Spring 2015 Volume 02, Number 02

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

Game Changer for Epilepsy

New center develops unique collaborations to advance epilespy research

Joining Forces for



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A TO A CONTRACT OF A CONTRACT

DAISY HASSANI SHED JOYFUL TEARS ON MATCH DAY AFTER SHE LEARNED THAT SHE MATCHED AT CASE WESTERN UNIVERSITY MEDICAL CENTER IN OBSTETRICS AND GYNECOLOGY. MORE THAN 62 PERCENT OF THE FEINBERG SCHOOL OF MEDICINE'S CLASS OF 2015 MATCHED AT THE TOP 25 *U.S. NEWS*-RANKED MEDICAL SCHOOLS THIS YEAR.

Northwestern Medicine

Magazine

SPRING 2015 VOLUME 02, NUMBER 02 MAGAZINE.NM.ORG

Northwestern Medicine Magazine is published quarterly for 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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02 Northwestern Medicine Leadership Message

Progress on the We Will Campaign

Campus News

- 03 Yancy Named Vice Dean for Diversity and Inclusion
- 04 Celebrating Match Day 2015
- 06 Faculty Awards and Honors
- 07 Remembering Dr. Andy Parsa
- 08 Highlights of Gifts to We Will Campaign
- **Research Briefs** 10
- Media Highlights 12
- 14 Features

Ward Rounds (Alumni) News

- 26 Alumni Board President's Message
- 27 Alumni Weekend 2015
- 30 Progress Notes
- 34 Progress Notes Awards/Honors
- 36 "A Changing Paradigm in Global Health" by Valerie Bengal, '80 MD
- 37 Alumni Dreams Come True as Global Health Nonprofit Gains Momentum
- 40 In Memoriam and Upcoming Events

GAME CHANGER FOR **EPILEPSY**

10

New Center Develops Unique Collaborations to Advance Epilepsy Research

P.18

MOVING BEYOND CANCER

The impossible is possible when cancer survivors are monitored by knowledgeable medical professionals

р.14

MAGAZINE.NM.ORG: ____ Additional Content Online

O Image Slideshow 1 Video

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COVER ART: Image created using a 3-D pen depicts

cortical interneurons derived from epileptic patients grown in a lab petri dish. They form an elaborate

network of interacting processes that allows them



JOINING FORCES FOR

DIGESTIVE HEALTH



Northwestern Medicine Leadership



With the transformative Simpson-Querrey naming gift for our new biomedical research building (see page 12), we have passed the \$1 billion dollar mark in We Will. The Campaign for Northwestern Medicine. Through the campaign, Northwestern University Feinberg School of Medicine and Northwestern Memorial Foundation are working together to raise \$1.75 billion to provide crucial resources that will increase innovation and excellence across the academic medical center. Our \$1.75 billion goal is a significant proportion of the University's overall goal of \$3.75 billion. The gifts to date, large and small, are changing the fabric of our school and academic medical center.

The new research building is part of an overall plan to double the size of our research footprint and funding. Compared to peer institutions, our space and number of research faculty are relatively small. This building will provide state-of-the-art facilities to recruit the best and brightest investigators for the next decade.

Endowed professorships and start-up funds have made it possible to recruit international leaders in a variety of areas, including Susan Quaggin, MD (nephrology), Dimitri Krainc, MD (neurology), Andy Parsa, MD, PhD (neurosurgery), Beth McNally, MD, PhD (genetic medicine), Al George, MD (pharmacology), and Ali Shilatifard, PhD (biomedicine). In addition to their own laboratory programs, these Northwestern Medicine pacesetters have either brought with them or recruited new junior faculty to serve as role models for our trainees and become the leaders of tomorrow.

Endowing scholarships is another major goal. At the start of the Campaign in 2012, we had \$113 million in endowment for scholars. Today, we have \$142 million in endowment. Our aspirational goal is to someday be able to provide scholarship support for every student requiring it, so that need will never keep a meritorious student from attending the Feinberg School of Medicine.

Another campaign focus has been the build-out of the Institutes of Northwestern Medicine. In the first year, we kicked off the Heart Institutes, comprised of the Northwestern Bluhm Cardiovascular Institute and Feinberg Cardiovascular Research Institute. The latter is developing collaborative, thematically based research centers in Heart, Translational Vascular Biology, and Kidney Diseases and Cardiovascular Health. In Oct. 2014, we launched the Institute for Translational Neuroscience, with new centers either developing or expanding in Alzheimer's disease, "rare" neurologic diseases, amyotrophic lateral sclerosis (ALS), epilepsy (see cover story on page 18), and others.

This fall, we plan to launch our Cancer Institutes within the Robert H. Lurie Comprehensive Cancer Center of Northwestern University. The Oct. 22 event will feature the faculty and projects that are distinguishing our nationally recognized cancer center.

All of the institutes are umbrella organizations, bringing together the people, resources and vision for the integration of clinical care, research, education, community service and advocacy.

In the clinical arena, a We Will priority is funding construction of the new Northwestern Medicine Lake Forest Hospital, a 483,500-square-foot, state-ofthe-art facility on which we broke ground last August and recently began laying the foundations. To date, an impressive \$37 million has been raised against a capital and program goal of \$75 million in support of this beautiful hospital that will raise the bar by bringing even more highly sophisticated clinical care to Lake County when it opens in summer 2017.

In addition, a new campaigns was recently launched in support of the Northwestern Medicine Comprehensive Transplant Center, which celebrated its 50th anniversary in 2014. A \$10 million endowment is needed to support continued progress in transplant research, patient care and outcomes that will shape the future of transplantation. And to commemorate the 10th anniversary of the Bluhm Cardiovascular Institute, which has ascended to #13 in U.S. News & World Report's 2014-2015 "Best Hospitals" list, we have launched a campaign to support the future of the institute and its patients. By establishing a robust endowment, we will be able to continue to support our cutting-edge research, recruit and retain the best and the brightest experts and provide outstanding clinical care.

The Campaign also has made possible the initiation of a new Corporate Engagement unit at Feinberg. Increasingly, the interaction between academics and industry will determine our success in generating new drugs and medical devices. Feinberg is reaching out to industry to establish collaborations and drug development programs. The most successful blockbuster drug ever to come from academics is Lyrica, the invention of Northwestern University's Professor Richard Silverman. Industry partners can help deliver our life-changing discoveries to the marketplace.

The first three years of the Campaign have changed the medical school and our academic medical center, forever altering the trajectory in clinical care, education and research. But we have a great deal of work ahead of us as we pick up momentum. The Campaign will permit further advances in all of these areas as Northwestern Medicine takes its place among the elite biomedical enterprises in the world.

With warm regards,

Eric G. Neilson, MD Vice President for Medical Affairs and Lewis Landsberg Dean

Dean M. Harrison President and CEO Northwestern Memorial HealthCare

Campus News

Yancy Named Vice Dean for Diversity and Inclusion

WRITTEN BY: Nora Dunne

Clyde Yancy, MD, Magerstadt Professor and chief of cardiology, has been named vice dean for Diversity and Inclusion, a newly created position at Northwestern University Feinberg School of Medicine that deepens the commitment in a growing community of students, residents, fellows and faculty.

"Dr. Yancy is an experienced and trusted leader whose outstanding accomplishments in academic medicine are ideally paired with a passion for promoting a culture of diversity," says Eric G. Neilson, MD, vice president for Medical Affairs and Lewis Landsberg Dean. "At the medical school, we are dedicated to growing all human potential across a broad spectrum of endeavors, from educating future students and physicians to clinical practice serving a growing diversity of patients as well as important health problems needing more academic study. Clyde will help us realize that commitment while enriching our values at Feinberg."

The vice dean for Diversity and Inclusion is responsible for growing new programs at Feinberg and supporting existing efforts through the Office of Diversity, the McGaw Diversity Council, and the school's relationship with National Medical Fellowships, a nonprofit organization dedicated to improving the health of low-income and minority communities by increasing the representation of minorities in health care.

"As a leading academic medical center in the United States, Northwestern must be outstanding in all dimensions of contemporary medical science and health care. Among the most distinguishing attributes of leading academic medical centers is a strong and palpable presence of diversity," explains Dr. Yancy. "We have much in play already in the diversity space, but we've not yet seen the benefit of a coordinated and focused effort. Northwestern, as a Chicago-based institution, has the opportunity to parallel the richness of culture that this great community provides."

In his new position, Yancy will develop a strategic plan for diversity; assist in the engagement and recruiting of faculty, fellows, residents and students from traditionally underrepresented backgrounds; build a Feinberg School of Medicine Diversity Council; increase offerings of new seminars and lecture series; and enhance mentoring programs.

"My goals are simple: to foster a receptive culture, grow diversity and further strengthen our institution. Through increased diversity we will benefit from a deeper talent pool, a broader idea base and an environment where everyone feels welcomed, including our



students, faculty, staff, care providers, investigators, physicians and especially our patients," Dr. Yancy says. "This is as it should be for a leading academic medical center."

Yancy will continue to serve as chief of medicine-cardiology, professor of cardiology and medical social sciences, and as associate director of the Bluhm Cardiovascular Institute. He joined the faculty in 2011, after serving as chief of cardiothoracic transplant services and director of the Baylor Heart and Vascular Institute at Baylor University. Dr. Yancy is also a former president of the American Heart Association (AHA). In 2014, he received the AHA's Gold Heart Award, the organization's highest honor, one of many awards that has marked his career to date.

Dr. Yancy received his medical degree from Tulane University School of Medicine in New Orleans in 1982 and completed postgraduate training in internal medicine and cardiology at Parkland Memorial Hospital and the University of Texas Southwestern Medical Center in Dallas, where he received his first faculty appointment in 1989. His academic and professional interests include cardiomyopathy, heart failure, hypertension, preventive cardiology, quality of care and ethnic and racial disparities in cardiovascular disease, topics on which he has authored more than 350 publications.

Writing on the Wall: Match Day 2015

WRITTEN BY: Sarah Plumridge PHOTOGRAPHY BY: Randy Belice

See the Match Day 2015 video and slideshow online at *magazine.nm.org.*

×

By the Numbers

% OF TOP SPECIALTIES CHOSEN BY FEINBERG STUDENTS

Waiting with their peers at Gino's East in Chicago (where the walls are laden with happy graffiti) to learn the results of their residency matches, Teresa Gomez and her fiancé Manuel Bramble described the process of learning where they will match as a "roller coaster." Match Day is held on the third Friday of March at medical schools across the country; all at once, students find out where they will spend the next three to six years as residents.

"There were some pretty tense conversations about where we wanted to be geographically. Our families are situated about 3,000 miles apart, so we knew that we could only be close to one person's family during residency," says Bramble. "The match

This year, an all-time high of 1,035 couples participated in The Match with a 94.8% match rate.

process has put our patience and communication to the test; but in the end I think it really reinforced our commitment to each other."

At 11:30 a.m., Bramble and Gomez opened their envelopes; Gomez matched at University of California San Francisco in Family Medicine, and Bramble at Children's Hospital Oakland in Pediatrics.

Bramble and Gomez met before their first year of medical school, during Feinberg's Second Look event for accepted medical school applicants and started dating two months into the year. They plan to marry in May.

This year, an all-time high of 1,035 couples participated in the match with a 94.8 percent match rate. Participants who enter the match as a couple agree to have their lists of preferred residency programs linked so they can try to match to a pair of programs that suits their needs.

More than 93 percent of U.S. medical school seniors matched to residency positions this year, and the total number of match registrants topped 41,000, the largest number on record, according

to the National Residency Matching Program (NRMP).

"It feels surreal and humbling," says Brandi Jackson. "It's deeply moving to know that my journey as a medical student is over and my journey as a doctor is just beginning. It's one of those pivotal, life-defining moments that you can only experience once."

Jackson matched at University of Illinois College of Medicine in Psychiatry. When creating her rank list, she prioritized the culture of a program.

"I knew that the people are what would make or break a residency program. I knew I needed people who were warm, happy, diverse and enthusiastic," Jackson explains. "They needed to have different worldviews than me. They needed to be happy with themselves and have a sense of humor."

Conducted by the NRMP, matches are made by using a computerized mathematical algorithm to align the preferences of applicants with the preferences of residency program directors to fill the training positions available in U.S. teaching hospitals.

"All the work and dedication from your entire education has led you to this moment," says Paul Devlin, who matched at Northwestern in Cardiothoracic Surgery.

"Medical school teaches you a framework and how to think clinically, but you also learn how much it is that you don't know—but will learn during your residency and career. I'll always look back on my time at Feinberg fondly; I wouldn't have traded it for anything," Devlin says. M

% OF TOP STATES FOR TRAINING CHOSEN BY FEINBERG STUDENTS





62% Percentage of Feinberg students who matched at the Top 25 U.S. News-ranked medical schools in 2015 Percentage of Feinberg students who

24%

Internal Medicine



Pediatrics

0.6% 10% 9.5% Emergency Medicine, Transitional

7.6%

Medicine Preliminary

Orthopaedic Surgery, **Diagnostic Radiology**





California





Massachusetts





THERE WAS A SWELL OF EMOTION AS FOURTH-YEAR STUDENTS AT FEINBERG LEARNED TO WHICH RESIDENCY PROGRAMS THEY MATCHED IN MARCH. THE CLASS OF 2015 EVENT WAS CELEBRATED WITH PEERS AT GINO'S EAST IN CHICAGO, WITHIN HAPPY GRAFFITI-LADEN BRICK WALLS. FROM LEFT TO RIGHT, STUDENTS PICTURED INCLUDE ADINA GOLDBERGER AND ADARSH MANJUNATH, TOM WANG WITH GIRLFRIEND ANNA (NOT A STUDENT), AND EMILY HALL WITH **BOYFRIEND JERRY (NOT A STUDENT).**

CAMPUS NEWS

Faculty Awards and Honors

More Awards and Honors are online at *magazine.nm.org.*

Lifang Hou, MD, PhD, chief of cancer epidemiology and prevention, associate professor of preventive medicine and a member of the Robert H. Lurie Comprehensive Cancer Center of Northwestern University, has been appointed co-director of International Relations for the Lurie Cancer Center.

