## GRAPEVINE THE AL LIMAN L MAGAZINE

THE ALUMNI MAGAZINE OF NYU SCHOOL OF MEDICINE SPRING 2018

#### Igniting a Transformation

How Ann Marie Schmidt '83 and a team of investigators are leading the fight against health epidemics like obesity and diabetes NYU School of Medicine

## SUPPORT OUR STUDENTS AND CREATE YOUR OWN LEGACY.

Your gift of \$30,000 (payable over up to three years) will be acknowledged with a named dorm room in Vilcek Hall. Planned gifts may qualify as well. One hundred percent of your contribution will support scholarships for NYU School of Medicine students.

**LEARN MORE:** Visit nyulangone.org/give/vilcek-hall-campaign, or contact Diana Robertson at 212-404-3510 or diana.robertson@nyumc.org.



## The Decade Ahead



Ten years ago, NYU Langone Health adopted an ambitious road map for transforming itself into a world-class healthcare system committed to continuous improvement and driven by metrics. In the decade since, thanks to the collective buy-in of our faculty,

staff, and philanthropic partners, this vision has been realized in its entirety—with major achievements that include fully integrating our medical school and hospital; launching C21, our curriculum for the 21st century, and our Three-Year Accelerated MD Pathway; and constructing our state-of-the-art Science Building, Kimmel Pavilion, and Hassenfeld Children's Hospital.

**OUR REMARKABLE PROGRESS** over this period can be observed in the more than 7 million square feet of clinical, education, and research space we have added across our campuses, and in our rating among a small group of hospitals nationwide, just 9 percent, that earned five stars for safety, quality, and patient experience from the Centers for Medicare and Medicaid Services—the only full-service hospital in New York to receive this elite distinction. As further evidence of our momentum, in March, our School ascended to an all-time high of #3 in the *U.S. News & World Report* "Best Medical Schools for Research" rankings, a significant leap from our placement at #34 in 2007.

Because of our resolve to follow up every success by aiming even higher, today we are implementing another, even more ambitious plan for the next 10 years, one that emphasizes outstanding facilities, expanded research, advanced technology, and top-flight education. With the aim of matching or exceeding our rate of growth over the past decade, our latest goals include:

- Achieving new levels of safety and quality in patient care by becoming a highreliability organization and investing in information technology
- Extending the model of all single-bed rooms (a hallmark of the new Kimmel Pavilion and Hassenfeld Children's Hospital) to Tisch Hospital and the rest of our campuses

- Constructing another cutting-edge research facility to house outstanding recruits in addition to our roster of outstanding investigators
- Cementing our position in the upper echelons of the nation's medical schools, while making NYU School of Medicine entirely tuition free

Because our organizational culture prioritizes excellence, accountability, and mutual respect—driven by a faculty and staff who embody these values on a daily basis—I am absolutely confident that we will once again achieve all we set out to do.

In this issue of *Grapevine*, we are delighted to share a glimpse of the groundbreaking things that lie ahead for NYU Langone Health. Focusing on research, we profile some of our faculty's current collaborations, highlight efforts to train the next generation of investigators, and show why our Science Building promises to reshape investigations not only at our institution but throughout the scientific community. I hope these stories leave you as excited about our future as I am.

Sincerely,

ROBERT I. GROSSMAN, MD SAUL J. FARBER DEAN AND CEO

"IN MARCH, OUR SCHOOL ASCENDED TO AN ALL-TIME HIGH OF #3 IN THE U.S. NEWS & WORLD REPORT 'BEST MEDICAL SCHOOLS FOR RESEARCH' RANKINGS."

## GRAPEVINE

#### **FEATURES**



#### Igniting a Transformation

#### 12

Ann Marie Schmidt '83, Melanie Jay '00, and Brian Elbel, PhD, are connecting research in basic science, clinical medicine, and population health.



#### **High-Rising** Science

#### 18

The future of taking discoveries from bench to bedside starts here.



#### New Directions for **Medical Science**

#### 22

HEARD

Class Notes

Douglas Lowy '68

Charles Debrovner '60

Berson Medical Alumni

Achievement Award

26

27

28

32

Profile:

Profile:

Meet five aspiring physicianscientists in NYU School of Medicine's growing MD/PhD program.

#### THE ALUMNI MAGAZINE **OF NYU SCHOOL OF MEDICINE** SPRING 2018

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NYU Langone Health comprises NYU Langone Hospitals and NYU School of Medicine.

