcription factors control genes in the pancreas in rhythm with the planet's daily rotation from light to dark. "This study reinforces the idea that clocks operating in cells are fundamental to health. They represent an important untapped target for improving the functions of cells in the pancreas," says Dr. Bass.

FEINBERG PROGRAMS RISE IN MEDICAL SCHOOL RANKINGS

The 2016 U.S. News & World Report ranking of medical schools featured three of the Feinberg School of Medicine's specialty programs in prominent positions, with women's health ranking 9th, internal medicine 13th and pediatrics 15th in the nation.

NORTHWESTERN MEDICINE HOSPITALS AMONG NATION'S BEST

Three Northwestern Medicine hospitals have been recognized by *U.S. News & World Report* in its 2015-16 ranking of America's Best Hospitals. For the fourth consecutive year, Northwestern Memorial Hospital has been named to the prestigious Best Hospitals Honor Roll, ranking 11th in the nation, 1st in Illinois and 1st in the Chicago Metro Region. Northwestern Medicine Central DuPage Hospital was ranked 6th in both Illinois and the Chicago Metro Region and Northwestern Medicine Lake Forest Hospital was ranked 19th in Illinois and 16th in the Chicago Metro Region.

PRESTIGIOUS ORGANIZATION TAPS FEINBERG LEADER

Serdar Bulun, MD, John J. Sciarra Professor in Obstetrics and Gynecology and chair of the Department of Obstetrics and Gynecology, will be a national resource and advisor on women's health issues as a newly-elected member of the National Academy of Medicine (NAM), formerly the Institute of Medicine. In October, NAM announced the election of 80 new members. Election to the Academy is considered one of the highest honors in the fields of health and medicine and recognizes individuals who have demonstrated outstanding professional achievement and commitment to service.

LEADERSHIP APPOINT VICE DEAN FOR

DIVERSITY AND INCLUSION

In February, Clyde Yancy, MD, Magerstadt

Department of Medicine, was named Vice Dean

for Diversity and Inclusion, a newly created

position at the Feinberg School of Medicine.

medical school's commitment to promoting a

culture of diversity through a coordinated and focused effort. In this role, Dr. Yancy's responsi-

bilities include overseeing a strategic plan for

residents, fellows and faculty from traditionally

offerings of new seminars and lecture series

diversity; engaging and recruiting students,

underrepresented backgrounds; increasing

and enhancing mentoring programs.

This appointment further deepened the

Professor and chief of Cardiology in the



Clyde Yancy, MD

Top to bottom: Thomas Shanley, MD Harris Perlman, PhD Francis Giles, MD







PEDIATRICS GAINED NATIONAL LEADER

In August, Thomas Shanley, MD, a renowned expert in pediatric intensive care, started as chair of Pediatrics at the medical school as well as Founders' Board Centennial Professor and chair of the Department of Medicine at the Ann & Robert H. Lurie Children's Hospital of Chicago. Before joining Northwestern, Dr. Shanley was at the University of Michigan Medical School, where he served as associate dean for clinical and translational research, professor of pediatrics and communicable diseases and director of the Michigan Institute for Clinical and Health Research.

TOP INVESTIGATOR LEADS RHEUMATOLOGY

In September, Harris Perlman, PhD, professor of Medicine in the Division of Rheumatology, succeeded Richard Pope, MD, as chief of Rheumatology. Dr. Pope had led the division for 25 years. A successful investigator, Perlman studies the impact that macrophages, a type of white blood cell, and dendritic cells play in rheumatoid arthritis and systemic lupus erythematosus. His lab also investigates the relationship between systemic inflammation and atherosclerosis, or hardening of the arteries.

CANCER EXPERT APPOINTED CHIEF OF HEMATOLOGY/ONCOLOGY

In October, Francis Giles, MD, was named chief of the Division of Hematology/Oncology in the Department of Medicine. In his new role, he intends to continue to advance the division's clinical, research and academic pursuits. Since joining Northwestern's faculty in 2013, Dr. Giles has led the launch and growth of the Northwestern Medicine Developmental Therapeutics Institute (NMDTI) to give patients increased access to novel therapies. He also started the NMDTI Developmental Therapeutics Fellowship that offers a mentorship environment for clinical investigators.

INFLUENTIAL NEUROSURGEON LEADS NEUROLOGICAL SURGERY

In November, Maciej (Matt) S. Lesniak, MD, became Michael J. Marchese Professor and chair of Neurological Surgery. He was most recently at the University of Chicago Pritzker School of Medicine, where he was a professor of neurosurgery, neurology and cancer biology as well as director of neurosurgical oncology and neurooncology research. He is a renowned neurosurgeon, with a reputation for investigating and carrying out creative approaches to treat adults with both malignant and benign brain tumors.

RENOWNED SURGEON, SCIENTIST HEADS UROLOGY DEPARTMENT

In December, Edward (Ted) M. Schaeffer, MD, PhD, an internationally recognized physician-scientist with deep expertise in urologic oncology, became Edmund Andrews Professor and chair of the Department of Urology. (See story on page 18 to learn more about this exceptional investigator and clinician.)

A better understanding of epilepsy through research could vastly improve treatment options for the millions of patients with this seizure disorder.

NOTABLE ANNOUN CENERAL RECORD-BREAKING GIFT BENEFITS BIOMEDICAL RESEARCH

In 2015, Northwestern University Trustee and alumnus Louis A. Simpson and his spouse, Kimberly K. Querrey, made a \$92 million gift to Northwestern University in support of Feinberg's biomedical research programs. In 2014, the couple made a \$25 million gift to Northwestern. This extraordinary philanthropic support set a new campaign record of \$117.8 million in total giving from a single benefactor. In recognition of their generosity, the new biomedical research center on Northwestern's Chicago campus will be named the Louis A. Simpson and Kimberly K. Querrey Biomedical Research Center.

FACULTY PROVIDE DISASTER RELIEF IN NEPAL

The people of Nepal suffered through a devastating 7.8 magnitude earthquake late last April. Within hours of the natural disaster, Victoria Brander, MD, associate professor of Clinical Physical Medicine and Rehabilitation and co-founder of Operation Walk Chicago, contacted colleagues at the Nepal Orthopaedic Hospital, a 100-bed orthopaedic hospital dedicated to caring for the underserved in Kathmandu. She wanted to figure out the best way to help. A short time later, Dr. Brander traveled with a trauma team to Nepal where they performed specialized surgeries at the hospital and provided medical care to patients at nearby villages.

NEW PARTNERSHIP UNITES ALL FIELDS OF HIV RESEARCH

At Northwestern University, experts in a wide range of medical and academic fields are attacking HIV from all sides. Now, a new five-year, \$6.25 million grant from the National Institutes of Health will help these investigators and others to work together to slow and stop HIV. The funding, from the National Institute of Allergy and Infectious Diseases, is supporting the creation of the Third Coast Center for AIDS Research (CFAR), a partnership between Northwestern University, the University of Chicago, the Chicago Department of Public Health, the AIDS Foundation of Chicago, the Alliance of Chicago Community Health Systems and the Center on Halsted.

UNIQUE COLLABORATIONS TO ADVANCE EPILEPSY RESEARCH

Northwestern Medicine's Institute for Translational Neuroscience announced the launch of a new epilepsy research center. This exciting initiative will bring together the academic medical center's top clinical and research minds in the area of epilepsy, taking full advantage of Northwestern's nationally prominent clinical services for pediatric and adult epilepsy patients to pursue ultra-modern breakthroughs in care.

IPHAM LAUNCHES PRIMARY CARE INNOVATION CENTER

Primary care plays a crucial role in supporting the health and wellbeing of individuals and communities. Focusing on initiatives to improve primary care research, education and clinical care, the Institute for Public Health and Medicine has established a new center: the Center for Primary Care Innovation. Stephen Persell, MD, MPH, associate professor of Medicine in the Division of General Internal Medicine and Geriatrics, serves as the new center's director.

A NEW CENTER FOR BIOETHICS AND MEDICAL HUMANITIES

Kelly Michelson, MD, MPH, '04 GME, was named director of Feinberg's new Center for Bioethics and Medical Humanities. Announced in December, the new center represents a natural evolution of the previous Medical Humanities and Bioethics Program, which has supported interdisciplinary work and reflection on human values in medicine for more than 25 years. It will be listed as one of the centers in the Institute for Public Health and Medicine. Dr. Michelson is an associate professor of Pediatrics in the Division of Critical Care. M

Kelly Michelson, MD, MPH, '04 GME

Victoria Brander, MD, surveys the earthquake damage in Nepal.