Dr. Hou joined Northwestern in 2007

after serving as research associate at the National Cancer Institute. Her research focuses on identifying molecular biomarkers that may predict cancer risk, progression and mortality in various populations, thus providing potential tools for early cancer detection and prevention. Dr. Hou has globally collaborated with researchers to study populations within and beyond the United States, including Africans, African Americans, Asians, Caucasians and Latinos, and is currently expanding her research to the Arabic populations.

Arnold "Arnie" L. Widen, MD, '55, '59 GME,

associate professor in medicine, received the American College of Physicians' (ACP) 2015 Outstanding Volunteer Clinical Teacher Award. The honor is bestowed upon a fellow of the College who demonstrates outstanding teaching prowess, displays exemplary characteristics of care and concern for individual



patients at the bedside, and serves as a role model and mentor.

Dr. Widen says that teaching and the direct and personal care of patients have been the most fulfilling and significant aspects of his professional life. He truly believes that he has received more than he has given.

His previous honors include the Lifetime Achievement Award of the Institute of Medicine of Chicago, the Serafino and Visionary Awards from CommunityHealth, the Russe Citation for Exemplary Compassion in Healthcare, the Community Service Award from Rainbow/Push, and the Aesculapian Award of the Chicago-area Anti-Defamation League.

Darius Tandon, PhD, associate professor of medical social sciences and associate director of the Center for Community Health in the Institute for Public Health and Medicine, was named the editor-inchief of the quarterly journal, *Progress in Community Health Partnerships*.



Alpesh A. Patel, '00 MD, FACS,

associate professor in orthopaedic surgery, director of orthopaedic spine surgery, director of the fellowship in spine surgery and co-director of the Northwestern Spine Center, is one of only five orthopaedic surgeons in the country to be awarded the highly



selective and prestigious 2015 American Orthopaedic Association's American-British-Canadian (AOA-ABC) Traveling Fellowship. This program recognizes young leaders for their early contributions to orthopaedics, while identifying and promoting their leadership skills.

Dr. Patel and his colleagues will travel to the United Kingdom, South Africa and New Zealand to meet with global leaders in orthopaedic surgery. He will provide expertise on cervical spine disease, minimally invasive surgery and clinical outcomes research.

David Baker, MD, MPH, Michael A. Gertz Professor of Medicine and chief of the Division of Medicine-General Internal Medicine and Geriatrics, has been appointed executive vice president at The Joint Commission, overseeing the Division of Healthcare Quality Evaluation. He will maintain an appointment with Feinberg as an adjunct professor.



Dr. Baker has dedicated his career to improving population health, focusing primarily on understanding disparities in healthcare delivery and quality of care for chronic medical conditions. He has received many honors and awards, including the Alvan R. Feinstein Memorial Award presented by the American College of Physicians for his major contributions to clinical epidemiology. His research includes more than 200 peer-reviewed publications and multimillion-dollar grants. He is also the principal investigator of the grant that established the Center for Advancing Equity in Clinical Preventive Services. Earlier this year, he published the most complete and up-to-date picture of racial/ethnic disparities in U.S. colorectal cancer screening rates.

Under his leadership, Northwestern Medicine's geriatrics program was ranked number 11 in the country by *U.S. News* and *World Report* last year.

Remembering Andrew Parsa, MD, PhD, chair of Neurological Surgery

WRITTEN BY: Nora Dunne

Andrew Parsa, MD, PhD, a groundbreaking neurosurgeon and scientist whose work provided landmark insights on brain tumor immunology, passed away suddenly on Monday, April 13. He was 48.

Dr. Parsa, the Michael J. Marchese Professor and chair of the departments of Neurological Surgery at Feinberg and Northwestern Memorial Hospital, was internationally renowned for his specialization in complex tumors of the brain and spine. He was also a well-respected leader, colleague and educator.

"We are all shocked and saddened by this great loss. Andy was a distinguished scholar, an extraordinarily talented surgeon and a dedicated mentor to students and faculty alike," says Eric G. Neilson, MD, vice president for Medical Affairs and Lewis Landsberg Dean. "He was a pioneering neurosurgeon and an innovative investigator who pushed the boundaries of scientific understanding. His presence will be sorely missed within the Northwestern Medicine community and across the country."

Many research accomplishments marked Dr. Parsa's career, including the identification of a novel link between oncogenesis and immune-resistance in brain tumors. He was principal investigator of the largest randomized brain tumor vaccine trial to be funded by the National Cancer Institute. Last July, his team released the study's phase 2 results, showing that an experimental cancer vaccine helps patients with glioblastoma multiforme live longer. He was also leading a trial testing a new adaptive hybrid surgery technology to safely remove rare brain tumors.



ANDREW PARSA, MD, PHD, CHAIR OF THE DEPARTMENTS OF NEUROLOGICAL SURGERY AT FEIN-BERG AND NORTHWESTERN MEMORIAL HOSPITAL, WAS A RESPECTED LEADER, COLLEAGUE AND EDUCATOR, AS WELL AS A PIONEERING SURGEON-SCIENTIST.

> Known for his personable management style and indefatigable work ethic, Dr. Parsa performed about 300 surgeries each year, while also conducting trials and training students and residents.

> "Andy's dedication to his patients made him a role model not just among physicians but for all of us who were privileged to have worked with him," says Dean M. Harrison, president and CEO of Northwestern Memorial HealthCare. "Though his legacy will continue to inspire us for many years, his passing has been felt deeply across Northwestern Medicine."

Born in Brooklyn, N.Y., Dr. Parsa earned his undergraduate degree in molecular biophysics and biochemistry at Yale University. In 1996, he completed medical and graduate degrees at Downstate Medical Center in Brooklyn, where he initiated one of the first vaccine studies for brain tumor patients. He finished an internship and residency in neurological surgery at Columbia University in 2002.

Prior to joining the Feinberg faculty in 2013, Parsa spent more than a decade at the University of California San Francisco, rising to professor and vice chair of the Department of Neurological Surgery. There, he helped pioneer an approach of adaptive hybrid surgery for skull base tumors, and was also recognized for his work in education, winning multiple awards, including the Medical School Mentor of the Year.

In addition to his roles in Neurological Surgery, Dr. Parsa was a professor in Feinberg's Ken and Ruth Davee Department of Neurology and co-Leader of the Translational Research in Solid Tumors Program at the Robert H. Lurie Comprehensive Cancer Center of Northwestern University. He published more than 300 peer-reviewed articles, reviews, chapters and monographs during his career.

Dr. Parsa is survived by his wife Charlotte Shum, MD, associate professor of orthopaedic surgery, and their three children, Julia, Micheline and Ismail.

A service to honor the memory and contributions of Dr. Andy Parsa was held on the Chicago campus on Friday, April 17. M

We Will. The Campaign for Northwestern Medicine



THE LARGEST CONTRIBUTION TO DATE FROM ALUMNUS LOUIS A. SIMPSON AND HIS WIFE KIMBERLY K. QUERREY FOR BIOMEDICAL RESEARCH PROGRAMS. NEW RESEARCH FACILITY WILL BEAR THEIR NAMES. (SEE PAGE 12.)

14,000+ \$1+ BILLION 58%

\$1.75 GOAL

BILLION

DONORS HAVE HELPED US SURPASS

\$92M

AS OF APRIL 30, WHICH IS

OF THE CAMPAIGN GOAL Global Health

550

MEDICAL STUDENTS AND RESIDENTS HAVE RECEIVED SUPPORT TO TRAIN IN 36 LOW-RESOURCE COUNTRIES AROUND THE WORLD WITH SUPPORT FROM THE GLOBAL HEALTH INITIATIVE FUND. \$4.3M \$800M \$1M+ 82% \$8.5M





\$830K

Scholarship

41

TOTAL CONTRIBUTIONS FROM FACULTY GIVING

NEW PROFESSORSHIPS ADDED TO REACH 157 CURRENT TOTAL. THESE PRESTIGIOUS FACULTY POSITIONS REPRESENT THE HIGHEST HONOR BESTOWED BY THE UNIVERSITY. \$37M (OF \$75M GOAL) RAISED TO DATE FOR CONSTRUCTION OF THE NEW 483,500-SQUARE-FOOT NORTHWESTERN MEDICINE LAKE FOREST HOSPITAL, A STATE-OF-THE-ART FACILITY TO OPEN IN LAKE COUNTY IN SUMMER 2017.

Research

HAS BEEN CONTRIBUTED BY MD ALUMNI THROUGH REUNION AND CLASS GIVING INITIATIVES.

ENDOWMENT NEEDED TO PROVIDE FULL-TUITION SCHOLARSHIPS TO ALL STUDENTS IN NEED. CURRENT ENDOWMENT IS \$142 MILLION.

THE BRUNO EPSTEIN CLASS OF 1955 SCHOLARSHIP IS THE FIRST MEDICAL SCHOOL SCHOLARSHIP ENDOWED BY A CLASS TO EXCEED \$1 MILLION.

OF THE CLASS OF '55 HAVE PARTICIPATED IN SCHOLARSHIP GIVING. CLASS OF '64 - 64%; CLASS OF '63 - 58%; CLASS OF '59 - 56%; CLASS OF '60 - 55%

NEW COMMITMENT FROM NORTHWESTERN ALUMNI MUNEER SATTER AND KRISTEN HERTEL TO FORTIFY SATTER FOUNDATION SCHOLARSHIP PROGRAM. ORIGINALLY CREATED IN 2008, THE PROGRAM HAS PROVIDED FULL-TUITION SUPPORT TO 18 OUTSTANDING SCHOLARS AT FEINBERG. ⁻\$10M

\$1M

\$2M+

ANONYMOUS DONORS MADE GENEROUS GIFTS TO ESTABLISH A FELLOWS FUND AND FOOD ALLERGY RESEARCH INITIATIVE FUND TO BETTER UNDERSTAND THE CAUSES, GENETIC SUSCEPTIBILITIES, IMPACT AND TREATMENT OF FOOD ALLERGY.

OF THE INSTITUTE FOR TRANSLATIONAL NEUROSCIENCE. GIFT FROM LIZ AND ERIC LEFKOFSKY WILL SUPPORT HIGHLY INNOVATIVE

PILOT STUDIES FROM: LAURA LACKNER, PHD, ASSISTANT PROFESSOR OF MOLECULAR BIOSCIENCES; MARCUS PETER, PHD, PROFESSOR OF HEMAT-OLOGY/ONCOLOGY; AND ATHANASIOS VASILOPOULOS, PHD, ASSISTANT PROFESSOR OF RADIATION ONCOLOGY.

GIFT ENABLES LAUNCH OF LES TURNER

ALS RESEARCH AND PATIENT CENTER

AT NORTHWESTERN MEDICINE. PART

Research Briefs



SuperAger Brains Yield New Clues to Their Remarkable Memories

SuperAgers, age 80 and above, have distinctly different looking brains than those of normal older people, according to new Northwestern Medicine research published Jan. 28 in the *Journal of Neuroscience*.

Cognitive SuperAgers, which were first identified in 2007 by scientists at Northwestern's Cognitive Neurology and Alzheimer's Disease Center, have memories that are as sharp as those of healthy persons decades younger.

Understanding their unique "brain signature" will enable scientists to decipher the genetic or molecular source and may

foster the development of strategies to protect the memories of normal aging persons as well as treat dementia.

Their unusual brain signature has three common components: a thicker region of the cortex, significantly fewer tangles (a primary marker of Alzheimer's disease), and a whopping supply of a specific kind of neuron—von Economo neurons—linked to higher social intelligence.

"It's thought that these von Economo neurons play a critical role in the rapid transmission of behaviorally relevant information related to social interactions," says Changiz Geula, PhD, study senior author and a research professor in the CNADC, "which is how they may relate to better memory capacity." These cells are present in such species as whales, elephants, dolphins and higher apes.

"Identifying the factors that contribute to the SuperAgers' unusual memory capacity may allow us to offer strategies to help the growing population of 'normal' elderly maintain their cognitive function and guide future therapies to treat certain dementias," says Tamar Gefen, the first study author and a clinical neuropsychology doctoral candidate at Feinberg.

The research was funded by National Institute on Aging, National Institutes of Health grant AG045571; The Davee Foundation; the Northwestern University Alzheimer's Disease Core Center grant AG13854 from the National Institute on Aging; a fellowship from the National Institute on Aging grant F31-AG043270; and others.

Family Voices and Stories Speed Coma Recovery

FAMILY MEMBERS ARE DESPERATE TO KNOW WHEN A LOVED ONE WITH A TRAUMATIC BRAIN INJURY IS IN A COMA.

A new Northwestern Medicine and Hines VA Hospital study published in the journal *Neurorehabilitation and Neural Repair* on Jan. 22 shows the voices of loved ones telling the patient familiar stories stored in his long-term memory can help awaken the unconscious brain and speed recovery.

Coma patients who heard familiar stories repeated by family members four times a day for six weeks, via recordings played over headphones, recovered consciousness significantly faster and had an improved recovery.

"We believe hearing those stories in parents' and siblings' voices exercises the circuits in the brain responsible for long-term memories," says lead author Theresa Pape, DPH, adjunct associate professor in physical medicine and rehabilitation.

"Can he hear me?"

As a result, the coma patients can wake more easily, become more aware of their environment and start responding to conversations and directions. This means they can actively participate in physical, speech and occupational therapy, all essential for their rehabilitation.

When patients in the study heard the voice of a family member calling while they were in an MRI, their brains showed increased neural activity.

"We saw changes in the blood oxygen level in their brain regions associated with retrieving long-term memory and understanding language," Pape says. "That means they were using those regions of their brains." M



A Step toward Feasible Organ Engineering

More than 120,000 people are waiting for a life-saving organ transplant, but there is a severe shortage of organs available to help them. To combat that disparity, Northwestern Medicine scientists have identified a strategy to reengineer part of the kidney's network of blood vessels.