PhD symposium on campus

#### 4

3

NEW(S)

Apple Award for innovations in technology

#### 6

#### HOST program brings

#### new practices open in Florida

8 Dean's Honors Day, faculty service awards, new books

together alumni and students,

#### 10

Annual scholarship dinner, recent alumni brunches along the East Coast

Q+A: A Conversation with Ofer Levy '97, PhD (GSAS '96), winner of the 2018 Solomon

#### 34

In Memoriam

#### 36

Look Back

**ON THE COVER** 

Illustration of Ann Marie Schmidt '83 by Gérard DuBois

# New(S)

#### **EVENTS**



## NYU School of Medicine Hosts Largest National Symposium on PhD Career Options

**BECAUSE** so many of today's scientists and trainees are finding career opportunities in places beyond tenure-track academic positions, NYU School of Medicine held the nation's largest symposium on PhD career options in November 2017. More than 1,200 participants—from the Northeast and beyond—attended.

"There are many ways for PhDs to thrive professionally, and many people working at the lab bench simply don't know enough about the great opportunities in the private and public sectors," said Keith Micoli, PhD, assistant dean of postdoctoral affairs and the recent recipient of a Patriotic Employer Award from the U.S. Department of Defense.

Symposium attendees had a chance to take part in 30 different breakout sessions, covering professional opportunities in fields such as patent law, marketing, consulting, and medical communications. The various sessions and workshops featured an impressive lineup of nearly 100 diverse speakers.

"Academia is a fairly saturated and stable market," said Dr. Micoli. "As educators, we have a responsibility to give the remaining 80 to 90 percent of PhDs who will pursue non-academic careers a way to capitalize on all the time and hard work they've invested. These are some of the best and brightest minds out there, and we're committed to helping them succeed."

To read more about how NYU School of Medicine is fostering PhD career options, please see "New Directions for Medical Science" on page 22.

## New(s)

TECHNOLOGY

## Apple Award Goes to NYU School of Medicine

Students and faculty increasingly use iPads for learning and assessment



**NYU SCHOOL OF MEDICINE** was recently named an Apple Distinguished School, a two-year designation (2017–19) that recognizes continuous innovation in teaching, learning, and the school environment.

Through the school's Institute for Innovations in Medical Education (IIME), every medical student and resident is provided with an iPad to enable bedside learning and assessment; each user's iPad is programmed with a unique set of web resources and iOS applications to support the user's learning experience.

One of the tools enabled on these iPads is the mobile companion app, which gives residents on-the-go access to clinical guidelines and resources using their physical location within the medical center. Residency programs are also using location-aware technology to facilitate tracking attendance in their academic conferences. There are other interactive tools that complement learning beyond the lab. NYU School of Medicine is testing 3D models and virtual and augmented reality to reinforce learning.

"No two medical students or residents are exactly alike so we want to make sure the content and resources created and pushed to them are as relevant as possible," said



**"WHEN APPLYING TECHNOLOGY** AND INFORMATICS SOLUTIONS, **WE WANT TO MAKE SURE WE'RE DOING SO IN** A WAY THAT PERSONALIZES MEDICAL **EDUCATION** AND TRAINING FOR MEDICAL **STUDENTS AND RESIDENTS.**"

MARC M. TRIOLA '98, ASSOCIATE DEAN FOR EDUCATIONAL INFORMATICS; DIRECTOR, IIME

Jake Sippel, an educational technology analyst at IIME. "With the companion app, students and residents can go on rounds and while doing so, look up anything they like, not just from NYU Langone Health internal guidelines, but from national and clinical databases as well."

In addition, educators have access to COMET, the Collaborative Organizational Mobile Evaluation Tool, a custom application developed to capture high-quality and timely evaluation and assessment data. It also helps streamline the workflow for assigning and completing evaluations and assessments.

**BY THE NUMBERS** 





**15,000+** 



## Join Us to Help Our Students Travel (HOST)

Alumni hosted students in 15 states last year

UPDATE

**IN 2017**, NYU School of Medicine relaunched the "Help Our Students Travel" (HOST) program to help students offset some of the financial burden and stress of interviewing for their residency placements. Already, alumni in 15 states have participated—providing housing and an insider's view of their own medical specialty, of the profession in general, and of their city of residence and its resources.

#### Call for Volunteers

We're actively seeking alumni to host students traveling for their residency interviews between October 2018 and January 2019. The HOST program provides a wonderful opportunity to build connections between students and alumni that can last a lifetime.