New urology chair leads with rare combination of skills

WRITTEN BY: Carolyn Schierhorn PHOTOGRAPHY BY: Bruce Powell

BROADLY SPECIALIZED

The medical profession likes to use the phrase "bench to bedside" when emphasizing the importance of translating basic science research into effective clinical interventions. In contrast, Edward M. "Ted" Schaeffer, MD, PhD, Edmund Andrews Professor of Urology and new chair of the Department of Urology at the Feinberg School of Medicine, describes much of his research on prostate cancer as "bedside to benchtop." Although he studies the disease at a molecular level, his investigations are driven by patient outcomes.

"I've always relied on my patients to inform me about important themes in prostate cancer," says Dr. Schaeffer, who joined Northwestern on December 1 after a distinguished eight-year career on the faculty of the Johns Hopkins University School of Medicine in Baltimore. "I partner with my patients in discovery."

A world-renowned urological surgeon, as well as a leading investigator, he has made groundbreaking discoveries that help explain why African-American men are twice as likely to die from prostate cancer as Caucasian men. These findings dispel the assumption that socioeconomic factors alone account for this racial health disparity. "I noticed that my African-American patients with prostate cancer had more aggressive cancers and more aggressive progression after treatment," says Dr. Schaeffer, who was the director of the prostate cancer program at Johns Hopkins Medicine and a professor of urology, oncology and pathology. "I wasn't sure at first if this was anecdotal or a true phenomenon. So I developed a whole research enterprise around understanding this better."

At a time when the medical community is cautioning against over-treating slowgrowing, or indolent, prostate tumors and recommending surveillance instead of surgery, Dr. Schaeffer has determined that normally nonaggressive prostate tumor types can be considerably more aggressive and lethal in African Americans. His research team has found that in African-American men, the tumors tend to occur in a more anterior location in the prostate, which may account for molecular differences such as decreased reliance on androgen signaling and novel gene fusions in solid tumors. In addition, he and other investigators are starting to pinpoint biomarkers specific to this patient population that may predict the development of aggressive disease.

"The essence of what I do is to try and understand prostate cancer better," he explains. "I'm interested in the molecular biology of aggressive, lethal cancers. And as a subset of that work, I'm focused on studying the unique features of African-American men that make those tumors aggressive."



Similarly, as a urological surgeon, he concentrates on the diagnosis and treatment of men with prostate cancer. Developing an international reputation for the surgical management of the disease, he performed more radical prostatectomies a year than any other urologist at Hopkins. More than two-thirds of his patients came to him from other states and countries.

"My treatment for each man is tailored to the individual person. There isn't a onesize-fits-all solution," says Dr. Schaeffer, who is also a member of the Robert H. Lurie Comprehensive Cancer Center of Northwestern University. "Based on the diagnosis of prostate cancer, we first determine if treatment is needed versus active surveillance. If we decide on treatment, we review the pros and cons of different options. There are some patients who should have an open radical prostatectomy with a traditional surgical approach. And there are others who might be good candidates for a laparoscopic robotic approach."

While his practice and research are very specialized, Dr. Schaeffer's skill set is astonishingly broad, notes Kenneth J. Pienta, MD, a professor of urology at Hopkins. "Ted is one of the few urologists in the world who not only has an active research laboratory but also is active in doing outcomes research and is recognized as an elite surgeon," says Dr. Pienta. "He is a very rare breed."



NEW CHAIR OF UROLOGY DR. EDWARD SCHAEFFER (LEFT) MEETS WITH PRAVEEN THUMBIKAT, PHD, ONE OF THE MANY ACCOMPLISHED RESEARCH FACULTY MEMBERS IN HIS DEPARTMENT.

MAKING HIS OWN WAY

Dr. Schaeffer succeeds his father, Anthony J. Schaeffer, '68 MD, Northwestern's long-time chair of urology. But as a child, the son had no inkling that he would choose a similar career path.

"My father was a urologist at Northwestern but never really brought his work home with him," recalls Dr. Schaeffer, who was born in California and raised in Western Springs, Illinois. "One of the things that I always respected about him was that he was my father at home; he wasn't a doctor at home. So when I was growing up, I didn't know that much about what he did."

Dr. Schaeffer's parents stressed the importance of respecting others, being a good listener and working hard in school. Heeding their advice, he excelled as a student and ended up attending the University of Chicago for his undergraduate and advanced degrees.

"I was always interested in discovery — why things work the way they do," he recalls. "And because of that, I was naturally drawn to the sciences. I liked the biological sciences better than the physical sciences, so I went down that road in college."

He decided to become a physician and was admitted into the University of Chicago Pritzker School of Medicine. In 1997, three years into medical school, he took a leave of absence to study basic science at the National Institutes of Health (NIH) in Bethesda, Maryland, receiving a scholarship from the Howard Hughes Medical Institute. He remained at the NIH for two years, enough time to complete a body of work that could be applied toward a PhD degree in molecular biology.

"Although I was initially studying the immune system, it was during my time at the NIH that I was drawn to urology and, more specifically, prostate cancer," shares Dr. Schaeffer. "In the late 1990s, very little was known about prostate cancer — why it occurred and what made it aggressive. So I decided then that I wanted to become a urologist and a scientist and work to understand the disease."

After completing his MD and PhD degrees at the University of Chicago in 2001, Dr. Schaeffer pursued a urology residency at Hopkins, which, he says, had the leading prostate cancer program in the country at the time. Finishing his training six years later, he joined the Hopkins faculty as an assistant professor, rising quickly through the ranks.

Dr. Schaeffer, who is 43, has more than 180 scientific publications to his name and has received millions of dollars in NIH and other government and foundation funding. He recently was awarded a \$2.5 million NIH grant to study the molecular and cellular characterization of screen-detected and lethal prostate cancer using a multidisciplinary, integrative genomic approach. Building on previous research, the five-year study, which began in October, aims to determine how to better distinguish lethal from indolent prostate cancer in Caucasian and African-American men.

Although he can no longer be the study's principal investigator (PI), as the grant must remain at Hopkins, Dr. Schaeffer continues to lead this research as a co-investigator. "It's his baby; I'm just holding it for him, so to speak" says Dr. Pienta, the grant's new PI. "He'll do all of the heavy lifting."



PROFESSIONAL, PERSONAL GOALS

Thrilled to be at Northwestern, Dr. Schaeffer looks forward to taking what is already one of the top urology departments in the country even further. "It's an 'A' program. And I'd like to take it from an 'A' to an 'A++' program," he says. "I'd like to develop a more highly organized oncology program that integrates the latest genomic testing and molecular therapeutics into treatment planning."

He also intends to give more support to other urologic subspecialties. "The faculty members that we have who specialize in reconstruction, male infertility and kidney stones are all superb," he remarks. "I would like to give them more administrative help to accelerate their programs in their respective fields."

Dr. Schaeffer, who is married and has three children, concedes that work-life balance is more challenging for him than it was for his father, given the constant connectivity of the Internet era. Still, he tries very hard to be a good husband and father, as well as a notable physician-scientist. "I try to pay attention and be observant of successful fathers, successful husbands, successful scientists and successful surgeons," he says. "I try to integrate excellence into my life all the time."

While continuously striving to improve himself, Dr. Schaeffer also gives selflessly of his time. "Although relatively young, Ted has mentored several faculty members through the ranks, helping them establish their careers," says Dr. Pienta. "He did this as an associate professor, which is highly unusual. Most people don't start mentoring until they are full professors.

"That kind of generosity of spirit, especially when he is excelling in so many domains, is an amazing thing to see." M

Delivering Breakthoug

Innovative treatments poised to become tomorrow's standard of care at Northwestern Medicine

Researchers combined gold nanoparticles with small interfering RNAs to knock down an oncogene that is overexpressed in glioblastoma.

Delivering breakthrough cancer and heart treatments

For patients seeking cancer or heart treatment, Northwestern Medicine boasts two innovative organizations working to develop transformative new treatments that have the potential to make dramatic leaps forward in life expectancy and quality of life.

The Bluhm Cardiovascular Institute (BCVI) and Robert H. Lurie Comprehensive Cancer Center of Northwestern University each include formidable teams of tightly integrated experts in research and clinical care. These teams are making astounding progress toward new therapies to address urgent needs. For patients, this expertise can be life-changing – even lifesaving.

"Our patient outcomes and depth of our programs have earned us a place among the top cardiac centers in the nation, but there is still more work for us to do," says Patrick McCarthy, MD, executive director of the BCVI.

In 2015, U.S. News & World Report named Northwestern Memorial Hospital 9th in the country for cardiology and heart surgery. BCVI's Center for Heart Valve Disease aims to become the top U.S. center in this subspecialty by introducing new technologies for visualizing the heart and safer surgical procedures.

Catheter-based approaches for valve surgery are making essential interventions possible for a wider range of patients. Success with transcatheter aortic valve replacement (TAVR) for high-risk patients has propelled BCVI experts to work on gaining regulatory approval to offer the procedure to intermediate-risk candidates.

"Many heart patients are still not well served because the expertise and technology to address their complex conditions don't exist. We are changing that," says James Thomas, MD, new director of the Center for Heart Valve Disease and professor of Medicine in the Division of Cardiology.