Sometimes an available organ is not suitable for transplant, but the process of removing its cellular components—decellularization—and replacing them with healthy ones—recellularization—has the potential to rehabilitate the organ.

Using rodent kidneys, the scientists studied three decellularization methods that leave behind a scaffold, a three-dimensional superstructure of the kidney.

"The best decellularization strategies remove all of the native cells ... while retaining the native structure of that kidney," says Jason Wertheim, MD, PhD, senior author of the study published in the *American Journal of Transplantation*.

They made sure the strategy left behind a scaffold that supported new cell growth and proliferation. Then the scientists recellularized the scaffold using induced pluripotent stem cells (iPS)—adult cells derived from skin or blood samples that have been reprogrammed as a source for other types of cells. In a healthy person, these cells form a barrier between blood and the rest of the body's tissues, helping to control kidney functions such as blood flow and blood pressure.

"Using kidney cells, we developed what appeared to be very early structures that look like tubules within our whole organ kidney scaffold," explains Wertheim, assistant professor of surgery-organ transplantation and the McCormick School of Engineering.

Tubules are the functional building blocks of the kidney: They concentrate urine, cleanse blood and recirculate nutrients the body needs. №

This work was supported by the Zell Family Foundation; Illinois Department of Healthcare and Family Services Excellence in Academic Medicine Act; Northwestern Memorial Foundation Dixon Translational Research Grants Initiative; American Society of Transplant Surgeons Faculty Development Grant; National Institute of Diabetes and Digestive and Kidney Diseases grant R01 DK050141; National Institute of General Medical Sciences grant K12 GM088021; Dialysis Clinic, Inc.; and the Northwestern University Mouse Histology and Phenotyping Laboratory. The iPS-derived endothelial cells were supplied by Cellular Dynamics International.

Music Eases Kids' Pain after Surgery

Pediatric patients who listened to 30 minutes of music of their choosing—or audio books—had a significant reduction in pain after major surgery, according to a new Northwestern Medicine study published in *Pediatric Surgery International* Jan. 3.

A strategy to control post-surgical pain without medication is important because opioid analgesics—most commonly used to control post-surgical pain—can cause breathing problems in children.

"Audio therapy is an exciting opportunity and should be considered by hospitals as an important strategy to minimize pain in children undergoing major surgery," says study senior author **Santhanam Suresh, MD, '91 GME,** Arthur C. King Professor in Anesthesiology. "This is inexpensive and doesn't have any side effects." The therapy was tested on children, ages nine to 14, and worked regardless of a patient's initial pain scores.

Dr. Suresh, chair of pediatric anesthesiology at Ann & Robert H. Lurie Children's Hospital of Chicago, believes the audio-therapy helped thwart a secondary pathway in the prefrontal cortex involved in the memory of pain.

"There is a certain amount of learning that goes on with pain," he says. "The idea is, if you don't think about it, maybe you won't experience it as much. We are trying to refocus mental channels on to something else." M

Media Spotlight

RESEARCHERS USE NANOTECHNOLOGY TO ENGINEER ACL REPLACEMENTS

FOX NEWS (NATIONAL) - DECEMBER 31, 2014

One of the most devastating knee injuries both for professional and recreational athletes is a rupture of the anterior cruciate ligament (ACL). A medical research team led by Guillermo Ameer, ScD, professor of surgery-vascular at Northwestern University's Feinberg School of Medicine and McCormick School of Engineering, is working to craft a synthetic graft for ACL reconstruction that may help improve post-surgery results. "The engineered ligament is biocompatible and can stabilize the knee," Ameer says of the model, which is currently being tested.

EVEN SMALL CHANGES MADE MIDLIFE CAN HELP KEEP YOUR HEART HEALTHY

NPR - JANUARY 15, 2015

Bonnie Spring, **PhD**, director of the Center for Behavior and Health in the Institute for Public Health and Medicine, and professor of preventive medicine-behavioral medicine at Feinberg, has conducted a study showing that even moderate habit changes in adulthood can significantly protect against heart disease later in life.

WANT TO PREVENT THOUSANDS OF DEATHS A YEAR? MAKE DOCTORS AND NURSES MEDITATE WASHINGTON POST - FEBRUARY 2, 2015

Each year, 100,000 people die from infections they picked up in the hospital. These are completely preventable diseases, often caused by human error when healthcare providers are being simultaneously pulled in many directions. According to the research of **Melinda Ring**, **MD**, assistant professor of medicinegeneral internal medicine and geriatrics, and medical director of the Osher Center for Integrative Medicine at Feinberg, "physicians participating in mindfulness training report enhanced personal well-being, decreased burn-out and improved attitude toward patient-centered care."

INFECTIONS MOST COMMON CAUSE OF READMISSIONS AFTER SURGERY

YAHOO! NEWS (AP) - FEBRUARY 3, 2015

Surgery patients end up back in the hospital most often because of incision infections that don't show up until after they're sent home, according to a study that found unexpected readmission rates vary widely. "Most of these things



Northwestern University Trustee and alumnus Louis A. Simpson and his spouse Kimberly K. Querrey have made an additional \$92 million gift to Northwestern University in support of biomedical research programs at the Feinberg School of Medicine.

The latest gift comes just a year after the couple made a \$25 million contribution to endow the Louis A. Simpson and Kimberly K. Querrey Institute for BioNanotechnology in Medicine (SQI). SQI is conducting some of the world's most innovative, interdisciplinary research in applying nanotechnology to regenerative medicine. Their contributions to We Will. The Campaign for Northwestern total \$117.8 million and represent the largest amount given by a single donor to the campaign.

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. are clearly related to the surgery, well-known accepted complications that we all try to reduce," says **Karl Bilimoria**, **MD**, **MS**, the study's senior author, assistant professor of surgery-surgical oncology and director of the Surgical Quality Improvement Center at Feinberg.

LOSING WEIGHT BEFORE PREGNANCY IS HEALTHIER FOR MOM, BABY

CHICAGO TRIBUNE- FEBRUARY 19, 2015

Until recently, researchers said children's obesity was primarily a reflection of a family's lifestyle. Now they know that the mother's excess pounds also affect the baby's propensity toward obesity by rewiring its brain. According to **Lisa Neff**, **MD**, assistant professor of medicine-endocrinology at Feinberg, "The babies born after their moms lost weight have fewer problems associated with obesity."

ALZHEIMER'S PROTEIN FOUND IN YOUNG BRAINS FOR THE FIRST TIME

TIME MAGAZINE - MARCH 2, 2015

For the first time, scientists have found evidence of a protein found in Alzheimer's disease, called amyloid, in the brains of people as young as 20. **Changiz Geula**, **PhD**, research professor in the Feinberg School of Medicine's Cognitive Neurology and Alzheimer's Disease Center (CNADC), reports in *Brain* that amyloid, which does have some important brain functions, starts appearing early in life. But in some people, the proteins start to clump together with age, forming sticky masses that interfere with normal nerve function.

CIRCADIAN SURPRISE: HOW OUR BODY CLOCKS HELP SHAPE OUR WAISTLINES

NPR - MARCH 10, 2015

We've long known about the master clock in our brains that helps us maintain a 24-hour sleep-wake cycle. But in recent years, scientists have discovered we have different clocks in virtually every organ of our bodies. Over time, if living against the clock becomes a way of life, this may set the stage for weight gain and metabolic diseases such as Type 2 diabetes.

"What happens is that you get a total de-synchronization of the clocks within us, which may be underlying the chronic diseases we face in our society today," says Fred Turek, professor of neurology and psychiatry at the Feinberg School of Medicine and in the Weinberg College of Arts and Sciences.



Construction will begin this year on the 12-story building. The new state-of-the-art research facility, comprising approximately 600,000 square feet, will have nine laboratory floors. It has been designed to accommodate an additional 15 laboratory floors of vertical expansion.

"This gift will be a catalyst for Northwestern Medicine's mission to advance biomedical research informing patient care," says Dr. Eric Neilson, vice president for medical affairs and Lewis Landsberg Dean at Feinberg. "The gift will enable us to both build on established areas of strength and develop new areas of excellence and expertise. ..."

The Simpson Querrey Biomedical Research Center will provide new space for SQI investigators and collaborators, as well as other biomedical scientists working in cancer, heart disease, neurodegenerative disorders and genetics. It will help draw the most talented research faculty, Ph.D. students and postdoctoral fellows, and will provide new research opportunities for medical students, residents and clinical fellows on both the Evanston and Chicago campuses.

Planning for the new facility, located in the heart of Northwestern's academic medical campus, includes four floors for the Stanley Manne Children's Research Institute of the Ann & Robert H. Lurie Children's Hospital of Chicago and will accommodate collaborative research conducted by Northwestern's McCormick School of Engineering and Applied Science, Northwestern Medicine's Department of Physical Medicine and Rehabilitation and the Rehabilitation Institute of Chicago.

Simpson is a 1958 alumnus of the University's Judd A. and Marjorie Weinberg College of Arts and Sciences, and his son Ted is a 1996 graduate of Northwestern's Kellogg School of Management. Lou Simpson has been on the Northwestern Board since 2006 and serves on the investment and educational properties committees. He is chairman of SQ Advisors, LLC, an investment advisory firm in Naples, Fla. Previously, he was president and CEO of Capital Operations at GEICO Corporation.

Querrey is president of SQ Advisors. Previously, she was president of Querrey Enterprises, a consulting firm. She currently serves on the board of directors and executive committee for both Artis Naples and the Chicago Council on Global Affairs. She is also a member of the Council on Foreign Relations.

"Kimberly and I are proud to support the leading-edge science that is occurring at Northwestern," Simpson says. "The research that is being done now will have a real impact on people's lives and give new hope to those who have been affected by injuries and disease." M The impossible is possible when cancer survivors are monitored by medical professionals who know their specialized needs WRITTEN BY: Martha O'Connell PHOTOGRAPHY BY: Northwestern Memorial HealthCare

RICHARD AND HOLLY MANPRISIO CELEBRATED THE BIRTH OF THEIR TWIN SONS ETHAN AND BENJAMIN IN EARLY NOVEMBER. THANKS TO NORTHWESTERN'S ONCOFERTILITY CONSORTIUM, HOLLY WAS ABLE TO FREEZE HER EMBRYOS BEFORE TREATMENT FOR BREAST CANCER AND WAS LATER ABLE TO CONCEIVE.

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HOLLY MANPRISIO, A TWO-TIME CANCER SURVIVOR, HAS RECEIVED HELP FROM COUNTLESS NORTHWESTERN MEDICINE PROFESSIONALS THROUGHOUT HER TREATMENT, RECOVERY AND ONGOING MONITORING.

Moving Beyond Cancer

On November 3, 2014, it was with overwhelming joy that Holly and Richard Manprisio, their friends, family and Northwestern Medicine clinical professionals welcomed Ethan and Benjamin to the world.



Northwestern helped the couple achieve the most important goal in their lives: to have children. As a survivor of childhood cancer, Holly was closely monitored so she could fulfill her dream.

She conquered Stage 4 Hodgkins lymphoma, which started when she was 13, through treatment at Children's Memorial Hospital (now Ann & Robert H. Lurie Children's Hospital of Chicago). At age 28, Holly developed breast cancer that likely resulted from radiation when she was a teenager.

"My family and I are here today because of the careful medical attention I have received for two decades. The people at Northwestern paid attention to my health risks and caught my breast cancer in time," she says.

Holly is among the growing population of men and women who survived cancer when they were children or adolescents. Improved screening and treatment mean that the number of survivors in the U.S. will continue to surge, reaching an estimated 18 million in 2020, according to the American Cancer Society.

Their "new normal" is the fears, medical check-ups and health regimens they must live with. Northwestern Medicine is helping patients adapt so they can handle these pressures and move beyond cancer.

EASING FEARS FOR CANCER PATIENTS

The Robert H. Lurie Comprehensive Cancer Center of Northwestern University is a national leader in scientific breakthroughs, high-quality cancer care, education of oncology physicians and community outreach. It is designated "comprehensive" by the National Cancer Institute, recognizing that it is one of the best in the country.

"Cancer patients should know that they will always need medical attention, but many times it is not because there is something wrong. It's because we are trying to prevent something from going wrong," says Aarati Didwania, MD, associate professor of general internal medicine and geriatrics.

Dr. Didwania became Holly's internist through the nationally recognized STAR Program, which stands for Survivors Taking Action & Responsibility. The program bridges between Lurie Children's Hospital and Northwestern Memorial Hospital (NMH) to monitor adult patients and find complications early before they become life-threatening.

At Children's, Holly formed a strong bond with Karen Kinahan, MS, RN, BC, her pediatric oncology nurse who later transferred to NMH to form STAR in 2001.

CSI is Leading Chicago's Quest for Better Cancer Care

Northwestern's Cancer Survivorship Institute (CSI) is setting high standards to improve comprehensive, long-term care of patients and their families.

Part of the Robert H. Lurie Comprehensive Cancer Center, CSI helps patients starting from the day they are told they have cancer. Nearly 40 physicians from NMH and Northwestern University Feinberg School of Medicine work to enhance the lives of cancer survivors.

Formed in 2013, CSI oversees specialty services such as the STAR Program for adults who had cancer in childhood or adolescence and the Lynn Sage Breast Cancer Survivorship Program.

Their Supportive Oncology Team provides psychosocial care, nutrition and fertility counseling, social work services, and nurse navigators who educate and advocate for their patients and families. "Providing survivorship care that addresses unique medical needs is essential to help patients adjust well and live healthy lives," says institute director Frank Penedo, PhD, the Roswell Park Professor of Medical Social Sciences.

The institute has a close partnership with the Lurie Cancer Center's Cancer Control and Survivorship Research Program. Also led by Penedo, the program studies ways to improve health and quickly brings these advances to patients.