Interested in hosting students? Call: 212-263-5390 Email: alumnirelations@nyumc.org Visit: bit.ly/volunteerhost

#### THANK YOU TO OUR 2017 HOSTS



Marc D. Anker '76 Stephen N. Bell '66 Charles D. Birnbach '92 Allison W. DePersia '12 Jeffrey S. Garrett '81 Meghan L. Jardon '16 Daniel C. Kessler '01 Michael G. Kowalski '83 Hillary A. Kruger '90 Douglas M. Levin '69 Carlos A. Lopez '99 Gwendolyn L. Lopez-Cohen '02 Breanna L. Lustre '12 Grace Y. Ma '92 Jesse McDermeit '16 Lynn E. Morgenlander '82 Joseph R. Plaksin '16 Steven L. Sabol '73 Judith B. Schartenberg '77 Ameer K. Sharifzadeh '17 Peter A. Smith '84 R. James Toussaint '08 Edward Tuohy IV '95 Amber L. Wheeler '07 Patty Yoon, parent

#### **OPENINGS**

## New Practices in the Sunshine State

NYU Langone Health brings cardiology and primary care to Florida



IN AN EFFORT to export

seamless access to the highquality care offered at NYU Langone Health in New York City, the health system recently opened two locations in Florida. At NYU Langone Cardiology Associates in Delray Beach, physicians diagnose and treat cardiac and vascular conditions; at NYU Langone Medical Associates in West Palm Beach, physicians provide high-quality primary and cardiology care. Same-day appointments are often available. No matter where you are, north or south, your electronic medical record is accessible to you and your care team.

"Every detail of this new ambulatory care center has been thoughtfully

#### "DR. TOUSSAINT AND HIS WIFE MADE ME FEEL RIGHT AT HOME IN TOWN AND TOOK WONDERFUL CARE OF ME DURING MY TIME THERE. THANK YOU FOR CONNECTING US THROUGH THE HOST PROGRAM."

ONARS

JING YE '18

"I WAS HAPPY TO OPEN MY HOME TO JING YE! IT WAS FUN HAVING PART OF THE NYU COMMUNITY DOWN HERE IN FLORIDA, AND I WELCOME THE OPPORTUNITY TO DO IT AGAIN."

R. JAMES TOUSSAINT '08

R. James Toussaint '08 (right), an orthopedic surgeon, medical consultant, and researcher, who served as co-chair of his 10th reunion in 2018, and his wife, Sara (left), who received her MBA from NYU Stern in 2008, hosted Jing Ye '18 in Gainesville, Florida, for her interview at the University of Florida.

designed to ensure that it is consistent with our other locations across the NYU Langone Health system, while at the same time drawing inspiration from the Florida community," said Vicki Match Suna, AIA, senior vice president and vice dean for real estate development and facilities at NYU Langone. "For example, we've enhanced the spaces with engaging artwork in partnership with local artist Mary Ellen Scherl, creating a welcoming, healing environment for patients, visitors, and staff."

Since 2011, NYU Langone has expanded its network to more than 230 locations across Manhattan, Brooklyn, Queens, Long Island, Staten Island, the Hudson Valley and now the Sunshine State. It has maintained its position as a national leader in the highest-quality outpatient care. In 2017, NYU Langone received the Ambulatory Care Quality and Accountability Award from Vizient, Inc., for the third year in a row.

Learn more: nyulangone.org/ cardiologydelraybeach

## New(s)

#### CELEBRATIONS

## Dean's Honors Day Recognizes Outstanding Faculty

Honorees included H. Leon Pachter '71, the George David Stewart Professor of Surgery

IN OCTOBER 2017, Dean and CEO Robert I. Grossman, MD, led NYU School of Medicine's annual event to recognize a group of extraordinary people at NYU Langone Health for their intellect, compassion, and service.

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H. Leon Pachter '71, the George David Stewart Chair and Professor of Surgery, received the Master Clinician Award. In his remarks, Dr. Grossman referred to Dr. Pachter as an outstanding surgeon and a "good old-fashioned doctor" who builds enduring relationships with his patients. Dr. Pachter fled Nazi Germany with his family at age 5. In accepting his award, he thanked the United States for taking his family in and giving them

refuge as well as a wealth of opportunities.

György Buzsáki, MD, PhD, the Biggs Professor of Neuroscience, was named this year's Master Scientist in recognition of his major contributions to our understanding of memory and how the brain works, as well as his overwhelming generosity as a mentor. Dr. Buzsáki said he loves his work so much, "I don't even understand why it's called a job." He added that it is a unique privilege to support and share in young researchers' excitement about discovery.

The Master Educator Award was presented to Elisabeth Cohen, MD, the academic advisor to medical students in the Three-Year Accelerated MD Pathway program at NYU Langone. A formidable clinician and clinical researcher, Dr. Cohen leads a national study aimed at improving treatment of herpes zoster ophthalmicus, a form of shingles that affects the eye. Dr. Cohen's own surgical career was ended by the virus, and she has advocated tirelessly to help spare others by encouraging use of the preventive vaccine.

Martin Lipton (LAW '55), a longtime member of NYU Langone Health's Board of Trustees, was honored with the Valentine Mott Founders Award, conferred each year on a benefactor who has championed NYU Langone's mission through his or her support.