ROYAL TREATMENT

Northwestern Medicine's cardiac experts also have pioneered the innovative MitraClip for correcting "leaky" mitral valves. Inserted via catheter into the left atrium, the clip rejoins damaged pieces of the mitral valve to prevent blood regurgitation. The device is currently permitted only for patients with damaged valve tissues. In a different study, investigators plan to introduce MitraClip therapy to patients with severe mitral regurgitation due to an abnormally functioning left ventricle.

Last year, the BCVI launched the TIARA study, named because the replacement mitral valve resembles a mini-tiara. Northwestern is one of only four centers worldwide to offer the trial.

"These initiatives are ushering in a huge change in how people around the world will be treated for valve disease and will eventually become the standard of care," says Dr. McCarthy, who is also chief of the Division of Cardiac Surgery in the Department of Surgery and Heller-Sacks Professor of Cardiac Surgery. "We are reaching the time when we won't have to stop hearts or use heart-lung machines."

Under the direction of Stuart Rich, MD, professor of Medicine in the Division of Cardiology, the new Pulmonary Vascular Disease Program is advancing therapies for patients with pulmonary hypertension. He focuses on repairing the tricuspid valve, sometimes called the "forgotten valve," because it has been understudied and undertreated – until now.

To enable highly precise procedures, Northwestern Medicine researchers and physicians are making astounding progress in cardiovascular imaging. Michael Markl, PhD, Lester B. and Francis T. Knight Professor of Cardiac Imaging and director of cardiovascular MRI research, employs physics and fluid dynamics to capture real-time data about stress on blood vessel walls and disease severity. This sophisticated 4D flow magnetic resonance imaging offers insight into timing of treatments essential in assessment and treatment of aortic valve disease.

The BCVI is enhancing systems to develop a cohesive network to serve its growing number of patients across different locations. For example, in late spring Northwestern Medicine will become the U.S. test center for ValveNet, an automated second review of all valve echocardiograms in the network's city and suburban hospitals.

Crowning Achievement



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Shaped like a mini-tiara, this mitral valve replacement offers another option for heart patients.

"The Bluhm Cardiovascular Institute is an established leader in treating heart disease, but it is also perfectly positioned to add considerably to the future of cardiovascular health and disease through the research, technology and IT infrastructure we've created. Through research, education and treatment we will remain class leaders in heart disease," says Clyde Yancy, MD MS, chief of Cardiology and associate director of the BCVI.

CROSS-EXAMINING CANCER

Over the next decade, the Lurie Cancer Center will transform therapies for patients with a new attack strategy based on the foundation that everyone's cancer is unique.

"Precision medicine" is more than a trendy term — it unlocks potential for tremendous impact by asking "why." Why does cancer form where and when it does? Cancer experts are "interrogating" tumors, like a guilty suspect in police custody who finally spills secrets.

At Northwestern, oncology physicians and scientists are delving into the molecular makeup of malignancies to develop new, more effective treatments. This move from organ-based oncology to

genomic-based care is still in its infancy. Today, there are few effective drugs for tumors caused by genetic abnormalities.

"We work to discover and offer new treatments today that will become tomorrow's standards of cancer care," says Leonidas Platanias, MD, PhD, director of the Lurie Cancer Center, and Jesse, Sara, Andrew, Abigail, Benjamin and Elizabeth Lurie Professor of Oncology.

GENOMICS MAKE A DIFFERENCE

Massimo Cristofanilli, MD, professor of Medicine in the Division of Hematology/ Oncology, joined Northwestern in late 2015 as associate director of Translational Research and Precision Medicine at the Lurie Cancer Center. His mission? To build the OncoSET (Sequence, Evaluate, Treat) program. The unprecedented initiative combines clinical evaluation, radiological assessment and genomic tumor profiling to find the best treatments or clinical trials for patients whose cancers are resistant to traditional therapies. The recently launched OncoSET clinic operates within the Northwestern Medicine Developmental Therapeutics Institute (NMDTI).

"Our formidable team is working extremely hard to create a patient-centered, molecular-based approach to cancer care and demonstrate how this novel integrated approach can change outcomes," says Dr. Cristofanilli. "We expect that some of our findings may become mainstream treatments."

OncoSET will be tightly integrated with the NMDTI, formed in 2014 to accelerate the process of bringing new and better therapies to patients. Deputy Director of the Lurie Cancer Center and NMDTI Director Francis Giles, MB, MD, was recently named

On the Leading Edge



Massimo Cristofanilli, MD Associate Director, Precision Medicine and Translational Research, Lurie Cancer Center



Stuart Rich, MD Director, Pulmonary Vascular Disease Program, BCVI



James Thomas, MD Director, Center for Heart Valve Disease, BCVI

chief of the Division of Hematology/Oncology in the Department of Medicine – a move that further unifies the direction of oncology care, physician training and research.

Other weapons for cancer destruction are being launched. Northwestern recently received a five-year, \$11.7 million grant from the National Cancer Institute (NCI) to use nucleic-acid-based nanoscale materials called spherical nucleic acids (SNAs) to gain access to intracellular environments, discover new aspects of cancer biology and create effective and non-toxic cancer treatments. Exemplifying a multi-disciplinary approach, the new Northwestern Center for Cancer Nanotechnology Excellence (CCNE) continues the strong partnership between the Lurie Cancer Center and Northwestern's International Institute for Nanotechnology (IIN), under the leadership of Chad Mirkin, PhD, George B. Rathmann Professor of Chemistry. In 2016, foundational work between researchers at the Lurie Cancer Center and the IIN will lead to the world's first clinical trial using SNAs to combat glioblastoma multiforme, the most common and aggressive cancer that originates in the brain.

Dr. Platanias sees dramatic leaps ahead in immunotherapies – agents that manipulate the immune system to fight cancers – especially after the FDA last year approved one of the first immunosuppressants to fight lung cancer. He is also determined to form clinical trials to prevent cancer metastasis because no drugs exist specifically to block the spread of cancer cells throughout the body. Cancer stem cells are a major target because they can evade chemotherapy, hibernate and are difficult to control when they reappear.

For breast cancer treatment, William Gradishar, MD, director of the Lurie Cancer Center's Maggie Daley Center for Women's Cancer Care and Betsy Bramsen Professor of Breast Oncology, has great expectations of personalized medicine for patients at all stages of the disease. "By better understanding what's going on in the tumor in real time, we are going to be able to choose therapies that make a difference in patient outcomes. I think this effort will move along rapidly," he says.

DREAM VS. REALITY

The urgent need for effective cancer care clashes with the lengthy time it takes to properly conduct basic research. A reorganization of sorts may help make breakthroughs happen faster.

Now in its first year, the Lurie Cancer Center's Translational Bridge Program fuels the discovery of medical applications during research. Post-doctoral clinical fellows are placed in the labs of outstanding basic scientists to form close working relationships that help elicit innovations in oncology treatment.

Not surprisingly, the NCI has designated the Lurie Cancer Center as a Comprehensive Cancer Center – one of the top cancer centers in the country for patient care, research and education. "In fact, we are also a founding member of the National Comprehensive Cancer Network," adds Dr. Platanias. "So we will continue to drive the practice guidelines in oncology." M Surgical Outcomes and Quality Improvement Center focuses on enhancing patient care WRITTEN BY: Nora Dunne

Measure By 7 Measure



Investigators at Northwestern and all over the world conduct countless studies to determine the best ways to prevent, diagnose and treat medical maladies. There's also a subset of investigators who develop and test innovative solutions to make sure that patients are receiving care that reflects the findings from all that research.

"This effort is about making sure that healthcare providers are actually implementing the best practices that we know about," says Karl Bilimoria, MD, '08 MS, '10 GME, director of the Northwestern Surgical Outcomes and Quality Improvement Center (SOQIC). "Our goal is to ensure that patients get the best possible care, every time."

With a team of more than 30 faculty members, fellows and staff, Dr. Bilimoria conducts research to elevate the quality of care patients receive. He tackled this broad and complex objective in a recent editorial and a series of studies published in the *Journal of the American Medical Association* (JAMA) over the past year.

"We focus on quality improvement in three ways: better measures, better levers and better evidence," says Dr. Bilimoria, who is also John Benjamin Murphy Professor of Surgery in the Division of Surgical Oncology and vice chair for quality in the Department of Surgery.

"Better measures" assess adherence to best practice guidelines – care that patients should ideally receive.

"For example, if you're doing a colon surgery, you should give the patient the correct antibiotic prior to the surgery. You should clean the skin with a certain type of antiseptic," he explains. "We develop measures like those and test them here at Northwestern Memorial Hospital or within our system and then roll them out more broadly across the state."