Responding to the unique needs of cancer survivors, the Commission on Cancer (CoC) has set new patient-centered care standards for accreditation. Funded by the private Coleman Foundation, the CoC-accredited Lurie Cancer Center is working closely with several area hospitals to map a process of survivorship care that will be implemented in these institutions, including monitoring and stress reduction.

CREATING NEW LIFE

Before her treatment for breast cancer began, Holly and Richard decided to freeze embryos for future family planning. After Holly's eggs were harvested by Northwestern's Fertility and Reproductive Medicine specialists, she underwent chemotherapy and radiation, followed by two years on tamoxifen, an estrogenblocking, anti-cancer drug.

"I am still struck by the fact that someone talked with me about preserving my ability to have children just two days after I was diagnosed with breast cancer," Holly says. "If I had not thought about it then, I may have lost my ability to conceive."

This was thanks to Northwestern's Oncofertility Consortium. Based at Northwestern, the NIH-funded program is a national network of medical professionals and scientists who offer additional choices in reproductive medicine for cancer survivors.

When Holly's initial attempts to become pregnant failed, she leaned on psychologist Angela Lawson, PhD, assistant professor of obstetrics and gynecology-reproductive endocrinology and infertility. Lawson, whom Holly calls a "lifesaver," counsels patients with infertility issues and helps them consider other options to have children.



HOLLY MANPRISIO HAS BECOME CLOSE WITH HER PHYSICIAN, DR. AARATI DIDWANIA (LEFT), AND KAREN KINAHAN, MS, RN, BC, HER PEDIATRIC ONCOLOGY NURSE WHO NOW WORKS AS PART OF THE STAR PROGRAM AT NORTHWESTERN MEMORIAL HOSPITAL.

"I work with patients to help them cope with the stress of cancer and possible infertility as a result of their treatment. My goal is to get patients back to a place where they are able to heal emotionally and move forward," Lawson explains. She and other psychologists with the STAR clinic are immediately available for patients.

STAR also has a strong research mission. For years, the program has gathered input from patients and parents to understand their concerns.

Finding the Right Therapy for Each Patient

Somewhere in the world exists the best anti-cancer therapy for each patient. The question and key to survival may be: Can your physicians identify and obtain it?

Physicians and scientists at the Northwestern Medicine Developmental Therapeutics Institute (NMDTI) connect patients with the correct therapies by looking for the root causes of their cancer.

"Medications and therapies for cancer are getting better at a pace unimaginable three years ago. Our patients are responding to these treatments because they zero in on what's driving the cancer," says Francis Giles, MB, MD, FRCPI, FRCPath, professor of medicine-hematology/oncology, director of NMDTI and deputy director of the Lurie Cancer Center.

Opened in 2014, NMDTI is a leader in a revolutionary shift in care that emphasizes therapy based on how the cancer is developing rather than how it looks. How big is the malignancy, where is it, and has it spread may no longer be the most relevant questions for some patients.

Using sophisticated molecular diagnostic tools from Northwestern's Onco-SET program, NMDTI physicians and scientists analyze the genetic profile of malignancies. With that data, and in collaboration with other Lurie Cancer Center specialists and colleagues around the world, they then seek therapies that focus on specific targets for each patient. Baseline genetic tendencies, a larger non-cancerous problem, or recurrence following primary cancer are just some of the possible variables.

Developing new scientific and logistical systems, NMDTI is part of a global cooperative network that optimizes molecular knowledge to find the best treatment for each patient—wherever it is available. Patients of all ages are welcome at NMDTI. Many people seek out the institute because their initial therapy failed. Giles, who came from MD Anderson Cancer Center and UCLA, notes that patients may stand to gain the most benefit if the correct anti-cancer agent is given as a first line of therapy.

NMDTI physicians push the barriers of clinical trials by working to get all appropriate individuals enrolled, not just patients who have very advanced cancer. The institute is also developing novel therapies, including modified cancer-killing viruses, modified stem cells, monoclonal antibodies, and drugs transported on nanoparticles that target only cancer cells. Specialists are also focusing on the new wave of immune-modulatory agents that stimulate the body's immune system so it attacks cancer invaders.

"Our intense involvement with targeted developmental therapeutics makes us one of the top NCI-designated cancer centers in this clinical area," Giles says. "We bring our patients the best therapies—we want people to thrive, not just survive."

TRUE PEER SUPPORT

As a seasoned cancer survivor, Holly truly knows what other patients are feeling and helps them work through the journey. She has spoken to patients individually or in groups, crying with them, raising their spirits and helping them along the same hard road she has traveled.

This volunteer work revealed her talent and enjoyment for helping patients and led her to earn a Master's in Public Health. Today, as a program manager for NMH, she organizes community health outreach programs.

For the last 22 years, Holly and her family have participated in Northwestern's Annual Cancer Survivors' Celebration & Walk. "Without help from everyone at Northwestern, I would not be pushing a stroller for two in this year's event," she adds. M

Northwestern Cancer Care Extends Its Reach

The recent merger between Northwestern Memorial HealthCare and Cadence Health brings even more innovative oncology programs to help patients become cancer survivors.

The Northwestern Medicine Chicago Proton Center, located in Warrenville, is the only place in Illinois that provides precise proton radiation treatments. Proton therapy targets tumors, not healthy tissues, minimizing short- and long-term side effects.

The LivingWell Cancer Resource Center in Geneva offers 75 programs and services that educate patients, families and caregivers about the journey during and after treatment. Trained, licensed clinical professionals offer psychosocial support, education and wellness activities free of charge thanks to generous donors in the Fox Valley area. New Center Develops Unique Collaborations to Advance Epilepsy Research. WRITTEN BY: Cheryl SooHoo PHOTOGRAPHY BY: Bruce Powell

GAME CHANGER

EPILEPSY



DRS. DOUG NORDLI, LINDA LAUX AND STEPHAN SCHUELE ARE CLINICIANS WHO TREAT EPILEPSY IN PEDIATRIC AND ADULT PATIENTS. THEY ARE PLAYING AN IMPORTANT ROLE IN LENDING THEIR EXPERTISE AS PART OF THE NEW EPILEPSY RESEARCH CENTER AT NORTHWESTERN MEDICINE.

More than 65 million people around the world have epilepsy. Each year, one in 20 children and one in 100 adults will develop the seizure disorder caused by electrical misfiring in the brain. The fourth most common neurological disorder in the United States after migraine, stroke and Alzheimer's disease, epilepsy can cause profound cognitive and physical disabilities, poor quality of life and, sometimes, sudden death.

Despite being described as a "sacred disease" by Hippocrates around 400 BC, epilepsy care has progressed slowly due, in part, to a lack of research funding and focus. In recent years, though, the momentum has shifted. Nationwide, parent advocacy groups have raised awareness and research dollars at the grassroots level. The latest insights from biology as well as cutting-edge technology have allowed investigators from all disciplines to shed light on the basic understanding of this genetically complex disease. In March 2012, an Institute of Medicine (IOM) report highlighted a serious gap of knowledge about epilepsy and recommended increased research efforts.

Now, in 2015, Northwestern Medicine's Institute for Translational Neuroscience has launched an 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.



GIANMARIA MACCAFERRI, MD, PHD, ASSOCIATE PROFESSOR OF PHYSIOLOGY, PRESENTS DURING ONE OF MANY PLANNED "SEIZURE FOCUS" RESEARCH CONFERENCES ORGANIZED BY DR. AL GEORGE FOR CLINICIANS AND INVESTIGATORS.

65M people with epilepsy worldwide

4th most common neurological disorder in U.S.

40 different forms of epilepsy

1 in 20 children develop epilepsy annually

1 in 100 adults develop epilepsy annually "In the past 15 years, we've built a strong clinical team at Lurie Children's," says Douglas R. Nordli Jr., MD, head of the Epilepsy Center at Ann & Robert H. Lurie Children's Hospital of Chicago and professor of pediatrics and neurology at the Feinberg School of Medicine. "However, everything we currently do is a therapeutic Band-Aid. We can blunt seizures with medication, but usually we can do nothing to correct the underlying problem. Conspicuously absent had been the presence of high-profile, world-renowned research capabilities that now exist right next door at the medical school and precisely align with our clinical research interests."

Dr. Nordli has teamed up with Alfred L. George Jr., MD, Magerstadt Professor and chair of pharmacology at the Feinberg School, to lead the development of the new epilepsy research center at Northwestern Medicine. A renowned authority on ion channel proteins, Dr. George, a recruit from Vanderbilt University, published with Australian colleagues in 1998 the discovery of the first identified mutation in a brain sodium channel gene associated with epilepsy. At Northwestern, he continues this important work. To build the center, George is in the process of reaching out to diverse faculty members—clinicians and investigators from neurology and physiology to genetic medicine and medicinal chemistry—across Northwestern's two campuses to "catalyze the convergence" of their expertise in epilepsy research.

"If we keep stirring the pot just right, we can stimulate a unique blend of research in this emerging field of study," explains George. "Then we can exploit this expertise to advance the science of epilepsy, and ultimately, improve clinical care." IN THE LABORATORY, ANGELOS KISKINIS HAS CREATED STEM-CELL-DERIVED NEURONS (IN PURPLE) AND STEM-CELL-DERIVED ASTROCYTES (IN TAN AND BROWN) TO STUDY EPILEPSY.

EPILEPSY DECODERS

More than 40 different forms of epilepsy exist in individuals of all ages. However, children and older adults are among the fastest growing segments of the population today with new cases of the disease, according to the Institute of Medicine. Seizures occur for a variety of reasons, including traumatic brain injury, tumors and genetic factors that are not necessarily inherited. It's the latter that can cause the disorder to appear in kids before their first birthday.

Says George, "Most cases of early onset epilepsy tend to be genetic and about two-thirds of them are due to mutations in ion channel genes, conditions referred to as channelopathies."

Zeroing in on severe childhood epilepsy, George works in close collaboration with epilepsy researcher and mouse geneticist Jennifer Kearney, PhD, associate professor of pharmacology. Dr. George focuses on the functional consequences of ion channel mutations, while Kearney investigates the genetics of epilepsy. Together, they endeavor to develop novel, more targeted medications for the disorder, which in children, can lead to devastating irreversible developmental and behavioral problems. "Our animal models allow us to mimic the whole physiology of epilepsy in mice," explains Kearney. "By studying genetic modifiers, we can better understand genetic factors that influence how the epilepsy appears in humans." She recently described a new mutation linked to severe childhood epilepsy in the Oct. 2014 issue of *Annals of Neurology.* Her Northwestern Medicine team found an anomaly in the KCNB1 potassium channel gene that causes neurons to misfire and leads to seizures and disrupted development.

Northwestern's technological capabilities in high-throughput drug screening of ion channels will give the new center a distinct advantage in the study of epilepsy. The Department of Pharmacology recently installed a state-of-the-art automated electrophysiology platform, the first of its kind in North America. This equipment allows for large-scale functional and pharmacological annotation of human ion channel variants, not just for epilepsy but other diseases as well, according to George.

Sodium channel genes are activated in the brain, influencing the normal firing of neurons. Mutations of this channel family have been correlated with severe childhood epilepsy. In particular, the SCN1A gene has more than 1,100 mutations, most of which have been identified in Dravet syndrome—a rare form of epilepsy that begins in infancy and often does not respond well to therapy.

George and Kearney have long studied SCN1A. Coincidentally, Lurie Children's epilepsy expert Linda C. Laux, MD, '01 GME, assistant professor of pediatrics and neurology, cares for one of the largest groups of children with Dravet syndrome in the nation. Lurie Children's has diagnosed and treated more than 175 patients since 2000. This bit of serendipity allows for Northwestern Medicine investigators to make an even greater contribution to advancing care. Says Dr. Laux, "We can provide clinical information and patient samples vital in making the most accurate phenotype/genotype correlations to better understand the disorder and tailor treatment for individual patients."

PRECISION MEDICINE

Currently available epilepsy drugs work well in some people but not in all. Finding the right match often involves trial and error. Not only may a medication ultimately fail to alleviate symptoms but it may also cause unnecessary adverse side effects. The emerging area of "reprogramming" offers a revolutionary method for delivering treatment that precisely addresses each patient's distinctive genetic makeup. Using blood samples or simple skin biopsies, investigators can generate patient-specific induced pluripotent stem cells to create cell-based models of epilepsy for particular individuals. obtain a bigger, more comprehensive picture is the next logical step for genetically based epilepsies such as Dravet syndrome and seizure disorders in general, according to Elizabeth M. McNally, MD, PhD, director of the Feinberg School's Center for Genetic Medicine. Another key collaborator in the new epilepsy center, she says, "If we can start organizing the wide variety of genes and variants underlying epilepsy and identify pathways, we can then develop a more rational approach to treatment to address the disease in its many forms."

Given the rich source of clinical and research experience available at Northwest-

By studying genetic modifiers, we can better understand genetic factors that influence how the epilepsy appears in humans.

"We are essentially gaining access to each patient's brain. Generating their stem cells, we then create brain cells with their unique genetic constellation. This process allows us to study their disease in a culture dish," says Evangelos Kiskinis, PhD, assistant professor of neurology and physiology. "By testing cells in the laboratory, we hope to better predict the benefits of available and novel drug therapy, which will be a huge advantage in clinical care." Most recently a faculty member at the Harvard Stem Cell Institute, Kiskinis brings to Northwestern and the epilepsy research center his experience in this leading-edge technology. He is currently working on modeling Dravet syndrome in collaboration with epileptologists at Lurie Children's Hospital.

Improvements in DNA sequencing technology continue to offer new insights into a variety of diseases, helping to link genetic anomalies with clinical outcomes. Applying the latest genomic tools to ern, the recently launched Northwestern Medicine epilepsy research center will initially focus on Dravet syndrome. While it only affects one to three percent of children with epilepsy, this rare disease offers a perfect jumping off point for treating other seizure disorders.