Steven B. Abramson, MD,

György Buzsáki, MD, PhD, Elisabeth Cohen, MD, and Martin Lipton (LAW '55)

Left to right: H. Leon Pachter '71,

Photo: Jay Brady



#### CELEBRATIONS

## Faculty Service Achievement Awards for 2016–17

IN JANUARY, NYU School of Medicine hosted an event to recognize faculty who celebrated milestone anniversaries last year. Below are the award recipients.

#### 2016: 25-YEAR AWARD

Jeffrey M. Cohen '86 Keith S. Heller '71 Abraham Jelin '72 Allen S. Keller '88 Richard A. Lebowitz '88 Margaret J. Nachtigall '88 Edwin F. Richter III '87 Elias G. Sakalis '90 Gail E. Schattner '89 Mark A. Steele '86 Alexandra Stern '90 Scott A. Weber '88 Paul B. Yellin '79

#### 2016: 35-YEAR AWARD

William J. Cole '80 Michael J. Faust '78 Mark S. Nachamie '80 Peter L. Reisfeld '77 Rene S. Rodriguez-Sains '77 James M. Salik '80

#### 2016: 50-YEAR AWARD

Ross S. Basch '61 Martin L. Kahn '63 Richard P. Novick '59

#### 2017: 25-YEAR AWARD

Joseph DeVito '91 Colette J. Ho '91 Salvatore R. Lenzo '81 Ted E. Listokin '91 Cynthia A. Loomis '90, PhD (GSAS '93) Rhonda I. Pomerantz '89 Andrew E. Prince '80 Sondra R. Zabar '91

#### 2017: 35-YEAR AWARD

Michael J. Attubato '81 Gary S. Meredith '81

#### 2017: 50-YEAR AWARD

Felicia B. Axelrod '66 Lois Anne Katz '66 Arthur S. Lebowitz '65 Michael S. Simberkoff '62 Bruce K. Young '63

vice dean for education, faculty, and academic affairs, also recognized those faculty members who have been named director of an institute; who have received an endowed professorship; who have been promoted or received tenure in the role of professor; and who have been promoted to associate professor, clinical or research professor, or clinical or research associate professor. NYU Langone Health's chairman of the Board of Trustees, Kenneth G. Langone, thanked everyone present, and all the faculty and staff, for working daily "to help people live healthier and

better lives."

senior vice president and

#### BOOKS



Press, 2016), by Jack L. Mayer '71, is an award-winning work of historical fiction based on a true

story of Weimar Germany and the rise of the Third Reich, illuminating how a democracy can become a dictatorship, and how ordinary people can become complicit in extraordinary crimes. Dr. Mayer also wrote Life in a Jar: The Irena Sendler Project (Long Trail Press, 2011), a nonfiction book about a forgotten Holocaust hero, Irena Sendler, who rescued 2,500 Jewish children from the Warsaw ghetto. Dr. Mayer is a practicing pediatrician in Vermont, an instructor in pediatrics at the University of Vermont School of

Medicine, and an adjunct faculty member for pre-med students at Middlebury College. To learn more, visit jackmayer.net.



Vitamin D (Academic Press, 2018), by David Feldman '63, BA (ARTS '59), editor-in-chief and emeritus professor

of medicine (endocrinology, gerontology, and metabolism) at Stanford University, is a major two-volume publication now in its fourth edition. Its more than 100 authors cover all features of vitamin D: biology, physiology, and clinical aspects, including its role in bone health, immunology, cancer, and multiple diseases such as osteoporosis, diabetes, hypertension, and heart disease.

## New(s)

CELEBRATIONS



## The Power of Scholarships

#### Alumni gifts help the next generation of physicians

IN NOVEMBER 2017, more than 150 students, faculty, alumni, and friends took part in the annual Scholarship and Alumni Appreciation Dinner at the Water Club in New York City. NYU School of Medicine honored three donors: Michael J. Napoliello '66, who received the Jerome S. Coles Award; Thomas J. Liesegang '70, who received the Samuel D. Leidesdorf Award; and Jeffrey P. Friedman '83, who received the Raymond J. Brienza Scholarship Award.

Malika Wilson '21, a firstyear student originally from Lincoln, Nebraska, addressed the group and described the life-changing impact of her scholarship.