The SOQIC team also evaluates national strategies meant to encourage clinicians to improve quality — "levers" like public reporting of outcomes and pay-for-performance initiatives. Some of the group's findings have changed how *U.S. News & World Report* and others rank hospitals. For instance, calculations to determine the best hospitals no longer include rates of postoperative blood clots after Dr. Bilimoria published a paper in 2013 showing that the measure was flawed. The problem was surveillance bias: Hospitals that more vigilantly tested for blood clots found more clots and therefore appeared to have higher rates.

With a team of more than 30 no faculty members, fellows and staff, ap Dr. Bilimoria ve conducts research to elevate the quality of care patients receive. th

"Our work found that the measure was not valid – it actually made good hospitals appear to be poor performers and vice versa," he says.

The final aspect of the center's work is developing "better evidence." To do this, the investigators test different approaches to care through trials that randomize hospitals instead of patients.



"We might experiment with two strategies to prevent patients from getting blood clots after surgery in two groups of hospitals," says Dr. Bilimoria. "Maybe the ideal situation is using both strategies but we want to learn which specific parts work best and what are the barriers to implementing them at different hospitals. Which approach is better for small hospitals versus big hospitals, or hospitals with a lot of resources versus those with fewer resources?"

"Hospitals and policymakers have to be nimble. You have to change when you realize there are problems with the quality metrics."

IDENTIFYING PARADOXICAL EFFECTS

A significant finding that has emerged from Dr. Bilimoria's research is that strategies meant to measure and improve quality sometimes have the opposite effect.

"Quality measures can be totally accurate, they can be a little off or they can be paradoxical and actually show you the inverse of quality," Dr. Bilimoria says.

The research team saw the latter when evaluating the Hospital-Acquired Condition Reduction Program, Medicare's pay-forperformance strategy. Initiated in 2010, the program focused on reducing preventable adverse events such as certain infections during hospitalization. Once again, the findings suggested that higherperforming, high-quality hospitals were financially penalized more than lowerperforming ones because of the way quality is measured.

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"That's bad for patients, because you may get led to the wrong hospitals. It's bad for hospitals, because they focus on improving the wrong things. And it's bad for policymakers, because they're penalizing the wrong hospitals," Dr. Bilimoria says.

Is there an easy solution to this paradoxical situation?

"The answer is that hospitals and policymakers have to be nimble. You have to be able to change when you realize there are problems with the quality metrics," he says. "We're hoping to help inspire that change."



"Our goal is to ensure that patients get the best possible care, every time."

DR. KARL BILIMORIA

TESTING RESIDENT WORK HOURS

Dr. Bilimoria just wrapped up a landmark project that could affect thousands of surgical residents — and many more patients. He is the principal investigator of a prospective, randomized national trial that compared current surgical resident duty hour limits to more flexible duty hour policies. Though residents were still limited to an 80-hour work week, the investigators eliminated most other rules: those that limit how many hours residents can work in a row and how much time they need off between shifts.

"Many clinicians believe that you can get better continuity of care with the flexible duty hours, because the doctor who knows you best can take care of you through the critical parts of your hospitalization," says Dr. Bilimoria. "Continuity may also result in better resident training."

Indeed, the results of the study published early February in the *New England* Journal of Medicine showed that less-restrictive duty hour policies for surgical residents were associated with patient outcomes comparable to those with current duty hours. There was also no significant difference in resident satisfaction with their overall wellbeing and education quality.

"Importantly, the residents in the flexible policy group noted that they were able to better care for patients and less likely to have to leave in the middle of an operation or hand off care of patients at a critical time due to duty hour limits," says Dr. Bilimoria.

The new study, dubbed the FIRST Trial, included 151 hospitals across the country.

"We enrolled about 95 percent of eligible hospitals to participate in the trial, which shows us that many in surgery thought that these duty hour limits may be a problem," he says. "We expect the findings to potentially have a huge effect on a very controversial issue and to result in major future policy changes."



MAKING IMPROVEMENTS ACROSS ILLINOIS, AND BEYOND

Challenges in the field of quality improvement include not only figuring out how to gather sound evidence but also learning how to apply what is found to make positive changes. To address that issue, SOQIC members lead the Illinois Surgical Quality Improvement Collaborative. This group of 55 hospitals uses a common data platform to collect and share detailed reports about surgeries performed and their results. Participating hospitals receive tools, including a formal curriculum, coaches and mentors to help them use this information to improve.

"Instead of just measuring quality, Karl critically analyzes the data, separates the signal from the noise and suggests change that will be impactful for the delivery of health care," says Nathaniel Soper, MD, Loyal and Edith Davis Professor and chair of the Department of Surgery. "His efforts are leading to changes in policy, ones that will be more realistic and meaningful."

Dr. Bilimoria gives much of the credit to his SOQIC team: surgeons like Tony Yang, '02 MD, '09 GME, Jonah Stulberg, MD, PhD, MPH, and David Odell, MD, MS, research methodologists like Jeanette Chung, PhD, qualitative researchers like Julie Johnson, PhD, as well as dedicated staff and research fellows.

"We have a talented, experienced team working toward the common goal of quality improvement," says Dr. Bilimoria. "They're doing a great job so that our work can have a meaningful impact locally, regionally and nationally." M

Alumni President's Message



Dear Fellow Alumni:

In my last message to you, I emphasized the importance to Dean Eric Neilson of the active involvement of alums in their alma mater and outlined how the Medical Association Alumni Board (MAAB) is reconfiguring itself to accomplish just that. In November, we held a highly animated and successful MAAB meeting. With the productive discussions we had still fresh in my mind, I'd like to emphasize critical success factors in achieving our goal, in particular: ALIGNMENT.

Alignment with Feinberg priorities: Global health remains a shining example of how interested alums aligned with a strong school program can create something that goes above and beyond expectations. We plan to expand opportunities for the engagement of alums and offer a rich menu from which to choose.

Alignment with staff support: ML Farrell, our director of alumni relations since 2013, moved West with her husband last year to take a similar position at the University of California at Davis. During her tenure at the medical school, ML's energy and insight were critical to our progress and she deserves all our thanks. Babette Nyka,



MEDICAL STUDENTS AND ALUMNI ENJOYED A THRILLING NOVEMBER MATCHUP BETWEEN THE WILDCATS AND THE NITTANY LIONS OF PENN STATE.

ML's successor, is off to a fast start and, with the support of the MAAB, she and her expanded support staff will continue to build on all we have achieved during the past two years.

Alignment with what matters to alums:

Strong alumni pride and Northwestern's increasing leadership and visibility in medical education and research are important to alums and keys to increased engagement. We have email or addresses for well over 90 percent of our MD and GME alums. We know how to contact our alumni and need to make that contact matter.

Alignment with student needs: Current medical students are future alums. Mentoring ranks at the top of alumni interests and is critically important as well to our students. The MAAB Mentoring and Engagement Committees now include representation from outstanding 2nd, 3rd and 4th year students who have already brought forward excellent ideas. On the theory that everybody likes to have fun, 20 students joined MAAB members on November 7 as we watched our Wildcats beat Penn State in a lastminute thriller. Geographic alignment: Our alums and MAAB members reside in a variety of locations across the country. We've made good progress in achieving an MAAB footprint congruent with that of our alums and hope to leverage this national representation with local events. Stay tuned for an event near you.



- Cities with MAAB members
- Cities showing NUFSM alumni density
- States with MAAB members

Please let us hear from you and how you'd like to be involved.

Sincerely,

Bruce Scharschmidt, '70 MD (HPME) Medical Alumni Association Board President

New Director Looks Forward to Reconnecting Alumni

WRITTEN BY: Sarah Plumridge



Babette Nyka joined Development and Alumni Relations at Northwestern University Feinberg School of Medicine as the new director of alumni relations on November 9.

"I am very proud to be at Northwestern, which produces such high-caliber physicians, scientists, physical therapists and physician assistants," says Nyka. "I'm grateful to be a part of such a broad and talented community. I hope to make an impact by strengthening our alumni's ties to their alma mater."

I'm grateful to be a part of such a broad and talented community.

Nyka plans to organize more alumni events nationwide from happy hours and tailgate parties to networking and educational programing.

"I hope to continue expanding our reach within the Northwestern medical alumni network by adding more local and regional events," she says. "We'd also like to engage more young alumni and keep them feeling connected to the school."

Before coming to Northwestern, Nyka was the senior development director at the Cystic Fibrosis Foundation. She provided overall direction for special events and worked with the board and fundraising committees on committee recruitment and sponsorship solicitation.

Previously, she was director of events planning at the Rehabilitation Institute of Chicago (RIC), where she developed strong strategic planning and leadership skills. She oversaw all RIC events including budgeting, vendor negotiations, post-event analysis and overall event execution. Additionally at RIC, she stewarded and cultivated existing and new donors, and provided leadership and oversight of the Women's Board.

Nyka completed her undergraduate education in marketing at the University of Wisconsin at Madison. She currently lives in Lakeview and works for animal causes in her spare time.