"By better understanding the genetics of hyperexcitability in the brain of a specific population, we can begin to find clues that may help us to treat all patients with epilepsy," says Stephan U. Schuele, MD, MPH, director of the Comprehensive Epilepsy Center based at Northwestern Memorial Hospital and associate professor of neurology and physical medicine and rehabilitation. "The knowledge gained about children with congenital channelopathies such as Dravet syndrome could one day be applied to the many adults who develop acquired, non-genetic forms of epilepsy and drug resistance." M



FOR DIGESTIVE HEALTH

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Though one is a world-class physician-scientist, the other a distinguished surgeon, Stephen Hanauer, MD, and Scott Strong, MD, share an expertise in difficult-to-treat gastrointestinal issues. As co-leaders of Northwestern Medicine's Digestive Health Center, they partner to advance a vision to improve patient care through multidisciplinary collaboration.

"We're breaking down the barriers between medical and surgical specialties," says Dr. Hanauer, the Clifford Joseph Barborka Professor in Medicine-Gastroenterology and Hepatology and the Digestive Health Center's medical director. "We're looking at a team approach to disorders that engage multiple departments. It leads to better care coordination and continuity, and hence, better patient outcomes."

Physicians and surgeons use different tactics to diagnose and treat patients—in general, the former uses medications, the latter operative techniques—but they're inevitably linked in areas of gastroenterology, a branch of internal medicine that focuses on the digestive system. Drs. Hanauer and Strong take on inflammatory bowel diseases (IBD) of the small and large intestine, seeing patients through progression from first-line medical management to potential surgery. "I have a lot more in common with my gastroenterology colleagues that treat IBD than I do with those who operate on other parts of the body," says Dr. Strong, who joined Northwestern in January as the James R. Hines, MD, Professor of Surgery, chief of Surgery-Gastrointestinal and Oncologic Surgery and surgical director of the Digestive Health Center. "It just makes sense to align physicians, surgeons and other healthcare providers along diseases, as opposed to what type of tool they use to manage the disease."

The human digestive system encompasses many organs, from the esophagus to the stomach to the small and large intestines. The diseases related to each of these components form the basis for the Center's subspecialties, which include esophageal, functional bowel, colorectal and pancreaticobiliary disorders.

A CHICAGO MAN

Dr. Hanauer came to Northwestern in January 2013 after spending 35 years at the University of Chicago (U of C). There, he completed an internship and residency in internal medicine, a fellowship in gastroenterology and rose to become chief of gastroenterology and nutrition at the Pritzker School of Medicine. He was also co-director of University of Chicago Medicine's Inflammatory Bowel Disease Research Center.

"The opportunity to direct a center at Northwestern, a large and growing institution, was a great new challenge," says Dr. Hanauer. "Plus, I didn't have to leave Chicago."

In fact, he has spent his whole life in the area—Dr. Hanauer was raised in the northern suburbs and earned his medical degree at the University of Illinois at Chicago.

He credits his mentor, Joseph Kirsner, MD, PhD, a pioneering gastroenterologist from the U of C, for instilling his interest in IBD, a group of conditions that includes ulcerative colitis and Crohn's disease, and affects more than 1.5 million Americans.

"Helping young patients who have to live with these chronic socially incapacitating diseases is very rewarding," he explains.

IMPROVING THERAPIES

In addition to clinical care, Hanauer has been actively involved in research pursuits throughout his career. The goals of this work, spanning from basic science to clinical trials, are to develop new therapies, or improve existing treatments, for patients with IBD. Much of this involves studying pharmacology to understand how different people metabolize and respond to medications.

"One dose does not fit everybody," he says. "Some people need higher doses or combinations of drugs for conventional agents to be effective."

He also investigates ways to reduce the development of antibodies in the immune system that suppress the potential therapeutic benefits of medications. Other work examines the epidemiologic factors that put individuals at risk for disease. Sometimes the findings are surprising: For instance, while smoking increases the chances of developing Crohn's disease, quitting cigarettes can actually lead to worse outcomes for smokers with ulcerative colitis, according to Dr. Hanauer's research.

"We've actually looked at giving back low doses of cigarettes to heal inflammation and prevent the need for more toxic medications," he explains.

When he's not at work, Hanauer enjoys traveling with his wife of 42 years, Jayne. They've hiked the Incan Trail to see Machu Picchu, biked the Atlas Mountains outside of Morocco and explored the Galapagos Islands. Next up: Bali.

He has three sons and several grandchildren, but he also thinks of the many students and fellows that he's mentored through the years as his children.

"The people I've trained have become some of the top leaders in gastroenterology," he says. "After I'm gone and my name forgotten, they will carry on my approach to research and to care."

MIDWEST TO MIDDLE EAST

Dr. Strong is also a man of the Midwest, though only a recent Chicago transplant. He grew up in a small town in Iowa, earned his medical degree at the University of Iowa and completed a general surgery internship and residency at Michigan State University. He finished residency in colorectal surgery at the Cleveland Clinic, where he remained for more than two decades, earning a reputation as a skilled gastrointestinal surgeon and a strong leader.

From 2007 to 2009, he had the unique opportunity to cultivate his management skills in Abu Dhabi, helping to build a health system at a 520-bed, 4,000-employee hospital partnered with the Cleveland Clinic, first as its chief medical officer and then as chief executive officer.

"The hospital had employees from 58 different countries, so the Golden Rule to 'treat others as you want to be treated' didn't really hold true," he recalls. "People from all over the world have different expectations for how they want to be treated."

He says that experience gave him valuable insight for working at Northwestern, an institution with diverse faculty, students, staff and patients—particularly within his specialty.

"I chose colorectal surgery because you treat both young and older people, both benign and malignant disease. You interact with some patients for a finite period of time, and build a relationship with others over years and years," he explains. "There's a lot of variety in this one organ system."

Strong has a background in basic science research, studying in particular how immune and non-immune cells of the intestine interact to cause the structural abnormalities characteristic of IBD. But in the last few years, he's switched gears to focus on quality of care and risk prediction.

"Judgment often comes with experience. As a surgeon, just because you can do the operation doesn't necessarily mean that you should do the operation," he says. "Armed with information from models that predict a person's risk for complications, surgeons can make more insightful decisions."



FACING CHANGE HEAD ON

As a surgeon, a leader and an educator, Dr. Strong's motto is to embrace change. He says that it's especially important as medical delivery across the United States transitions to a model that prioritizes individualized treatments, transparency and team-based approaches to care.

"We have the opportunity to help the students and trainees under our watch understand these changes that are going to follow them throughout their careers," he says. "We are leading the way at Northwestern Medicine, driving clinical care in parallel with research, innovation and education." Dr. Strong is already comfortable in his new home. He's looking forward to spending time outdoors this summer, bicycling and showing his two grown daughters around Chicago when they visit.

"I've arrived here with a fresh perspective," he says. "What I see is a great place to work, with very affable, upfront and helpful people who want to do the right thing."

LOOKING TO THE FUTURE

At the Digestive Health Center, Strong and Hanauer work together to help patients with the most complicated cases of IBD. Their colleagues do the same to prevent, diagnose and combat a medley of other gastrointestinal conditions.

"It's our job to bring together clinicians and researchers in common areas in a way that can really make a difference in a patient's life," explains Dr. Strong. "A lot of these relationships already exist in a formal or informal way. We're just trying to create a structured approach."

Dr. Hanauer has big plans for the Center in the long term.

"Ultimately, I want to turn it into a full-fledged institute that's focused on food as a theme across digestive health," he says with a grin. **M**

Alumni President's Message



Dear Fellow Alumni:

I am honored to accept the gavel as the new president of the Medical Alumni Association.

First, let me thank David Winchester, '63 MD, '70 GME, for his extraordinary efforts as president of our Alumni Board over the last two years.

Through Dave's leadership, and with the support of Dean Neilson and his exceptional staff, we have seen a transformation of our Alumni Board as we have concentrated on four areas—Fundraising, Engagement, Mentoring, and Strategic Initiatives. This new structure has brought focus and meaning to the board's work. My goal is to build on that foundation as we engage with and leverage the talents of our remarkable worldwide alumni community.

I want to share a bit about my background. I was an early (1970) graduate of Northwestern's Honors Program in Medical Education (HPME) and have been a member of the alumni board for over 10 years. I spent much of my career at the University of California, San Francisco (UCSF), where I was professor of medicine, chief of gastroenterology and closely involved in starting the liver transplant program. During this time, I also served as editor of the Journal of Clinical Investigation and president of the American Society of Clinical Investigation. I joined Chiron Corporation as head of clinical development in 1996 and stayed with Novartis for two years after their 2006 acquisition of Chiron. In 2008, I joined Hyperion, a small private start-up (now public) as chief medical officer. My wife, Peggy Crawford, '69 MS, '73 MD, is a dermatologist and currently serves as a clinical professor at the UCSF. Together, we bleed purple.

I am also a member of the external advisory board of Northwestern's Clinical and Translational Sciences Program (NUCATS) and have witnessed remarkable progress at Feinberg and a growing commitment from our medical school alumni. Dean Neilson has continued to recruit exceptional clinicians, researchers and educators as leaders. Last year, Diane Wayne, '91 MD, provides an essential competitive advantage as Feinberg continues its ascent. I ask all of you to consider making a contribution at any level.

Moving forward, I want to focus the alumni board's efforts on improving the effectiveness of our outreach to all alumni. In particular, we will concentrate on forging close relationships with more recent



DURING ALUMNI WEEKEND 2015 FESTIVITIES, **BRUCE SCHARSCHMIDT**, **'70 MD**, WAS ELECTED PRESIDENT OF FEINBERG'S MEDICAL ALUMNI ASSOCIATION BOARD. HE WILL SERVE IN THIS ROLE FOR TWO YEARS. JAMES P. KELLY, '73 MD (LEFT), WHO WAS NOMINATED PRESIDENT-ELECT, WILL LEAD THE BOARD BEGINNING IN SPRING 2017.

was named as the new vice dean for education. She brings a broad knowledge of the student-resident interaction and its effect on the patient experience, as well as a keen interest in maturing the new curriculum. On the research front, exciting news includes the recent naming gift for the new Biomedical Research Center (see details on page 12), which will propel Dr. Neilson's vision to double the medical school's research portfolio.

From a fundraising perspective, 2014 led to nearly \$20 million in new scholarship dollars raised toward our \$800 million scholarship endowment goal; the Class of 1955 (Bruno Epstein Scholarship fund) became the first class to surpass the \$1M level, 100 percent of our alumni board made gifts to Feinberg, and so many of you were critical in realizing a nearly 17 percent increase in alumni giving. Your philanthropy graduates. We hope to increase overall engagement by providing more opportunities for alumni to participate in important and interesting activities.

Some of these activities have been evaluated as "strategic initiatives." Our Global Health Initiative is off to an incredible start with strong interest from the board and the opportunity to expand this program more broadly to alumni. More nascent programs include hosting students across the country during residency interviews, expanding mentoring opportunities, developing corporate relations networks, and fostering more alumni regional and local networking.

I am honored by this opportunity to serve. Stay tuned.

Bruce Scharschmidt, '70 MD Medical Alumni Association Board President

Reuniting and Reminiscing at Alumni Weekend

WRITTEN BY: Nora Dunne **PHOTOGRAPHY BY:** Randy Belice, Nathan Mandell See the Alumni Weekend 2015 video and slideshow online at magazine.nm.org. WELCOME BACK ALUMNI PRING 2015 **27** James McAuley, '85 MD, '87 MPH, traveled to Chicago from Lusaka, Zambia, to attend this year's Alumni Weekend. He came primarily to see old friends, but also to hear about what Feinberg is doing in the realm of global health.

"It's fantastic to be here," says Dr. McAuley, who is Zambia's country director for the Centers for Disease Control and Prevention, helping manage resources to combat HIV/AIDS, tuberculosis and other diseases. "It's exciting to hear about the great opportunities Northwestern students have to go overseas. I hope those experiences will inspire some of them to make health care for underserved populations a big part of their long-term careers."

Thirty years after graduating, he credits the public health courses he took at Feinberg, a community health rotation, and supportive professors and classmates for setting up his own career path. McAuley was one of about 400 alumni and guests who visited Feinberg for Alumni Weekend April 17 and 18 to catch up and reminisce with those former classmates.

"I suspect everybody here feels the same about their class, but mine is really an amazing group of people who are passionate about medicine, stay in touch, and encourage each other—all those things that help keep your career going," he explains.

Over two days, attendees talked with current students, toured affiliate hospitals and attended forums led by Feinberg faculty on topics spanning from social media and medicine to aging to human genome sequencing. Visitors also went behind the scenes of the Galter Health Sciences Library, saw how trainees practice their skills in the Northwestern Simulation facility, and met with investigators in the Department of Physical Therapy and Human Movement Sciences laboratory.

"I'm very impressed with how much the campus has changed," says Harriet Pien, '70 MD, one of three alumni who made the trip from Honolulu.

In more than 60 years, Norman Simon, '55 MD, has also seen major transformations at Feinberg. After completing residency—interrupted by a three-year stint in Germany to serve as a U.S. Army physician—Dr. Simon returned to Northwestern for a fellowship in nephrology, before it was widely considered a subspecialty.

"I was fortunate to have mentors at Northwestern during the halcyon days of nephrology. We saw big things happen, from the application of dialysis for chronic kidney failure to the development of a drug that made transplantation possible," explains Dr. Simon, who continued to work at Northwestern for 15 years before moving to Evanston Hospital.

On Friday, Eric G. Neilson, MD, vice president for Medical Affairs and Lewis Landsberg Dean, gave an update on medical school activities. He highlighted the impactful research being published by faculty, trainees and students, as well as the high national rankings Feinberg and Northwestern Memorial Hospital have received among medical schools and hospitals.