"By sixth grade, I knew that I wanted to become an OB/GYN, so that I could be part of bringing life into the world," Wilson said. "But my unwavering love for medicine is somewhat surprising as I never recall having met a

1. Dean and CEO Robert I. Grossman, Thomas J. Liesegang '70, and Anthony J. Grieco '63; 2. Malika Wilson '21; 3. Saida H. Baxt '66 and Sherwood A. Baxt '66 with Jitendra Sonal Patel '19 and Gabriel Redel-Traub '20, recipients of the Saida H. Baxt, MD, Scholarship; 4. Roberta Goldring, MD, with Nolan Kerstin '19, recipient of the Robert S. Coles Scholarship; 5. Dean Grossman, Jeffrey P. Friedman '83, and Anthony J. Grieco '63; 6. Celia Kroop, Steven Kroop, Eugenie Kroop, and Jessica Qiu '19, recipient of the Dr. Irving G. Kroop and Eugenie S. Kroop Scholarship; 7. Safi Ali-Khan '19, Herbert A. Goldfarb '60, and Beverly Goldfarb; 8. Dean Grossman and Michael J. Napoliello '66

Read more: nyulangone.org/give/funds/ medical-school-scholarships

#### **EVENTS**





black physician during my childhood. My scholarship meant one less financial burden my mother had to take on while having three children in higher education. It meant that I, as an African American woman from Nebraska, could finally envision myself as a black doctor with role models who look like me. Most importantly, it meant that I would get the opportunity to pursue my dreams without the burden of choosing a specialty that would eventually cover my debt."

## Alumni Reconnect along the East Coast



**DURING THE ANNUAL** Florida alumni regional brunch at the Boca Beach Club in February, physicians reminisced about their time at NYU School of Medicine and honored Warren R. Janowitz '72, medical director of molecular imaging at Baptist Health South Florida and clinical professor of radiology at the Florida International School of Medicine. The event was chaired by Mary Chrussiadis '89 and Howard E. Voss '61.



**IN THE FALL OF 2017,** alumni gathered at the Willard InterContinental in Washington, DC, to honor Saralyn Mark '88, founder and president of iGIANT and SolaMed Solutions, LLC. Our director of the Division of Medical Humanities, David Oshinsky, PhD, attended both events to share his book *Bellevue: Three Centuries of Medicine and Mayhem at America's Most Storied Hospital* (Random House, 2016). Scott Janowitz, Elizabeth Janowitz, Warren R. Janowitz '72, Allison Janowitz, and Joe Saka

#### **SAVE THE DATE!** We hope you can join us at these

upcoming events.

**NEW ENGLAND ALUMNI BRUNCH** September 23, 11 am Boston Harbor Hotel

**NORTHERN CALIFORNIA ALUMNI BRUNCH** October 20, 11 am The Ritz Carlton, San Francisco

SOUTHERN CALIFORNIA ALUMNI BRUNCH October 21, 11 am The Peninsula, Beverly Hills

Learn more and/or RSVP: Call Carolann Treacy at 212-404-4032 or email alumnievents@nyumc.org.

Saralyn Mark '88 and Anthony J. Grieco '63

#### Brian Elbel, PhD, MPH

Director of the Comprehensive Program on Obesity

Associate Professor, Department of Population Health

Associate Professor, Department of Medicine

Assistant Dean for Strategic Initiatives within the Office of Science and Research

Specialty: Population Health

#### Ann Marie Schmidt '83

Director of IGNITION Lab Dr. Iven Young Professor of Endocrinology, Department of Medicine Professor, Department of Biochemistry and Molecular Pharmacology Professor, Department of Pathology Specialty: Basic Science

#### Melanie Jay '00

Co-Director of the Comprehensive Program on Obesity Associate Professor, Department of Medicine Associate Professor, Department of Population Health Specialty: Clinical Science



## **FRANSFORMATION**

#### ANN MARIE SCHMIDT '83, MELANIE JAY '00, AND Brian Elbel, Phd, are using data and technology to connect research in basic science, clinical Medicine, and population health.

**BY JEN SWETZOFF** 



nn Marie Schmidt '83 has never forgotten the patients she saw as a resident in internal medicine at Bellevue more than 30 years ago. Back then, blood tests for type 2 diabetes, the most common kind of diabetes and the one most often associated with obesity, had only recently emerged. Insulin pumps were just becoming available. Many of her patients worked two or more jobs, unable to monitor their insulin levels

regularly or compute a daily step count. There was no affordable diabetes drug to prescribe.

"Those patients in the clinic had so many stresses and complications related to diabetes, including blindness, plus a lot of economic challenges," recalls Dr. Schmidt, the Dr. Iven Young Professor of Endocrinology and Professor of Medicine, Biochemistry and Molecular Pharmacology, and Pathology at NYU School of Medicine. "Those patients are the ones I think about on a daily basis. They're the reason I keep pushing ahead with my research, trying to give back, to find a better solution."

#### FOLLOWING THE SCIENCE

A world-renowned diabetes researcher, Dr. Schmidt has dedicated her life to medical science. She earned her BA in biology and history from NYU, and she is a graduate of the NYU School of Medicine, where she also completed her medical residency and a fellowship in hematology and medical oncology. Her Bellevue experience has shaped her career and her professional focus.