Progress Notes

'50s

Noel A. Williams, '58 MD, of Concord, Calif., retired from his medical practice in 1998. He enjoys writing sonnets (he has written more than 200), painting and watching television documentaries. He has several adult children and grandchildren.

Edwin Kellerman, '59 MD, JD, has been teaching an elective course on medical law to medical students at Temple University in Philadelphia.



Stephen Soreff, '69 MD, a teacher at Daniel Webster College, Nashua, N.H., is the president of Etz Hayim Synagogue in nearby Derry and chair of The Forum, an online and print newspaper in the New Hampshire town of Deerfield. He also serves as the president of Education Initiatives, LLC.



Rodrigo Merino, '74 MD, '78 GME, retired December 31, 2013, and has been working *locum tenens* since. He married Lynn in January 2015. Dr. Merino is doing temporary work at Aspirus Healthcare in Wausau, Wisc., and at the University of New Mexico as an assistant professor in neurology. He became president of the Wisconsin Neurological Society on October 28.



Ronald "Ron" Pudlo, '82 MD, has been re-elected to a third term as chief of the Pediatric Service for Cone Health, in Greensboro, N.C. Cone Health is a multihospital healthcare system with one of the largest delivery services in the state, a level 3 NICU, a PICU and a children's inpatient unit. Home of the primary care residency track for the University of North Carolina pediatric residency program, Cone



Health is currently planning a new women and children's hospital.

Dr. Pudlo writes, "I enjoyed watching NU defeat Duke in the football game in Durham this fall. Go Cats!"

Larry Kwak, '83 MD, '84 PhD, inaugural associate director for developmental therapeutics and translational research for the City of Hope's comprehensive cancer center in Southern California is first to hold the title of Dr. Michael Friedman Professor in Translational Medicine. He also serves as director of the Toni Stephenson Lymphoma Center. He was recently appointed to the scientific advisory board at SELLAS Life Sciences Group, a clinical-stage biopharmaceutical company that focuses on novel cancer therapies.

Michael Kuettel, '86 MD, of Buffalo, N.Y., professor and Barbara C. and George H. Hyde Chair in Radiation Medicine at Roswell Park Cancer Institute and the State University of New York at Buffalo, was elected health policy council vice chair for the American Society for Radiation Oncology.

Johnathan Pregler, '88 MD, has been appointed director of operative services for the Westwood Campus of the University of California at Los Angeles (UCLA) Health System. He is a professor of clinical anesthesiology at the David Geffen School of Medicine at UCLA. Dr. Pregler serves on the Centers for Medicare & Medicaid Services (CMS) panel on Hospital Outpatient Payments and has been appointed to the Medicare Coverage Advisory Committee (MEDAC), which provides advice and guidance to the secretary of the Department of Health and Human Services and the administrator of the CMS concerning the adequacy of scientific evidence available for "reasonable and necessary" determinations under Medicare. Dr. Pregler served as president of the California Society of Anesthesiologists from 2012 through 2013.

Michael J. Vasconcelles, '89 MD, senior vice president and global head of the oncology therapy area unit at Takeda Pharmaceuticals International Co., was appointed chief medical officer at Unum Therapeutics in Cambridge, Mass.



Timothy A. Pritts, '95 MD, PhD, was recently promoted to director, Division of General Surgery, at the University of Cincinnati Medical Center. He continues to serve as associate professor of surgery and vice chair for professional development.

Carol D. King, '96 MD, currently chairs the Patient Experience Committee for IHA (Integrated Healthcare Associates), a multispecialty group based in Ann Arbor,



Mich. She serves on the board of the new CIN (Community Integrated Network) for the St. Joseph/Trinity Health System and is also the site medical director of IHA Canton Family Medicine, a rapidly growing practice in southeast Michigan. Dr. King continues to enjoy outpatient family medicine, with a focus on preventive health and the treatment of anxiety and depression. She lives in Plymouth, Mich. with husband Paul and her two daughters. She writes that oldest daughter Maddie, "...has her application in for the NU class of 2020! Go Wildcats!"



Jordan Dubow, '03 MD, '07 GME, vice

president of medical affairs at Cynapsus Therapeutics, was appointed chief medical officer and vice president of clinical and medical affairs at Marathon Pharmaceuticals, LLC, in Northbrook, III.

Maulik D. Majmudar,

'04 MD, is a clinical cardiologist and associate director of the Healthcare Transformation Lab at Massachusetts General Hospital. He



was recently appointed lecturer at Massachusetts Institute of Technology, where he teaches "Healthcare Ventures." In addition, Dr. Majmudar's wife, Salony, completed her residency training in physical medicine and rehabilitation at Spaulding Rehabilitation Hospital.

Clarence Yap, '04 MD, '04 MPH, is currently leading the development of Vosoritide at BioMarin as a potential treatment for achondroplasia, a form of short-limbed dwarfism. Drug studies have yielded positive Phase 2 data reported in June. Dr. Yap and colleagues are preparing for Phase 3 studies.

Alexander S. Strauss, '05 MD, and wife Michele welcomed Bradley Amedeo Strauss on June 20. Dr. Strauss writes, "He joins our son, Matthew Robert



Strauss. I am continuing to work as an adult, child and adolescent psychiatrist and partner at Centra, P.C. in Marlton, N.J., a part of the greater Philadelphia area."

Maria C. Monge, '07 MD, and husband Craig Hall welcomed their first child, a daughter, on April 23. Dr. Monge is the director of Adolescent Medicine at Dell Children's Medical Center of Central Texas and an assistant professor of Medicine at Dell Medical School, UT at Austin.



Neelam Vashi, '08 MD, '09 GME, and husband Eric Secemsky, '09 MD, welcomed daughter Ava Tamara Secemsky on August 28. In addition, Dr. Vashi is the editor and lead author of a recently published dermatology textbook available on Amazon entitled, *Beauty and Body Dysmorphic Disorder*.

Charles "Chazz" Dabbs, '10 MD, '11 MA, and Danielle Fisher Dabbs of Fairborn, Ohio, are the proud parents of Charles Grant and Audrey Hope.



Robert Buckingham, MD, '89 GME,

published his book, Hazing Aging, How Capillary Endothelia Control Inflammation and Aging, in July as a culmination of his



35 years of medical practice.

He shares, "Writing this book has been a game changer for making medicine interesting to me once again. At the same time, it is a useful primer on preventive medicine and how lifestyle choices can be either pro- or anti-inflammatory to our blood vessels and end organs. It has done very well and become an e-book in the top 20 bestseller lists on Amazon for preventive medicine. The writing process has become infectious, as I have written two additional books on capillary inflammation, which will be published in 2016." For more information on Dr. Buckingham's book or blogs, visit: drbuckingham-hazingaging.com.

Hector R. Cajigas, MD, '03 GME, worked at Henry Ford Hospital in Detroit for 12 years after finishing a fellowship in pulmonary and critical care at Northwestern. He returned as a faculty member to Northwestern Medicine on July 1. He is the director of outreach for the Division of Pulmonary and Critical Care and a member of the Advanced Lung Disease Group with special interest in lung transplant and pulmonary hypertension.

Joshua Hutter, DDS, '06 GME, is currently a full-time partner at Western New York (WNY) Dental Group and a clinical instructor at the

State University of



New York at Buffalo (UB) School of Dental Medicine, following his general practice residency at Northwestern Memorial Hospital. He resides in a suburb of Buffalo.

Dr. Hutter currently serves on the board of directors for the Erie County Dental Society and chairs two of its committees; serves on the executive council for the UB School of Dental Medicine Alumni Association and chairs three of its committees; chairs two committees and is a member of the Joint Policy Board for Western New York Dental Group; and is a member of a committee for the 8th District Dental Society. He will soon be a member of the board of directors for the WNY Dental Group, as well as a board member for the Erie County Dental Assistants' Association in 2016. He is the immediate past president of the UB School of Dental Medicine Alumni Association. He also volunteers regularly for the Good Neighbors dental clinic of downtown Buffalo as well as the Food Bank of Western New York.

David Mathison, MD, '06 GME, of Bethesda, Md., was named regional medical director at PM Pediatrics, where he is responsible for leading the development of PM Pediatrics locations in the mid-Atlantic region. He is also assistant professor of pediatrics and emergency medicine at the George Washington University School of Medicine and Health Sciences and a faculty member in the Emergency Department at Children's National Health System.

Michael Salvino, MD, '07 GME, and wife Peggy welcomed their sixth child, Greta, into the world!

Nirav A. Shah, MD, '08 GME, who practices orthopaedic sports medicine and arthroscopic surgery, and Ramille N. Shah, PhD, assistant professor of materials science and transplant surgery at Northwestern University, welcomed baby boy Niam in October. Here he is with his big sister, Sofia. Swati Sehgal, MD, '15 GME, was appointed as a cardiologist at the Children's Hospital of Michigan at the Detroit Medical Center.