"It is a great pleasure to welcome you back to campus," he says. "It's an exciting time to be at Feinberg and to see all of the things that are happening here." Afterward, alumni gathered for an evening event that included dinner, dancing and a salute to 26 members from the class of 1965 celebrating their 50-year reunion. Francisco González-Scarano, '75 MD,

LEFT: DECKED OUT IN NORTHWESTERN HATS AND PURPLE BANDANAS, ALUMNI AND STUDENTS MET FOR A FUN RUN/ WALK ALONG THE LAKEFRONT DURING ALUMNI WEEKEND. MIDDLE: CHILDREN OF ALUMNI PLAYED BOARD GAMES, BAGS AND HULA HOOPS ON SATUR-DAY, WHILE ENJOYING LUNCH FROM PORTILLO'S. **RIGHT:** UKEME UMANA, '85 MD, AND HIS WIFE CHRISTINA, VISITED WITH WIN SIMS, '85 MD.





TOP RIGHT: ORA PESCOVITZ, '79 MD, AND MELANI SHAUM, '78, '80 MD, '11 P, WERE HAPPY TO RECONNECT DURING ALUMNI WEEKEND. CLASS OF '65 ATTENDEES INCLUDED: **FRONT ROW** (L TO R): JOE MOTTO, JOHN LAYDE, TIM DINA, JOHN CANTWELL, BRENT FIELDS, KEN JOHNSON, COURTLAND MUNROE; **2ND ROW:** BARBARA SPOERL, BILL NEVIN, CHARLES BROWN, DOUG SODERDAHL, RICK VON HAAM; **3RD ROW:** JUDY BLUNCK, ART KIRCHNER, KARL TOMM, BOB WERTZ, RICHARD SKRENTA, MARV PERER, GEORGE WILNER; **4TH ROW:** DENNIS KONTRA, GENE THOMPSON, DOUG MEADOWS, RANDY LINDBLAD; **TOP ROW:** TOM EKKERS, MIKE FLYNN, JOHN STONER AND LEN GOSINK.

was presented with the Distinguished Alumni Award, an honor given for outstanding professional achievement.

"I had no idea what I was going to do in medicine when I came to Northwestern. The people here turned me on to the field of neurology and to research, influencing everything I've done since then," says Dr. González-Scarano, who is dean of the School of Medicine and vice president for medical affairs at the University of Texas Health Science Center in San Antonio.

"It is a privilege to be a physician and I thank the school for setting me up to be one," he says.

The festivities continued Saturday: Alumni and their families took a fun run/walk on the lakefront, toured Chicago on a trolley and attended reunion class dinners. **M**

MIDDLE: HENRY CHEN '85, '87 MD, '88 GME; ROBERT WATERHOUSE, '83, '85 MD; BETSY REID, '85 MD; AND ROB WALTER, '83, '85 MD, '88 GME MET UP IN METH-OD ATRIUM ON FRIDAY. **BOTTOM:** DEAN ERIC NEILSON PRESENTS FRANCISCO GONZÁLEZ-SCARANO, '75 MD, WITH THE DISTINGUISHED ALUMNI AWARD.

NORTHWESTERN UNIVERSITY

Progress Notes

EDITOR'S NOTE:

WE CONCLUDE OUR COVERAGE OF ALUMNI WHO HAVE SERVED IN THE VARIOUS BRANCHES OF THE MILITARY. WE BEGIN TO RECOGNIZE THOSE WHO HAVE SERVED IN THE U.S. PUBLIC HEALTH SERVICE AND VOLUNTEERED FOR GLOBAL HEALTH MISSIONS.



Albert J. Miller, '46 MD, interned at Michael Reese Hospital, Chicago, entered the Army and was sent to Fort Sam Houston, Texas, via Galesburg, III., for basic training. He studied at the Air Force Academy at Randolph Field, Texas, and was trained as a flight surgeon and aviation physiologist. Dr. Miller writes, "I assume because of my interest in research, I was assigned to the 1st Arctic Aeromedical Laboratory stationed at Ladd Air Force Base, Alaska. Our mission was to study the effects of cold on the human body, an area that at that time was of great interest to the Air Force. When I completed my military service in 1948, I was a captain." More information online.

R. Drew Miller, '46 MD, was on campus during some of WWII, then interned at a U.S. Naval hospital from 1946 to 1947. He served as a medical officer on the USS Rankin AKA in an attack transport division, going to occupy Japan after the atom bombs were dropped. They were assigned to the U.S. China fleet (U.S. Asiatic Fleet) in Tsingtao, China–later evacuating the 7th regiment of the first Marine division from Chinwangtao (Qinhuangdao), China, in the Yellow Sea, to San Diego. Afterwards, he was assigned to the Naval Air Weapons Station (NAWS) China Lake on the Mohave Desert at the Naval Air Warfare Center Weapons Division where guided rockets were studied. From there, Dr. Miller was released to inactive duty, remaining in the ready reserve while first in training and then in service on the staff of Mayo Clinic for 45 years.



Henry Drinker, '52 MD, '59 GME, served in WWII. After four quarters in pre-med at Stanford, he served two years in the U.S. Merchant Marines in the Pacific Theater as a purser. His last trip was carrying trucks for the invasion of Japan. He writes, "We were lucky the bombs were successful in cementing the surrender."

After completing internship at Northwestern he was drafted into the Korean War and served in Alaska as a flight surgeon for two years, then returned to Northwestern to complete a urology residency.



Bernard "B. J." Blumenthal, '55 MD, FACP, participated in the Jan. 2015 Chevron, Aramco Houston Half Marathon. He was the oldest of the 27,000 people registered. Additionally, he was the first and only one in his age group, 85-90.

Gerald A. Close, '57 MD, spent ten years, from 1960 to 1970, as a medical missionary in Zimbabwe, Africa, then known as Rhodesia. Since returning to family practice in Minnesota, he has done short-term (2-4 week) medical mission work in the following countries: Honduras, Sierra Leone, Jamaica, India, Bangladesh, Nepal, Botswana and Myanmar (Burma). He writes, "This has been a tremendously rewarding experience and I wish I could do it all over again."

Larry Kretchmar, '58 MD, was in the U.S. Navy from 1967 to 1969, the first year at Balboa Hospital, San Diego, the last year in Da Nang at the Naval hospital as the only land-based urologist in South Vietnam. He writes, "I began during Tet 1968 and left during Tet 1969. It was very exciting. I entered as a lieutenant commander, left as a commander." He still works one day a week."



W. Bruce Ketel, '66 MD, '68 GME, recently moved to Gilbert, Ariz., retiring after 42 years practicing neurology at Advocate Lutheran General Hospital, Park Ridge, III.

Michael L. Friedman, '67 MD, FACOG, writes: "I started NU medical school in September of 1963. I received my commission as an ensign in the U.S.



Navy Reserves in 1964. I was not sure whether or not I would go on the Ensign 1915 Program (which paid for my medical school, plus payback time, year-for-year for my medical school training, internship and post-grad training.) I chose to stay in the Navy Reserve and not sign up for that program. I did not even have a uniform." *More information online.*



Robert Kotler, '67 MD, FACS, was in the inactive reserves from 1966 through 1973. He writes: "I finished my residency in ENT/Head and Neck Surgery in June 1973. And in early August I started my military career at Ft. Sam Houston, Texas, for a two-week medical officer 'basic training.' No crawling through mud, under barbed wire with live ammo above. Rather, one day on the rifle range, one parade ground march and lots of air-conditioned classroom study. It was a splendid intro to Army life, with water skiing, tennis and great Texas barbequed brisket." *More information online.*

Thomas "Tom" Olson, '67 MD, served in the U.S. Public Health Service (USPHS) with the Navajo Nation from 1968 to 1970. He writes, "During Vietnam, all MDs had an obligation to serve. The Berry Plan allowed deferment of one year or more for some, but most went in after internship. I had always been interested in spending some time in the Indian Health Service, a branch of the USPHS, which at one time had been a division of the U.S. Navy. Service in the USPHS satisfied my military obligation and during internship I applied and was accepted." *More information online.*

Thomas Pavlovic, '67 MD, '73, '75 GME,

writes, "I was drafted in 1969 out of my NUMS digs at 860 DeWitt, and landed in 68th Armored, Baumholder, Germany, as a battalion surgeon, serving with terrific, great fellow citizens. We were all sublimating our concerns about threats reopening from the East, and the phone call that would lead us to a pit in Vietnam within 24 hours. Chance and Wildcat energy later got me promoted to medical advisor and director of medical services for the U.S. Embassy, Germany. Now I was among the French, English, Russian and Germans coping with the Old Europe, and the challenges of Europa, new. I am honored to claim my unique subspecialty of Spy/ Espionage/Agent Medical Care."

Kenneth "Ken" Wolski, '68 MD, still works full-time in the pharmaceutical business, now with atypical neuroleptics. He writes, "Being close to New York City, Johanna and I remain hopelessly passionate about the Metropolitan Opera and the American Ballet Theater."

Louis Fazen, III, '69 MD, MPH, writes, "I happened to graduate at a time when almost all physicians were conscripted after internship for military duty, or alternatively two years of government service in a non-military capacity. Due to a very positive medical student experience in Karachi, Pakistan, in an experimental diarrhea research station, I was already headed for a career combining public health and clinical medicine. Obviously I wasn't going to find that in Vietnam, so I looked long and hard at the U.S. Public Health Service.

"Fortunately, I landed in Oklahoma for two years as a general medical officer in a Cherokee Hospital in the USPHS Indian Health Service. I recall we were on call every 6th night, but 'Oh, what a night...' Each night we worked alone to deliver one or two babies, admit adults with pneumonia or heart disease, suture trauma cases and run the emergency ward, and meanwhile, hoped the tornadoes would go some other way." *More information online.*



Thomas Fred Alguire, '70 MD, served as a general medical officer in the Air Force at F. E. Warren Air Force Base, Cheyenne, Wyo., from 1971 to 1973. He was not sent to Vietnam.

Michael Henneberry, '71 MD, '79 GME,

served in the Air Force as a flight surgeon at Fairchild Air Force Base, Washington, from 1972 to 1974. He also made five trips to Belize as part of a multi-specialty healthcare team.

Stephen Yeh, '71 MD,

'76 GME, served for two years as a major in the U.S. Army Medical Corps at Fort Polk, Louisiana, after completing medical school and an



otolaryngology residency, both at Northwestern University. He ended his solo otolaryngology head and neck surgery practice after 33 years at Evanston Hospital in 2011.

He writes, "I was happy to have received the 'Castle-Connolly 10 Consecutive Years Top Doctor Award' in 2010. After itinerant global health service in many interesting places around the world over the years: Honduras, China, India, Kenya, as well as the headwaters of the Amazon River in Peru, I am presently a practicing ENT on Chicago's West Side for the medically underserved. For the past four years, I've been working at the Lawndale Christian Health Center, doing surgery at Mount Sinai Hospital."

Michael C. Loebach, '72 MD, MBA, served in the U.S. Navy from 1971 to 1973 as described below:

- 1971 lieutenant junior grade (LTJG), Medico Legal Division of AFIP (Armed Forces Institute of Pathology), Washington, D.C.
- 1972 LTJG, San Diego Hospital, pulmonary and cardiology
- 1973 lieutenant, anesthesiologist, Naval Hospital Great Lakes, North Chicago, III.

William "Bill" B. Miller, Jr., '75 MD, '76 GME, wrote "The Microcosm Within: Evolution



and Extinction in the Hologenome," Universal Publishers, 2013. It is the first comprehensive book on evolution written by a physician.

Alan L. Sisson, '77 MD, was the medical director for an air ambulance company for several years, heading teams of medical personnel that flew ill or injured patients from all over the world back to the U.S. for more advanced treatment. These patients required treatment en route, up to and including critical care medical interventions. *More information online.*

Theodore Brand, '78 MD, has retired after nearly three decades in private practice of pediatric surgery at Children's Healthcare of Atlanta. He writes that he is "planning to relax, enjoy bicycling and learn to play tennis and piano. As well, I'll have no restraints as regards visiting my three children (unfortunately, bicoastal) and my granddaughter, with hope that there'll be many more to spoil!"



Mark Kogan, '80 MD, Tanya Spirtos '80 MD, and David Aizuss, '80 MD, are members of the California Medical Association (CMA) Board of Trustees,



where Dr. Aizuss is newly-elected chair of the board (read more about Dr. Aizuss on page 36.) They reunite each year in Chicago at the AMA annual meeting. They vividly remember their early years at Northwestern when they and their classmates picketed the medical school over sudden unanticipated tuition increases, exposing all of the students to the power of a collective voice.

Dr. Kogan, a product of the Northwestern Honors Program in Medical Education, completed his internal medicine residency at Cornell University, followed by a GI/ hepatology fellowship at the University of Colorado. Actively practicing in the California Bay Area, he has been involved in the medical community in numerous leadership roles, including chief of staff at Doctors Medical Center, president of the Alameda Contra Costa Medical Association, medical director of the Alta Bates Medical Group, as well as serving on the clinical practice committee for the American Gastroenterology Association. He has maintained teaching appointments at both UCSF School of Medicine and Touro Osteopathic Medical School, More information online.

Dr. Tanya Spirtos, as well as Nicola "Nick" Spirtos, '80 MD, survived the grueling Ob/ Gyn residency at LA County/USC Medical Center and then began an REI fellowship there until moving to Stanford for Nick's Gyn/Oncology fellowship. Actively practicing until the birth of her twins in 1989, Tanya then focused on private practice gynecology/infertility while becoming embroiled in organized medicine and serving on multiple committees in her hospitals and as president of the Santa Clara County Medical Association. She is an active member of the Sequoia Hospital Board of Directors and remains on the teaching faculty at Stanford University, focusing on the medical student clinical experience. Meanwhile, Nick is professor and director of the Division of GynOncology at the University of Nevada School of Medicine, medical director of the Women's Cancer Center of Nevada and was recently appointed to the advisory board for the proposed new UNLV medical school. More information online.