After completing her fellowship, she spent nearly two decades in academia at Columbia University—where she discovered the protein called RAGE (receptor for advanced glycation end products) that has proven to promote inflammation and to be a key player in diabetic complications. Dr. Schmidt found that giving









Obesity is one of the biggest drivers of preventable chronic disease, which accounts for 86% of annual healthcare spending

Adapted from data available on the Centers for Disease Control and Prevention (CDC) website and in a 2014 report on obesity published by McKinsey & Company

#### "WHEN IT COMES TO COMPLEX DISEASES LIKE OBESITY, TRANSFORMATIVE THINGS TAKE TIME."

Ann Marie Schmidt '83



"It was a wonderful example of what I continue to tell people in the lab: Just follow the science," Dr. Schmidt says.

Today, while still steering NYU's diabetes research program, Dr. Schmidt is expanding her scope to help stop one of the most dangerous and complex epidemics facing humanity: obesity. Over the past year, she and a multidisciplinary team of physicians, scientists, and economists at NYU Langone have been collaborating on a project they believe can result in novel therapeutic interventions and prevention.

#### **OBESITY'S HARSH REALITY**

Obesity plays a role in 86 percent of annual healthcare spending, according to a recent report from McKinsey. Two-thirds of adults in the U.S. are overweight or obese, and one out of three children will develop diabetes. Half of the world's population is projected to be overweight by 2030. At \$2 trillion a year, obesity has roughly the same economic impact as smoking or armed conflict.

NYU Langone is committed to changing this harsh reality, and has been recruiting faculty who prioritize innovation and collaboration. In March 2017, in recognition of NYU's efforts, the American Heart Association (AHA) awarded a \$4 million grant to Dr. Schmidt's research lab, "NYU IGNITION" (InvestiGating Novel obesIty soluTIONs), with support from the recently launched NYU Comprehensive Program on Obesity, to evaluate the anti-obesity effects of blocking RAGE. The initiative, which makes NYU part of the national AHA Obesity Research Network, is breaking new ground by bringing together faculty spanning basic science, clinical medicine, and population health.

Leading the basic science research team, Dr. Schmidt is studying new models in mice to determine the role of RAGE-dependent inflammation and adipocyte (fat cell) biology in energy expenditure and weight loss.

"We've already discovered that mice that have no RAGE whatsoever are largely protected from high fat diet–induced obesity," Dr. Schmidt says. "When they eat high-fat food, unlike their RAGE-expressing counterparts, they do not become obese. So, we believe that if we antagonize the receptor pharmacologically, we might be able to improve the metabolic effects. Right now, we're doing our tests in mice, but we're optimistic that this will ultimately also work with people."

To begin making those human connections, Ira J. Goldberg, MD, director of the NYU Division of Endocrinology, Diabetes, and Metabolism, and the center's deputy director, along with Jose Aleman, MD, PhD, assistant professor of medicine, will manage IGNITION's clinical team. Their groups will assess the involvement of the RAGE signaling pathway as well as novel, yet-to-be-identified pathways, and perform an unbiased analysis to determine the inflammatory pathways activated within people who are obese, and how these are changed with surgical and dietary weight reduction.

#### A COMPREHENSIVE PLAN

NYU IGNITION's comprehensive scope will be rounded out by the work of Mary Ann Sevick, ScD, professor of population health and co-investigator with Eran Segal, PhD, of the Weizmann Institute in Israel. In a community-based clinical trial, Drs. Sevick and Segal will compare two behavioral weight loss interventions delivered using mobile technology: a one-size-fits-all calorie- and fat-restricted



A nurse teaching a patient how to use an insulin pump without tubing, managed with an electronic control unit



diet, versus a calorie-restricted diet plus personalized feedback to reduce glycemic response to meals. In addition to the projects led by Drs. Schmidt, Goldberg, and Sevick, the research plan will contain a rigorous training program, overseen by Ira Goldberg, MD, leader of the clinical project in the AHA Center and director of the division of endocrinology, diabetes, and metabolism at NYU.

The Comprehensive Program on Obesity, led by Associate Professors of Medicine and Population Health Brian Elbel, PhD, MPH, director of the program, and Melanie Jay '00, co-director of the program, also plays a significant role in the AHA project. The program, which launched in September 2016, was spearheaded by Dafna Bar-Sagi, PhD, senior vice president and vice dean for science, chief scientific officer at NYU Langone, to integrate multidisciplinary research, including data science, with the hope of preventing and curing obesity within one generation.

"Such large, synergistic, institution-wide collaborations help further establish NYU Langone as a center of true excellence in the fight against obesity," says Dr. Bar-Sagi. "We're taking scientific discovery from the lab bench all the way to affected communities."