Ann (Carrico) Wiley, '93 MPT, married Bob Wiley on August 22. She lives in Longmont, Colo., working as a home-health physical therapist.



Paul Bissler, '09 DPT, and Christine Potempa Bissler of Chicago are the proud parents of Clara Lucille, born April 22.



Paul Beck, '58 DDS, of Palm Desert, Calif., became a certified personal trainer for a gym in Laguna Niguel, Calif., after 38 years in dentistry. Dr. Beck also wrote *Fitness* – *First & Forever* (CreateSpace, 2014).

Kevin Patterson '86 DDS, of LaGrange, III., was elected to the board of directors of the Chicago Dental Society. He represents the south suburban branch and will serve a three-year term. **M**



Progress Notes Awards and Honors





Donald Sherline, '58 MD, was awarded the Georgia Obstetrical and Gynecological Distinguished Service Award in September. Dr. Sherline is the retired Brooks Professor and chairman emeritus of the Department of Obstetrics and Gynecology, and associate professor of Anesthesiology at the Medical College of Georgia, Georgia Regents University in Augusta.

He is also a veteran of both the U.S. Naval Reserve and U.S. Air Force. He and his wife, Sandi, have been married for 56 years and live in Scottsdale, Ariz.



Worldster Lee, '69 MD, a cataract surgeon and ophthalmologist, was recently recognized by Continental Who's Who as a Pinnacle Professional in the field of health care. Dr. Lee is the founder and medical director of the Cataract and Vision Center of Hawaii.



David Skorton, '74 MD, former president of Cornell University and the University of Iowa, was installed as the 13th secretary of the Smithsonian in October.



David H. Aizuss, '80 MD, was re-elected chair for the board of trustees of the California Medical Association and was elected as the delegate representing Los Angeles in the California delegation to the American Medical Association's House of Delegates.



Daniel Ivankovich, '95 MD, '02 GME, an orthopaedic surgeon, was chosen as a 2015 Top 10 CNN Hero. In 2010, he co-founded the nonprofit One Patient Global Health Initiative (http://onepatient.org), designed to establish sustainable programs of outreach, prevention and patient education in Chicago, as well as Haiti. Dr. Ivankovich runs three clinics in Chicago and performs more than 600 surgeries a year. He says more than 100,000 people have benefited from the program. The clinics treat everyone, regardless of insurance.

The Top 10 CNN Heroes were honored on December 6 during, "CNN Heroes: An All-Star Tribute," that was broadcast on CNN's global networks.

Rebecca Parker, '95 MD, attending emergency physician at Vista Health, senior vice president of Envision Healthcare in Oak Brook, III., and president of Team Parker LLC, was selected as president-elect of the American College of Emergency Physicians (ACEP). She also serves as chair of the board of directors for ACEP. Gurpreet Dhaliwal, '98 MD, received a Robert J. Glaser Distinguished Teacher Award for teaching in clinical sciences from Alpha Omega Alpha (AΩA), in cooperation with the Association of American Medical Colleges (AAMC) (See photo below.) This annual AΩA award is presented to two basic science and two clinical teachers who are nominated by a submission to the AAMC from the deans of medical schools. Winners of the award receive \$10,000, their schools receive \$2,500 and active AΩA chapters at those schools receive \$1,000. Schools nominating candidates for the award receive a plaque with the name of the nominee. (*More information online.*)



Ray Hsiao, '00 MD, child psychiatrist and addiction specialist at Seattle Children's Hospital and associate professor and director of the child and adolescent psychiatry residency training program at the University of Washington School of Medicine, was elected president of the Washington State Medical Association.

Michael Fang, '04

MD, founded health information consulting and technology company CETA Inc. (www.cetagroup. com), which was ranked #297 by *INC*



LEFT TO RIGHT: PETER SLAVIN, MD, CHAIR OF THE BOARD OF DIRECTORS OF THE AAMC; RICHARD BYYNY, MD, EXECUTIVE DIRECTOR, ALPHA OMEGA ALPHA; THOMAS KWASIGROCH, PHD, DISTINGUISHED TEACHER RECIPIENT; GURPREET DHALIWAL, MD, DISTINGUISHED TEACHER RECIPIENT; DAVID MULLER, MD, DISTINGUISHED TEACHER RECIPIENT; AND DARRELL KIRCH, MD, PRESIDENT AND CEO, AAMC



5000 magazine in an exclusive ranking of the 5,000 fastest growing U.S. private companies. CETA is ranked as #13 in Illinois and #7 in Chicago. Dr. Fang also received the 2015 Innovation Leadership Award from the Organization of Chinese Americans Chicago.



Bruce Edison, MD, '72, '73 GME, of Houston was named physician of the year by the Retired Physicians Organization of Harris County for his volunteer work in the medical community and the community at large. He has worked with the San José Medical Clinic, served on the board of the Anti-Defamation League and the Emergency Aid Coalition, and is a child advocate. Since his retirement 12 years ago, Dr. Edison and his wife, Reva, have traveled and spent time with their children and grandchildren in Connecticut and Texas.

Wayne N. Burton, MD, '77 GME,

received the 2015 Mark Dundon Research Award from the Health Enhancement Research Organization. The



award honors dedication and commitment to the field of Employee Health Management and acknowledges outstanding achievements in the area of research. Dr. Burton is the global corporate medical director for American Express, based in New York City, and leads the organization's global worksite clinics and behavioral health and wellness initiatives for more than 50,000 employees. He has authored some 100 publications on topics including health promotion, behavioral health, chronic disease, medical and pharmaceutical costs, and medication adherence. E. Dale Abel, MD, PhD, '92 GME, was elected to the National Academy of Medicine (NAM) in October. Dr. Abel is the John B. Stokes III Chair in Diabetes Research,



professor of internal medicine and biochemistry, director of the Division of Endocrinology and Metabolism, and director of the Fraternal Order of Eagles Diabetes Research Center at the University of Iowa Carver College of Medicine. (*More information online.*)

Benjamin Li, MD, '92

GME, director of the MetroHealth Cancer Center in Cleveland, is the recipient of the inaugural Edward G. Mansour, MD, Professorship of

Professorship of Surgical Oncology, established by the Metro-Health System and Case Western Reserve University School of Medicine. As the Mansour Professor, Dr. Li will be able to use the \$1.5 million endowment for research, education

and recruitment or retention of key personnel. Dr. Li was on the faculty at Louisiana State University (LSU) Medical School in Shreveport, La., and served as the director of the Solid Tumor Program at Feist-Weiller Cancer Center at LSU until joining MetroHealth in 2015.

John K. Pontikes, DMD, '03 GME, was recently nominated for the American Dental Association Dr. David Whiston Leadership award. This award is given

to an early-career dentist who is an emerging leader for improving the oral health of the public. He was also selected by his peers as



ship Program in Advanced Orthopaedic Manual Therapy in Hayward and co-owner of Redwood Orthopaedic Physical Therapy in Castro Valley. In June, Farrell received the American Physical Therapy Association's Catherine Worthingham Fellow Award for his sustained efforts to advance physical therapy.

a "Top Doctor" and was featured as one of

Chicago Magazine's January 2016 medical

Charlie, to the family. Big sister Marianna

is head over heels for her little brother.

issue. In addition, Dr. Pontikes and wife

Georgia welcomed their second child,

the best dentists in the Chicagoland area in



Kristin Hartmann Burda, '99 MPT, DPT, (pictured second from right) regional director of Chicago operations for NovaCare Rehabilitation, was pleased to report that NovaCare Chicago was ranked as 11th in the list of the *Chicago Tribune's* "Top Workplaces in 2015" in the small business category. NovaCare Chicago specializes in physical therapy and sports medicine and employs more than 176 individuals at 33 locations in the Chicago area. In 2015, the Chicago Fire soccer team made NovaCare its official physical therapy and athletic training facility. **M**

IHE KIDS HELPING KIDS CLUB

By Cyril Ramer, '60 MD

San Francisco pediatrician Cyril Ramer (second row, left) encourages her "club kids" to enrich their own lives: currently, they are learning administrative skills at her office.

Three of my teenaged patients attended the same alternative high school, and I had agreed to provide a community service experience for them. I had always wanted to sponsor a kids club. Why not have kids helping other kids as the basis for their community service?

At our first meeting, I met the kids with their parents and younger siblings at a small family restaurant. The place was welcoming, as usual. We then started our first formal meeting. Our name: Kids Helping Kids Club.

Cassandra nominated herself for president and everyone knew she'd be great. Amanda then felt confident enough

to nominate herself for secretary, which also was equally applauded. That left Graham for treasurer. Michelle became counselor, and the other parents, Ray and Jackie, became co-assistant counselors.

Azure, Eddy and little Ray were made honorary members. We decided to meet every month.

The kids who seem to have the least are those in foster care. Our first project focused on helping children in foster care. It was decided the kids would find an article on the Internet and present it at the next meeting. The meeting was adjourned.