Richard Olney '84 MD, MPH, retired three years ago from the U.S. Public Health Service after more than 20 years in the Commissioned Corps, starting as a



pediatrician in the Navajo Area Indian Health Service. During his Commissioned Corps career, he had two years of training in field epidemiology at the CDC, and spent another two years in a medical genetics residency program at Stanford. He was the pediatric genetics team leader at the CDC, and for the past three years has been the medical director of the Genetic Counseling Training Program at Emory University. He recently accepted a position as chief of the Genetic Disease Screening Program in the California Department of Public Health.



Jane Leonardson Moultrie, '88 MD, '91 GME, chief medical information officer for UTMB-Correctional Managed Care, was privileged to be the lead physician for McMurdo Station, Antarctica, for the month of Oct. 2014.





Arielle Levitan, '98 MD, '01 GME, is a practicing internist on the North Shore. Along with Romy Block, MD, she recently launched a line of personalized multivitamins for women. After years of advising patients who were



confused about what vitamins to take and what levels are safe, the doctors founded and launched Vous Vitamin in April 2014. The products are based on the fact that people have individual needs when it comes to nutrients and supplements. *More information online*.



Ramona Bhatia, '03 MS, '07 MD, '13 GME,

adjunct assistant professor in the Department of Preventive Medicine at the Feinberg School of Medicine, completed her infectious diseases fellowship at Northwestern after

medical school. During her training, she focused on HIV outcomes in vulnerable populations, including disparities on a global scale. As a clinical research associate in the Center for Global Health, Dr. Bhatia worked with the Global Health Initiative, a charitable organization supported by the physicians and patients of the Chicago Lake Shore Medical Associates of Northwestern Medicine, to increase global health education at Feinberg. She developed a partnership with Clinica de Familia, one of the largest HIV primary care clinics in the Dominican Republic serving the Haitian migrant community. Dr. Bhatia created and personally taught a novel Spanishlanguage HIV training course tailored to the educational needs of Dominican HIV providers. Partnering with Project Cure, she coordinated a large charitable donation of needed medical equipment to the Clinica. She also laid the groundwork for the first HIV primary care global health rotation for Feinberg students at the Clinica and is planning to have students travel there in the next few months.

Jennifer L. Chan, '03 MD, MPH, FACEP, assistant professor in emergency medicine since 2010 at the Feinberg School of Medicine, is the director of Global



Emergency Medicine in the Department of Emergency Medicine. She is also an associate faculty member at the Harvard Humanitarian Initiative.

Dr. Chan lived and worked in the People's Republic of China in the 1990s and after completing her undergraduate studies at Columbia University, New York City, she pursued additional degrees in medicine and public health. She completed her emergency medicine training at the Harvard Affiliated Emergency Medicine Residency Program, followed by an International Emergency Medicine Fellowship at Brigham and Women's Hospital. She has been involved in disaster and humanitarian assistance for over nine years and her work spans research, training and direct response. *More information online*. Angie En Wen, '03 MD, eye surgeon at the New York Eye and Ear Infirmary Faculty Practice, married Jeffrey Yatsai Choi, a pilot at Gama Aviation, in July 2014.

'10s

Daniel Choi, '11 MD, resident in orthopaedic surgery at the University Hospital in Newark, married Jennifer Park in June 2014.



William C. Stivelman, MD, '86, '87 GME,

retired after 31 years from the practice of ophthalmology in Thousand Oaks and Simi Valley, Calif. His plans include operating his family 501.c.3 (The Mary Oakley Foundation, Inc.), teaching literacy and travelling the world as an amateur photographer. He will continue teaching residents and fellows at the Stein Eye Institute, Center for Health Sciences, UCLA, for several more years.

Rosaleah Bernardo, MD, '96 GME, became a medical director in the health network innovation division of Blue Cross Blue Shield of North Dakota in March 2014. She provides leadership and oversight for quality management activities, including quality monitoring, fraud, waste and abuse, physician reporting and medical policy development.



Dorothy Anasinski, '95 CERT, of Chicago, is a specialist in periodontics and dental implants with Dental Specialists of Niles. She is assistant clinical professor in



the Department of Postgraduate Periodontics at the University of Illinois at Chicago. She is also founder of the Greater Chicago Dental Academy, an organization she created to promote the continuing education of dental professionals. **M**

Progress Notes Awards and Honors

′50s

E. Richard Ensrud, '52 MD, MACP, received the Chapter Centennial Legacy Award in January from the Illinois Chapter Downstate Region of the American College of Physicians (ACP). This award recognizes one seminal chapter member who exemplifies the ACP's core values of leadership, excellence, respect, compassion, professionalism and responsibility.

Dr. Ensrud served as governor of the Illinois Chapter's Southern Region from 1976 to 1980, won their Laureate Award in 1990, and was awarded Mastership in 2006. Currently retired, he worked as a gastroenterologist at Carle Clinic in Urbana, and also served as the founding program director of the internal medicine residency program at the University of Illinois in Urbana. He continues to serve on University of Illinois College of Medicine committees and attend clinical conferences. He serves on the ACP Illinois Downstate Awards Committee, and regularly attends chapter and national meetings. He remains a strong advocate of trainees, is a treasured mentor to many, and is a stalwart supporter of the ACP and internal medicine.

Robert A. Kyle, '52 MD, MACP, received the John Phillips Memorial Award for Outstanding Work in Clinical Medicine by the ACP in April. Dr. Kyle is a medical researcher at Mayo Clinic in Minnesota, a member of the board of the International Myeloma Foundation and chairs the Scientific Advisory Board. He has served as chair of the Myeloma Committee of the Eastern Cooperative Oncology Group and the secretary-general of the International Society of Hematology. Dr. Kyle served as president for both the International Society of Amyloidosis and the International Myeloma Society. He defined the term "MGUS" (monoclonal gammopathy of undetermined significance), and with his colleague, Dr. Philip Greipp, described "smoldering myeloma." Dr. Kyle founded the Special Protein Laboratory and he collected and recorded serum samples from all people with monoclonal plasma cell disorders at Mayo Clinic.



Kent Jacobs, '64 MD, and his wife, professional painter Sallie Ritter, were honored in September in Santa Fe, N.M., where they received the Governor's Award for Excellence in the Arts. Dr. Jacobs is a retired dermatologist, museum regent and writer; his wife is an internationally known artist. He is a longtime arts advocate and

served for 14 years under five New Mexico governors as a regent for the Museum of New Mexico, a post to which he was appointed most



recently by Governor Susana Martinez.

Dr. Jacobs also released his latest novel, "Zuni Stew," in December that draws upon his experiences living on the Zuni reservation as a young doctor with the U.S. Public Health Service. It reveals both his intimate knowledge of New Mexico and his fascination with the Zuni way of life.

He is the author of three other books-"Breckkan," "The Turned Field," and "Hopi Tea" (April 2015)-available on Amazon in paperback or e-book.



David H. Aizuss, '80 MD, was elected chair of the board of trustees of the California Medical Association (CMA) at their annual meeting in December. Dr. Aizuss, born and raised in Chicago, completed his residency in ophthalmology and a fellowship in corneal and refractive surgery at the UCLA Jules Stein Eye Institute. He has been active in organized medicine, first as a medical student delegate to the AMA, and most recently as president of the California Academy of Ophthalmology and the Los Angeles County Medical Association. He maintains an active ophthalmology practice in Los Angeles and is an assistant clinical professor of ophthalmology at the UCLA School of Medicine.

Linda Morris, '81 BSN, was appointed director of the Emergency Nurses Association's Institute of Emergency Nursing Education.

Andrew Lazar, '82 MD, '87 GME, has been named chief of dermatology for the Washington, D.C., and suburban Maryland region of the Mid Atlantic Permanente Medical Group.

Jesse Fann, '89 MD, MPH, a professor in the Department of Psychiatry & **Behavioral Sciences** at the University of Washington, Seattle, received the 2014

Research Award from the Academy of Psychosomatic Medicine. The award is given to an individual currently studying psychopathology in the medically ill and recognizes exceptional research and clinical work in the field.



Richard W. Byrne, '91 MD, chairman of the Department of Neurosurgery at Rush University Medical Center, was appointed medical director of neurosurgical services at Elmhurst Hospital in Illinois.

Scott A. LaMaire, '92

MD, professor of surgery and of molecular physiology and biophysics, vice chair for research in the Michael E. DeBakey Department

of Surgery, and director of research,

Division of Cardiothoracic Surgery at Baylor College of Medicine, has been selected to serve as the new editor of the *Journal of* Surgical Research. The journal has been the official publication of the Association for Academic Surgery for nearly 50 years.



Nupur Ghoshal, '02 PhD, '03 MD, received the Outstanding Young Alumni Award from

the lowa State

Association in

University Alumni

October. Dr. Ghoshal is a leading physician



and researcher in the fields of interdisciplinary education, clinical care, and dementia and geriatric neurology. She is a board-certified neurologist whose MD/PhD was National Institutes of Health-funded. She is currently an assistant professor in neurology at Washington University Medical School and the first-ever female fellow of the Alzheimer's Disease Research Center there.



David Silver, MD, '92 GME, chief operating officer and president at Targeted Medical Pharma, was promoted to chief medical officer.

Gordon J. Wood, MD, '07 GME, '08 MS, Midwest Palliative & Hospice CareCenter associate medical director, was named to the American Academy of Hospice



and Palliative Medicine's list of Inspirational Leaders Under 40. Dr. Wood was nominated and recognized by his peers for enhancing the care of seriously ill patients and their families.

He also serves as Midwest CareCenter's Martha L. Twaddle, MD, Chair in Palliative Medicine, focusing on medical education and research. He is the director of Palliative Medicine and Supportive Care at Northwestern Lake Forest Hospital and is an assistant professor in the section of palliative medicine at the Feinberg School of Medicine.



Esther Tompkins, '80 BSPT, associate professor of pediatrics at the University of Arkansas for Medical Sciences, was appointed to the board of trustees at the Arkansas Colleges of Health Education. M

A CHANGING PARADIGM IN GLOBAL HEALTH



The vision of many medical and community healthcare professionals is to expand the old paradigm of medicine into a broader global mission, which includes advocacy for human rights, appropriate technology, economic justice and environmental sustainability. The phenomena of economic globalization, the global migration crisis, and global climate change require a response from the health professions. We practice medicine locally but we must think globally.

My experiences with global health started in my childhood as the daughter of a public health educator and an environmentalist civil engineer. We had frequent visitors and friends from around the world: some had survived war and trauma, some worked in the sciences and education, some were artists and musicians. I was inspired by our family friend, Father Richard W. Timm, PhD, Congregation of the Holy Cross, a nematologist and president of Notre Dame College in Dhaka, Bangladesh, who has lived and worked in that country since 1952. I also was enthralled by stories about Dr. Albert Schweitzer.

In my youth, my approach to global health was to study science, history, anthropology, geography, sociology and foreign languages, including a year at the Sorbonne in Paris and a summer at the University of Vienna (where I also researched balneotherapy). I lived at the International House at UC Berkeley with many foreign graduate students enrolled in the School of Public Health. After medical school at Northwestern, I started a residency at the UCSF Natividad Family Medicine, a revolutionary field at the time, where I could pursue my interests in "holistic medicine," social justice, environmental sustainability, and care of the underserved.

BY VALERIE BENGAL, '80 MD

It became clear during my internship in Chicago, my National Health Service Corps placement in the Salinas Valley of California, and my residency at Natividad Medical Center that "third world medicine" existed in the U.S. due to health disparities. Among the numerous immigrants and refugees from Latin America and Asia, I encountered cases of preventable occupational injuries, war trauma, helminthic infections, including neurocysticercosis, leprosy, amebiasis, lead intoxication and pesticide poisoning.

During the 1980s our residency program had a relationship with the pediatric hospital "La Mascota" in Managua, Nicaragua. For 14 years I was part of numerous delegations to Nicaragua, Guatemala, and El Salvador to train healthcare workers, assist with projects, and provide direct patient care. I also volunteered with ORSTOM, the French Overseas Research Agency, on a research project in Cameroon: Food Cycles and Nutritional Anthropology. For the last 15 years I have been board president of Capacitar International, which uses powerful, accessible, and culturally sensitive practices in a popular education model to heal trauma survivors.

Many of my American colleagues are part of Doctors for Global Health, the CDC (including Sundeep Gupta, '95 MD), International Physicians for the Prevention of Nuclear War, and (South) Sudan Medical Relief. They have saved lives, empowered communities, and provided Americans with a window into the reality of the outside world.

How does a physician participate in global health work, given the demands of medical practice and personal responsibilities? It is possible in a supportive work environment to take several weeks off to assist an international project, or provide support from a distance. What we learn from the rest of the world is applicable to our care of patients and community here in the U.S.

I have learned throughout my medical career that global health is a continuum uniting the environmental and social determinants of health with medical science, related sciences and public policy. Eventually global health may include integrative medicine and popular education. Global health is creating positive alternatives in partnership with organizations dedicated to sustainable agriculture, renewable energy, "green" and appropriate technologies in industry, careful management of resources such as land and water, and workplace safety. IM

Alumni Dreams Come True as Global Health Nonprofit Gains Momentum

Dr. Ernani Sadural, '92 MD, is chief medical officer of Life is Great Global Foundation, a nonprofit he and five other Feinberg School of Medicine alumni created and launched in the aftermath of the earthquake in Haiti.

During countless hours of studying, six Feinberg medical school students bonded over interests in community service and dreamt of one day starting their own global health nonprofit. This idea took a back seat for more than 20 years as they pursued their careers, that is, until the 2010 earthquake in Haiti, which acted as a catalyst to jump-start the Life is Great (LIG) Global Foundation.

"We all had this deep sense of giving back to the community—not just locally but throughout the world—and had a dream to do something meaningful once we were in a position to do so," says Ernani Sadural, '92 MD, chief medical officer of LIG.