The core mission of the Comprehensive Program on Obesity is to discover treatments that target each patient's unique biology; to develop methods and strategies that can help stop obesity in its earliest stages; and to pioneer solutions that can scale up to reach entire communities. NYU Langone is home to the first program on obesity in the United States that intertwines breakthroughs in basic science, clinical interventions, and population health through a new initiative called DataBridge.

"There are physiological, psychological, and environmental reasons for obesity," Dr. Jay says, "and they all interact. It's clear that we need intentional collaboration to make leaps and bounds in terms of how we're going to deal with this epidemic."

Dr. Jay, an expert in obesity-related health services research and collaborative science, studied behavioral science as an undergraduate at the University of Pennsylvania and then focused on primary care at NYU School of Medicine. She stayed on for her residency, during which time she founded a weight management clinic at Gouverneur Hospital that continues today at Bellevue, and has since extended her career at NYU.

One of her most recent collaborative research projects is a longitudinal study of bariatric surgery outcomes, which she is leading in partnership with Dr. Schmidt; Christine Ren-Fielding, MD, chief of bariatric surgery; and Dr. Segal. This study, which is currently enrolling patients at Tisch Hospital and Bellevue Hospital, will offer a unique opportunity to investigate how environmental factors, interactions with the microbiome, and other variables affect the dramatic weight loss prompted by bariatric surgery.

#### **INCENTIVIZING PATIENTS**

"I've learned a lot about basic science from Dr. Schmidt," Dr. Jay says. "If new drugs can be discovered through NYU's work on obesity, it is a fact that such drugs can help only those who have access to it. My research tends to be about how we get a treatment or a solution to as many people as possible, and how they can use it in the most effective way."

In addition to co-directing research through the Comprehensive Program on Obesity, Dr. Jay still sees patients once a week at the Veterans Affairs (VA) Medical Center and runs a lab called MOTIVATE (Managing Obesity Through InnoVATion and Effectiveness), where the focus of her research is on how to improve the treatment and prevention of obesity in primary care settings. OUR COMMITMENT TO MENTORSHIP AND TO BRINGING PEOPLE TOGETHER IS HOW WE INCREASE THE ODDS OF MAKING IMPORTANT DISCOVERIES."

Melanie Jay '00

Above: Dr. Jay with the MOTIVATE lab's research team

#### GLOBAL IMPACT NYU SCHOOL OF MEDICINE CONDUCTS OBESITY STUDY IN ABU DHABI



#### **DR. SCHMIDT HAS TRAVELED**

to the emirate of Abu Dhabi more than 20 times over the past eight years. She has been part of a research team that is testing RAGE hypotheses in clinical samples and using epidemiology to understand why in one generation people have become more substantially obese and insulin-resistant.

This is the first mechanism-seeking study on the biochemical and molecular risk factors that contribute to the pathogenesis of obesity, metabolic dysfunction, and diabetes in citizens of Abu Dhabi. The ultimate goal is to develop and prospectively study a large cohort of subjects, with the target set at 20,000 citizens between the ages of 18 and 40, by 2020, to identify risk factors and propose novel targets for therapeutic intervention in Abu Dhabi. Already, more than 5,000 participants have been enrolled and monitored.

#### "WE REALLY NEED THE VARIOUS PLAYERS—AND THEIR DATA—TO TALK TO EACH OTHER."

Brian Elbel, PhD, MPH

Her current studies on health services include "Goals for Eating and Moving (GEM)," which examines technology-centered health coaching interventions; "Peer Assisted Lifestyle and Weight Management Study (PAL)," which adds peer coaches to primary care teams; and "Financial Incentives for Weight Reduction (FIreWoRk) Study," in partnership with Joseph Ladapo, MD, PhD, at UCLA, which compares goal-directed financial incentives to outcome-directed financial incentives for low-income primary care patients with obesity.

"All the patients in the financial incentives study receive resources," Dr. Jay explains. "They all get free Weight Watchers memberships, a Fitbit, and a scale. We teach them how to self-monitor their diet and increase physical activity, and we provide brief counseling about ways to improve their lifestyle. That's the baseline. Participants in a process-based group are also paid for participating in the program and doing their own self-monitoring. And finally, in the outcomes-based group, people get paid for losing weight. We're trying to see if it's better to incentivize the process or the outcome, or if it matters to incentivize people at all."

Throughout all her research, Dr. Jay likes to involve students and residents from NYU School of Medicine. This year, she has 22 interns who volunteer approximately 15 hours a week in her MOTIVATE lab, some of whom train to become health coaches, as well as post-docs, graduate-level researchers, and junior faculty. She is also working with Dr. Holly Lofton to start an obesity medicine fellowship.