As we were eating lunch, I felt a hand on my shoulder. I looked up to see a handsome man, charismatic as he apologized for interrupting. He had overheard our meeting and was so pleased. He was a foster child and he talked about the scars he spent the rest of his life overcoming, hopefully successfully, with the help of well-meaning mentors. I asked him to sit with us and tell us what unique problems a foster child has to overcome.

He had spent most of his childhood and early adolescence in a foster home. His foster mother was a nice lady. She had successfully raised two children, then grown, and took in a foster child as a source of extra income. He always knew that. Her expectations were high. Her children behaved, and she expected nothing less from him. He complied. But he never got to do what he wanted. He knew he was different than her children, but he never got a chance to find out who he was.

Foster parents are given an adequate but not generous stipend for their foster child's clothes. He always had enough clothes, but he'd go to school every year in the cheapest clothes in the class. He never had anything that made him feel special. He never felt special. He never felt loved. He longed for love. He would say to his foster mother, "Do you love me?" She'd always reply, "If I didn't love you, I wouldn't keep you." End of discussion.

Everyone was captured and touched by his story. They all were supercharged now. They were going to make a difference!

We've had several meetings since forming our club a year ago and recently created a logo. The kids are volunteering several times a week at a day care center with mostly foster kids, making friendships. Selling brownies was our first fundraiser. The kids enjoy raising money to buy books, toys and other items to enrich the lives of their new friends. All the club members are special needs kids. They're blossoming helping other kids with other special needs. **™**

Passport to Multifaceted Career

WRITTEN BY SARAH PLUMRIDGE

The summer before entering medical school, Claire Panosian Dunavan, '76 MD, '80 GME, met patients suffering from malaria, tuberculosis, tetanus, kwashiorkor (proteincalorie malnutrition) and other diseases of global poverty while volunteering in a rural, missionary hospital in Haiti. This experience piqued her interest in global health and led to a career in tropical medicine.

"It was the first time I had visited a developing country, and it was a real eye-opener. I began to realize that tropical medicine was a rich career path to pursue," says Dr. Panosian. "When I started medical school, people's jaws dropped at the fact that I had just been in Haiti — at the time, it was that unusual. But I had a passion to see the world and learn about different people and places."

Originally focused on liberal arts, this California native was drawn to medicine through high school biology classes and as a hospital volunteer in Santa Barbara. She

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later completed her undergraduate history degree and premedical studies at Stanford University. Attracted to Chicago's urban energy and the warm faculty of Feinberg, she started medical school in 1972. Encouraged by various mentors, Dr. Panosian decided to pursue tropical medicine. During her residency training at Northwestern, she took a year off to study at the London School of Hygiene and Tropical Medicine in England.

"I will always be grateful that Northwestern supported my interests," she recalls. "After I returned from London, I became a local expert on everything from leprosy to neurocysticercosis, a larval tapeworm infection that is a leading cause of epilepsy throughout the world. Both diseases are also seen here in Los Angeles."

Dr. Panosian continued her clinical training in infectious disease at Tufts-New England Medical Center, where she also conducted basic laboratory research on leishmaniasis, a parasitic disease spread by the bite of sand flies. As a child in Turkey, her grandfather suffered leishmaniasis before leaving for the United States.

Since 1984, she has been on the faculty of the University of California at Los Angeles (UCLA). She started as chief of Infectious Diseases at LA County-Olive View Medical Center – LA County's original public TB sanitarium – later joining the Division of Infectious Diseases at Ronald Reagan UCLA Medical Center and launching a clinical and educational program in travel and tropical medicine. In 2005, she co-founded UCLA's Program in Global Health. In 2008, Dr. Panosian also served as president of the American Society of Tropical Medicine and Hygiene, the world's largest professional organization of its type.

Over the course of her career, she has worked in Taiwan, the Philippines, Pakistan, Vietnam, Albania, Armenia and Tanzania, among other countries. Says Dr. Panosian, "It's such a meaningful thing for doctors to participate in overseas healthcare and see modern medicine through a different lens."

GLOBAL HEALTH POLICYMAKING

While at UCLA, Dr. Panosian has collaborated with faculty beyond the medical school, creating and teaching courses for undergraduates majoring in International Development Studies. "I never defined myself too tightly," she says. "After meeting like-minded colleagues in economics, anthropology, law and political science, I realized that I could contribute to global health education both within the medical school and on the main UCLA campus."

Always open to new opportunities, Dr. Panosian was approached in the early 2000s to co-author policy reports for the Institute of Medicine's (IOM) Board on Global Health. The organization tapped her to write about global subsidies for malaria drugs and the need for a U.S. Global Health Corps to support HIV care in Africa.

"Policy is a hugely important piece of healthcare that few medical schools teach," she says. "Working on IOM policy reports broadened my circle of friends and expanded my horizons."

AN EXPERIENCED JOURNALIST

In addition to a career in clinical and academic medicine, Dr. Panosian has worked as a print and broadcast journalist. In the 1980s and 1990s, she spent six years as a medical editor, reporter and co-anchor for Lifetime Television and also co-produced documentaries with husband Patrick Dunavan, an Emmy Award-winning documentary filmmaker.

Her articles and columns have appeared in the Los Angeles Times, New York Times, Washington Post, Scientific American and Discover magazine, among other publications. While writing a weekly syndicated column, called "The Infection Files," for the Media News Group, Dr. Panosian discovered that food-borne infection was an especially popular topic among her readers. In 2014, she decided to write a lay-oriented book about modern food-borne illness and food safety, weaving patient stories and microbiology as well as related aspects ranging from agricultural practices to government regulation. She has now completed close to 150 interviews. If all goes according to plan, *Eat, Drink, and Be* Wary will be published in 2017.

"Food is a dynamic, multifaceted topic that touches all of our lives," she says. "I'm hoping my book will reach a broad audience of fellow cooks, foodies and adventurous eaters at the same time I educate higherrisk patients."

In the future, Dr. Panosian plans to continue writing and also mentoring young physicians who wish to pursue tropical medicine not just overseas but also in Los Angeles, which sees its share of exotic, imported infections.

"In my lifetime, I've witnessed globalization on a scale I never imagined when I first stepped foot in Haiti. Over the last four decades, we've made great advances in beating back global infectious diseases, but if I've learned one thing, it's this: there's always always something new around the corner. Today, more often than not, it eventually lands on our doorstep." M





"PEOPLE'S JAWS DROPPED AT THE FACT THAT I HAD JUST BEEN IN HAITI. BUT I HAD A PASSION TO SEE THE WORLD AND LEARN ABOUT DIFFERENT PEOPLE AND PLACES."



Dr. Meier strives to support her seriously-ill patients on their journey rather than "fixing" them.

> MORE THAN THE CURE

Written by: Janet DeRaleau Diane E. Meier, '77 MD, sees people as either lumpers or splitters. She casts herself into the first category.

Borrowing from the distinction first used by Charles Darwin, Dr. Meier's broad holistic view, rather than a narrow focus, was what attracted her to geriatrics and ultimately to palliative care. It's what confirms her belief that in treating seriously ill patients, the emphasis should not be on prolonging life at all costs but on addressing the needs of the whole person. Helping patients live each day in a way that is meaningful to them is meaningful to her.

"Palliative care is not about fixing things," says Dr. Meier. "It's about recognizing that accompanying people on the journey is as important as giving drugs and doing procedures."

As the director of the Center to Advance Palliative Care (CAPC), a national member-based organization in New York, Dr. Meier has devoted herself to increasing the number and quality of palliative care programs across the country. The number of such programs in U.S. hospitals has more than tripled in the last 10 years under her leadership.

Not to be confused with hospice care, which focuses on the end of life, palliative medicine is care for people with serious chronic illnesses such as cancer, cardiac, pulmonary or kidney diseases, or dementia. A specially-trained team of doctors, nurses, social workers, pharmacists and chaplains work with the patient's doctors to provide an added layer of support. Palliative care assists people, from infants to elders, and their families to better cope with chronic illnesses by relieving symptoms and stress.

Relationships with patients, as opposed to doing procedures, tend to draw clinical providers to the specialty, says the 63-yearold New Yorker. "Palliative care appeals to people who are more nurtured by accompanying patients and their families during one of the most challenging and meaningful stages of their life."

THEN

Dr. Meier's search for this kind of work was neither quick nor easy. Starting her career in internal medicine, she was drawn to the whole-person approach of geriatric medicine and completed a fellowship in 1983. That same year, Dr. Meier joined the Icahn School of Medicine at Mount Sinai as an instructor in the Department of Geriatrics and Adult Development. At the time, the field of palliative care was nonexistent. She was named associate professor in 1990 and later, professor of geriatrics and medicine.