While volunteering their medical expertise in Haiti, Dr. Sadural and his

friends: Sarah Timmapuri, '91 MD; Raghu Thunga, '92 MD, '96 GME; Francis McGeorge, '90 MD; David Rhew, '92 MD; and Eugen Kim, '92 MD, met several like-minded medical and non-medical volunteers who laid the groundwork for the foundation's formation. The mission of LIG is to deliver humanitarian relief and excellent health care to people in great need around the world by bringing together volunteers, supplies and technology.

Dr. Sadural, an obstetrician/gynecologist, and his wife Dr. Timmapuri, a cardiologist, practice in New Jersey. Dr. Thunga completed his anesthesiology residency and has a private practice in Chicago's northern suburbs. Dr. McGeorge trained in emergency medicine and is a medical correspondent in Michigan. Dr. Rhew, an infectious disease specialist, lives in California; and Dr. Kim, an orthopedist, calls Ohio home.

In Sept. 2011, the foundation became a 501(c)(3)-designated corporation, with Dr. Thunga as chief operating officer and Dr. Timmapuri as chief executive officer. Olga Gorenyuk, '07 MD, joined LIG as the chief financial officer and treasurer.

Soon after, the group partnered with other charitable organizations, community groups, medical schools and residency programs to make surgical trips to India and the Dominican Republic, and now has over 500 volunteers serving in 10 countries (Dominican Republic, Haiti, India, Philippines, Grenada, Uganda, Tanzania, South Sudan, Peru and the U.S.).

Dr. Timmapuri attributes their fast growth to word of mouth and the length of their trips. They range from five to nine days, where many other organizations require six months or longer time commitments.

"People have a strong desire to volunteer, but they may only be able to fit a week into their schedule," she says. "We try to take care of the planning and logistics to make it easy for people to join us."

The Foundation has completed more than 30 medical trips, distributing over \$5 million of donated supplies, equipment and medications. Trips are tailored to the needs of the community and range from one or two volunteers to larger groups of more than 50.

Dr. Thunga describes these expeditions as personally enriching and rejuvenating.

"When we are on a trip, we are practicing medicine and helping people directly," he explains. "A lot of times in private practice you get bogged down with materialistic gain; going to these countries, you are working with people who are giving of themselves. It refreshes me and allows me to help those who can't help themselves. I also find it enjoyable because I am doing it with my friends."

The foundation evolved from primarily conducting surgeries (ob/gyn, plastic, general, orthopedic, podiatry and wound care) to providing more services to the communities they visit. During a trip to the Dominican Republic, when teachers from a school for students with special needs asked for assistance, the team did medical check-ups and helped with educational activities.

"We try to address the needs of the communities—each country has its own challenges—as we are trying to create sustainable changes," Dr. Sadural says. "By using technology, we can continue to communicate with the programs we started and administer services when we get there."

DEVELOPING PUBLIC HEALTH INITIATIVES

In addition to its service-oriented medical trips, LIG has focused on facilitating and developing population-health initiatives with local and national medical institutions in the various countries.

For example, LIG trained local community workers and nurses in India in VIA (visual inspection of the cervix utilizing acetic acid), an economical alternative to PAP smears in rural areas where there are no available laboratory facilities.

"There is a huge need for cervical cancer prevention, with access to routine PAP smears limited, so the Foundation set out to train communities on alternative approaches to diagnosing cervical cancer," Dr. Sadural explains. "Establishing these types of programs has a larger impact."



The current executive board of LIG, all decked out in Northwestern caps, includes: Raghu Thunga (COO), Sarah Timmapuri (CEO), Olga Gorenyuk (CFO) and Ernani Sadural (CMO).

In addition, LIG started to work with health promoters to create educational initiatives (healthy diet and cooking, limiting alcohol use and smoking) to prevent chronic health conditions such as heart disease and diabetes.

LIG's commitment to developing and nurturing close relationships with existing local healthcare institutions allows for leveraging of existing infrastructure to enable the success of larger public health initiatives and smaller service-oriented projects.

INCREASING IMPACT THROUGH TECHNOLOGY

Life is Great uses technology to increase the reach and impact of its volunteers and international partners. With tele-health, electronic health records (EHR) and mobile-based ventures, geography has become less of a barrier to doctors and nurses providing care to patients in faraway places. Rather than focusing on getting patients to brick-andmortar institutions, LIG is committed to bringing state-of-the-art medicine to remote locations to reach those most at risk.

In Iloilo, Philippines, LIG set up a telemedicine station in a public health clinic to lend cardiology support. Providers can perform EKGs and upload and send the results to experts at LIG for reading. The team also has established mobile cervical screening stations. Using a smart phone and attached camera, a photo of the cervix can be taken and sent to specialists at LIG for advice and diagnosis. All of this information goes into the patient's EHR.

"We can reach more people using devices, video and audio through the Internet to do consultations, access electronic health records and observe exams and procedures," says Dr. Thunga.



LEFT: Raghu Thunga, '92 MD, '96 GME, chief operating officer of LIG, has a full-time private practice in Chicago's northern suburbs.



EXPANDING SERVICES WITH YOUTH PROGRAM

With interest in these medical trips growing in volunteers under age 21, the team created a youth network that is being developed and implemented by undergraduate and medical students and residents collaborating internationally.

Dr. Timmapuri explains that younger volunteers provide value through their optimism and ability to solve problems differently. On a recent trip to the Philippines, four teen-aged volunteers downloaded LIG's electronic health records mobile application onto their mobile devices, recording pertinent medical information that was then reviewed and authenticated by the volunteer physicians and nurse practitioners.

"The doctors had the ability to see an enormous amount of patients because they didn't have to spend time doing paperwork," says Dr. Timmapuri.

The youth network also helps document supply inventories and creates projects such as crafts to do with the children they meet on trips. The team at LIG has created a scholarship fund to support their ideas and projects.

"Whether their goal is to become a health professional or to be compassionate, I'm amazed by the contributions that are being made from kids and our non-medical peers. One of our goals is to train future physician leaders and give a sense of purpose," Dr. Sadural explains.

In addition to starting the youth program, LIG is working to bring in clinical research volunteers to help facilitate studies on the populations the organization serves.

"Starting this foundation has been one of the biggest joys; it's a pleasure to use our education from Northwestern in this way—to take the knowledge we gained and bring it to other populations that aren't outside our front door and where there is a need," Dr. Timmapuri says.

RIGHT: Dr. Sarah Timmapuri, a cardiologist practicing in New Jersey, meets with a patient during one of LIG's medical mission trips.

LIG continues to grow its network of volunteers. To learn more about how to get involved, visit <u>ligglobal.org</u>.

In Memoriam

Rodger L. Alspach, '52 MD, '54 GME, of Annapolis, Md., died Nov. 2, 2014.

Joseph W. Begley, Jr., '46 MD, of Evansville, Ind., died May 5, 2014.

Mark W. Blackburn, '62 DDS, of Jackson, Miss., died April 11, 2014.

Donald K. Boyden, '62 DDS, of Mitchell, S.D., died June 11, 2014.

Joel L. Cristol, '65 MD, of Naples, Fla., died Nov. 25, 2014.

Douglas M. Enoch, '58 MD, of Sacramento, Calif., died Nov. 14, 2014. Philip M. Goldstein, '45 DDS, of Kenosha, Wis., died May 16, 2014.

Seema Gupta, '98 MD, '01 GME, of Orange Village, Ohio, died Nov. 27, 2014.

Donald F. Hajek, '60 MD, of Rockford, III., died Dec. 13, 2014.

Ralph R. Heine, '48 MD, of Elk City, Okla., died Nov. 13, 2014.

Howard F. Heller, '75, '77 MD, of Renton, Wash., died Feb. 25, 2014.

Robert G. Heneveld, MD, '57 GME, of Muskegon, Mich., died Jan. 8, 2015. Donald W. Hofsess, '51 MD, of Gypsum, Colo., died Dec. 2, 2014.

Paul B. Kerr, '50 MD, of Montrose, Pa., died Nov. 25, 2014.

William Smith Kirk, '49 DDS, of Salisbury, N.C., died May 29, 2014.

Frederic G. Lauder, '53 DDS, of Palm City, Fla., died May 5, 2014.

Rita C. Lucas, '89 PhD, of West Orange, N.J., died Jan. 8, 2015.

Roberto A. Marrero, '58 DDS, of Park Ridge, III., died May 5, 2014. Wilfred W. Miles, '52 MD, of Aurora, Colo., died Dec. 16, 2014.

Thomas O. Miller, '53 DDS, of Fort Myers, Fla., died May 31, 2014.

Thomas E. Murphy, '59 MD, of Glenview, III., died Nov. 21, 2014.

Joseph M. Oppenheim, '48 MD, of Pawleys Island, S.C., died Nov. 30, 2014.

Kenneth A. Phillips, '09, '11 CERT, of Norwood, Mich., died Dec. 30, 2014.

Ankita S. Pradhan, MD student, of Oak Creek, Wis., died Jan. 26, 2015. David A. Randolph, '66 MD, '71 GME, of Barrington, III., died Jan. 4, 2014.

Edwin C. Salter, '51 MD, of Lake Forest, III., died Nov. 21, 2014.

Shirley K. Schneider, '59 DDS, of Springfield, Ohio, died Oct. 4, 2013.

James "Jim" L. Schroeder, MD, '81 GME, of Hobe Sound, Fla., died Dec. 30, 2014.

C. Jack Snider, '56 MD, of Tucson, Ariz., died Feb. 4, 2015.

Sidney N. Spies, '51 MD, of Albany, Calif., died Nov. 24, 2013. Donald G. Toraason, '43 DDS, of Olympia, Wash., died April 7, 2014.

Thomas N. Trauba, '51 MD, of Loomis, Calif., died Dec. 18, 2014.

Bruno J. Virgili, '49 DDS, of Placida, Fla., died June 20, 2014.

Wallace J. Werner, '70 MD, of Haymarket, Va., died Nov. 25, 2014.

Nicholas Wetzel, Jr., '46 MD, '50 MS, '52 GME, '57 PhD, of Evanston, III., died Feb. 4, 2015.

Alon P. Winnie, '58 MD, of Wilmette, III., died Jan. 18, 2015.

Upcoming Events



IUNE 5, 2015

Frontiers in Nanotechnology Seminar-Professor Andrew Ewing

Abbott Auditorium 2200 Campus Dr., Evanston. For more information, call 847-467-2530.

JUNE 9, 2015

Neurology Grand Rounds: Neuromuscular Disorders

Robert H. Lurie Research Building, Searle Seminar Room 320 E. Superior St., Chicago. For more information, call 312-908-5035.

JUNE 10, 2015

Cultivating Positive Emotion to Cope with Life Stress Arkes Pavilion 676 N. St. Clair St., 6th Fl., Chicago. For more information, call 312-503-1725.

JUNE 12, 2015 2015 Developmental Biology Research Symposium

Robert H. Lurie Medical Research Center, Baldwin Auditorium 303 E. Superior St., Chicago. For more information, call 773-755-6383.



JULY 9-11, 2015 4th Annual Chicago Cardiovascular Update Prentice Women's Hospital, 3rd Floor 250 E. Superior, Chicago. For more information, call 312-503-8533.





Northwestern Creates \$200,000 Nemmers Prize in Medical Science

Northwestern University has created a \$200,000 Mechthild Esser Nemmers Prize in Medical Science. The inaugural prize will be awarded in early 2016. The recipient will deliver a public lecture and participate in other scholarly activities at Northwestern.

Candidacy is open to physician-scientists whose body of research exhibits outstanding achievement in their disciplines. Nominations for the prize will be accepted until Sept. 15, 2015.

"We look forward to honoring a groundbreaking physician-scientist, someone whose interest in medicine informs and inspires his or her research," says Eric G. Neilson, MD, vice president for medical affairs and Lewis Landsberg Dean. "At Feinberg, we are committed to fostering scientific discovery and innovation that will benefit human health and lead to tomorrow's cures."

The award is made possible by a generous gift to Northwestern by the late Erwin Esser Nemmers and the late Frederic Esser Nemmers. The Mechthild Esser Nemmers Prize in Medical Science is the fourth Nemmers Prize to be established by Northwestern.

Nominations can be submitted at feinberg.northwestern.edu/nemmers.

Internal Medicine, Women's Health Rise in Medical School Rankings

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



Compared to last year, internal medicine (previously unranked) and women's health (previously 10th) rose in their specialty lists. Among research-oriented medical schools, Feinberg ranked 19th overall, landing on the list of top 20 medical schools for the eighth consecutive year.

"Our placement among top-tier medical schools in the country once again solidifies our reputation as an institution with outstanding academic research and education," says Eric G. Neilson, MD, vice president for Medical Affairs and Lewis Landsberg Dean. "We are pleased that our faculty and staff's commitment to these endeavors has been recognized in this way."



100th Anniversary of Dr. James Eckenhoff's Birth

RENOWNED PROFESSOR OF ANESTHESIOLOGY AND FORMER DEAN OF THE MEDICAL SCHOOL MADE LASTING CONTRIBUTIONS TO NORTHWESTERN

James Edward Eckenhoff, MD, led the medical school from 1970 to 1983, and during that time instituted a number of landmark changes, including an MD-PhD program in conjunction with The Graduate School, a Master of Public Health program, a wholly elective curriculum for fourth-year medical students, among others. Read more about this former medical school leader in the magazine's history blog at magazine.nm.org.





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During Founders' Day Convocation every August, our incoming medical students don their first white coats and take their first steps on a journey to earn a Northwestern medical degree.

Support the Class of 2019 in this tradition by making a gift to the annual fund today! The annual fund supports the Northwestern medical student experience, including the purchase of these students' first white coats.

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Make your gift online today at wewill.northwestern.edu/whitecoat2019. Visit feinberg.northwestern.edu/giving for more information.



Questions? Contact Development & Alumni Relations at 312-503-8933. Build the Network at feinberg.alumni.northwestern.edu.