Then in 1994, her department chair at Mount Sinai, Robert N. Butler, MD, who started the National Institute on Aging, suggested she apply for the new Project on Death in America Faculty Scholars program. Despite her assertion that she was too busy, he refused to take "no" for an answer.

"Because of his mentorship and encouragement, in mid-career I found my true calling in palliative medicine," she writes in her biographical story "Finding My Place" published in 2009 in the *Journal of Palliative Medicine*.

At the time, the field was referred to as "end of life," but it became obvious that the term was a misnomer. "Most patients in need of palliative care weren't dying but living for years with significant burdens of chronic illnesses," she says.

In 1997, Dr. Meier and two other physicians started a palliative care

consultation service affiliated with Mount Sinai. She thought they'd be lucky to have 50 consult requests in the first year. She worried that her medical school and hospital peers would think she was doing something "soft" and unimportant. Not only did they exceed 250 consultations but also "our existence as a clinical service seemed to be the catalyst permitting our colleagues to name the problems – their need to acknowledge the suffering of their patients and families and their recognition of the limits of the cure-at-all-costs-focused medical model."

Two years later, the Robert Wood Johnson Foundation approached Dr. Meier and a colleague about developing what is today CAPC.

NOW

Rotations in palliative care expose some medical students to the field early on in their medical careers. At Mount Sinai, it's a one-week immersion. Although short, the experience is a powerful one because it represents what many students envision the practice of medicine to be before they confront the

"The hidden secret in palliative care is the front row seat you get on love, courage, the things that really matter in life."

> Diane E. Meier, '77 MD

realities of clinical practice: moving patients in and out of the hospital, ordering tests and fragmentation among multiple specialists, according to Dr. Meier.

Doctors who pursue this subspecialty are now coming from the top residency programs in the country and many are dually trained in cardiology, oncology and other specialties. Dr. Meier points out that many mid-career physicians, tired of the grind of seeing one patient every 10 minutes, are seeking training in palliative care.

Data now suggest that people who receive palliative care at the same time as disease treatment live longer than those receiving only disease treatment. Researchers think it's in part because patients avoid the risks of hospitalization such as infection. Receiving relief from pain and depression, these individuals also may have more physical and emotional reserves to live their lives. In addition, cancer patients with such support are more likely to complete their chemotherapy and radiation therapy regimens.

On the CAPC website, getpalliativecare.org, Dr. Meier captures the core of her profession: "The hidden secret in palliative care is the front row seat you get on love, courage, the things that really matter in life – the fact that you have time to listen to people, to begin to understand their inner life and be present with that – it's such a huge privilege..."



In Memoriam

Deborah S. Asnis-Kazdin, '81 MD, of Hewlett, N.Y., died Sept. 12, 2015.

Richard C. Boronow, '59 MD, of Ridgeland, Miss., died March 28, 2015.

Berger H. Carlson, '46 MD, of Concord, N.H., died Sept. 14, 2015.

Farrell Dean Curtis, '46 DDS, of Portland, Ore., died April 25, 2015.

Richard A. Dietz, '56 MD, of Middletown, Ohio, died Aug. 30, 2015. John W. Gardner, '54 MD, '55 GME, of East Wenatchee, Wash., died Oct. 11, 2015.

William P. Garred, '51 MD, of Onawa, Iowa, died Nov. 19, 2014.

Davis Henderson, '39 DDS, of Hawthorne, Fla., died April 1, 2015.

Robert S. Huebner, '67 MD, '73 GME, of McCune, Kan., died Nov. 13, 2015.

Alexander J. Javois, '53 DDS, '57 MS, of Palm City, Fla., died May 20, 2015. Susan Anderson Kline, '63 MD, of Minnetonka, Minn., died March 28, 2015.

Warren J. Kraft, '45 MD, of East Wenatchee, Wash., died Nov 4, 2014.

Wilbur A. Lazarus, '38 DDS, of Metairie, La., died April 24, 2015.

Jackson C. Moody, '51 MD, of Silver City, N.M., died Oct. 20, 2015.

Daniel C. Moore, '44 MD, of Seattle, died Sept. 6, 2015. William O. Myers, '55 MD, of Marshfield, Wis., died Aug. 22, 2015.

Charles E. Newton, '60 DDS, of Seneca, III., died May 10, 2015.

Warren H. Pearse, '51 MD, of Ashland, Va., died Nov. 16, 2015.

David T. Petty, '47 MD, of Huntley, III., died April 14, 2015.

Robert J. Pollock Sr., '56 DDS, of Gainesville, Ga., died May 23, 2015. Patricia Rooney, '50 CERT, of Bellevue, Wash., died Oct. 29, 2015.

Michael H. Serio Jr., '60 MD, of Prospect Heights, III., died Nov. 9, 2015.

Dean O. Smith, '54 DDS, of St. Augustine, Fla., died April 21, 2015.

James J. Smith, '63 MD, of Palatine, III., died in September 2015.

Lee A. Smith Jr., '51 MD, of Manchester, Ind., died Oct. 6, 2015. Philip Sokoloff, '73 DDS, of Chicago, died in May 2014.

Edward W. Stilwill, '76 MD, '76 GME, of Traverse City, Mich., died Nov. 15, 2015.

Richard A. Warrner, '62 MD, of Rockford, III., died Nov. 29, 2014.

Douglas Whelpley, MD, '77 GME, of Dallas, died Oct. 5, 2015.

James McAdams Williams, '56 MD, of Hamden, Conn., died Sept. 13, 2015.

Upcoming Events



MARCH 22, 2016 Germ Cell Biology: Forming and Protecting the Next Generation

Robert H. Lurie Medical Research Center, Hughes Auditorium, 303 E. Superior Street, Chicago. For more information, call 312-503-5600.



APRIL 6, 2016

R3 Data Club: Hunter Rogers: Ex Vivo Study of Placenta

Robert H. Lurie Medical Research Center, 10-123, 303 E. Superior Street, Chicago. For more information, call 312-503-2504.

APRIL 7, 2015

12th Annual Lewis Landsberg Research Day

Northwestern Memorial Hospital, Conference Center, Feinberg Pavilion, 251 E. Huron Street, Chicago. For more information, call 312-503-1499.

APRIL 15, 2016

Pediatric Pearls: Skin Disorders Double Tree by Hilton, 1909 Spring Road, Oak Brook. For more information, call 312-227-7411. *5.50 AMA PRA Category 1 Credits*[™] are being offered.



MAY 5, 2016 Center for Community Health Writing Manuscript Retreat Arthur Rubloff Building,

Artnur Rubion Building,
11th Floor – Lakeview Conference Room,
420 E. Superior Street, Chicago.
For more information, contact
cch@northwestern.edu

MAY 12, 2016 22nd Annual Alzheimer Day

Northwestern Memorial Hospital Conference Center, Feinberg Pavilion 251 E. Huron Street, Chicago. For more information, call 312-908-9023.

MAY 18, 2016

New Approaches to an Old Disease: Therapeutic Discovery for Heart Failure Robert H. Lurie Medical Research Center, Baldwin Auditorium, 303 E. Superior Street, Chicago. For more information, call 312-503-0344.





Surgery Pioneer Boldly Led the Way

Waiting for a diseased appendix to rupture was once the standard of care. That is until John Benjamin Murphy, MD, professor of Surgery at Northwestern and chief of Surgery at the medical school's first teaching affiliate, Mercy Hospital, from 1895 to 1916, upended this conventional wisdom. He advocated early surgical intervention and held the profession responsible if physicians failed to act.

A charismatic figure, Dr. Murphy's often controversial opinions put his colleagues and peers into two camps: those who loved him and those who loathed him. Early in his career, his colorful personality led to his rejection for membership in the Chicago Medical Society and American Surgical Association. Both groups eventually relented: Dr. Murphy later became president of the former, belated member of the latter and also president of the American Medical Association. Read more about this notable faculty member in the magazine's history blog at **magazine.nm.org.**



NM Health System Broadens Reach

Northwestern Memorial HealthCare (NMHC) welcomed KishHealth System as the newest member of Northwestern Medicine in December. With the addition of Kishwaukee Hospital in DeKalb and Valley West Hospital in Sandwich, Northwestern Medicine expands to six hospitals, 90 sites of care and more than 26,500 professional and ancillary staff as well as volunteers across eight Illinois counties. Additionally, Marianjoy Rehabilitation Hospital, a 127-bed nonprofit rehabilitation and teaching hospital in Wheaton, will soon join Northwestern Medicine. NMHC and Wheaton Franciscan Healthcare signed a Letter of Intent last fall.



Lots of Laughs for Worthy Cause

At Feinberg's 37th annual student sketch comedy show, In Vivo, students satirized the medical school experience by spoofing the comedy series "Saturday Night Live" to raise funds for Chicago Youth Programs. Proceeds from the November 14 show went to the non-profit organization created by Northwestern medical students in 1984 to provide mentoring and other activities to at-risk youth in underserved communities. The event raised more than \$3,500.





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