"In science," says Dr. Jay, "I believe that the best way to have a lasting impact is to inspire other people. I've been very lucky to have my own mentors at NYU, and now my students make me incredibly proud. I think that's one of our most important traditions at NYU School of Medicine: Our commitment to mentorship and to bringing people together is how we increase the odds of making important discoveries."

#### TACKLING TECHNOLOGY: DATABRIDGE

Dr. Elbel, who serves as director of the Comprehensive Program on Obesity, is tackling another critical part of 21st-century science. As part of the program, he is managing an institution-wide initiative at NYU Langone Health called DataBridge, a powerful big-data platform that integrates data from basic science, clinical medicine, and population health research. Soon, investigators will be able to look at large amounts of data—from biological samples, clinical studies, and environmental research—in order to address long-standing questions from completely new perspectives using advanced machine learning and other techniques.

"Data is at the core of what most scientists do," Dr. Elbel says. "They collect it, they analyze it, they draw inferences from it. But in many cases, different groups or silos or disciplines think about data in their own way. That doesn't work when you're trying to solve a problem like obesity, which is big and multifaceted and determined by multiple factors. In this case, we really need the various players and their data—to talk to each other."

The first project to utilize DataBridge is a pediatric obesity study that will draw on the electronic health records of more than 52,000 children from NYU Langone Hospital–Brooklyn to create a series of models predicting which children will be affected by childhood obesity. Understanding the broader predictors early in life—perhaps in children as young as 5—can help scientists learn how to prevent and better treat obesity. "Even with just 500 subjects in our pilot study," Dr. Schmidt says, "we were able to attract males and females in all the different decades, and we saw predictive levels of our soluble RAGEs that suggest who's going to be more insulin resistant and have more tendency toward diabetes. This project has immediate public health interest, and hopefully it will result in long-term public interest assistance."

The conditions in Abu Dhabi

are increasingly dire, as diets and lifestyles have changed significantly. According to research from the American Diabetes Association, 44 percent of the emirate's population has either pre-diabetes or diabetes. Without intervention, 41 percent of the pre-diabetes population will convert to diabetes in five years. Recent prevalence rates of obesity and being overweight in Abu Dhabi were 35 percent and 32 percent, respectively; 57 percent had central obesity. Although similar rates apply in the United States, the population of Abu Dhabi is much younger.

"Our work began in diabetic complications," Dr. Schmidt says, "but we soon learned that the biology of this receptor puts it square in the face of the development of obesity as well, which is a major risk factor for type 2 diabetes. This is a global public health epidemic that we're trying to stop."

By ultimately linking data on public school students—for example, their obesity rates and their environment, along with their health records from NYU Langone Hospital–Brooklyn—plus the soluble RAGE measurements that Dr. Schmidt is collecting and the clinical interventions that Dr. Jay is studying, scientists may be able to make groundbreaking new discoveries.

"Our vision," Dr. Elbel explains, "is to think about DataBridge as a model for how such work can be adopted at an institutional level."

Outside his work on DataBridge, Dr. Elbel—who joined the NYU Langone faculty in 2007 after receiving his PhD in health policy from Yale—has focused his own behavioral economics research in two areas: how people make decisions about their health, and how public policy and the environment affect obesity and related chronic diseases. He also uses statistical and econometric methods and diverse data sources to inform policy and science on obesity prevention. "NYU recognizes that a broad, collaborative approach is the best way [forward]," Dr. Elbel says. "We have great depth in related research areas. We have a very broad clinical network that we are increasingly tapping into. On top of all that, we're using our strengths in data and technology to make a sustained impact."

In less than two years, the Comprehensive Program on Obesity has made great strides in fostering team science. Looking ahead, DataBridge will help take the science even farther, helping to better predict outcomes in a wide array of research areas, including, for instance, which patients might do better with self-achieved weight loss, which with bariatric surgery, and which with orthopedic surgery.

"Science is hard," Dr. Schmidt admits. "When it comes to complex diseases like obesity, transformative things take time. So what I try to do every day is remember the patients, work toward my goals, and think creatively with our team."

#### **JOIN US**

This fall, NYU Langone will host its inaugural Obesity Summit, a symposium for the scientific and clinical community as well as the general public.

#### Learn more:

med.nyu.edu/research/obesity/ comprehensive-program-obesity



This visual illustrates the scope of a new big-data platform, which will integrate research from three key spheres to account for the influence of many factors related to obesity and diabetes.



## HIGH

THE FUTURE OF TAKING DISCOVERIES FROM BENCH TO BEDSIDE STARTS HERE.

RISING

TAKING RESEARCH TO NEW HEIGHTS, NYU Langone Health's new 10-story Science Building recently opened near where Rubin Hall once stood. Today, more than 800 faculty, students, postdoctoral fellows, and staff can work together in large state-of-the-art laboratories with the newest technology resources. "The labs and the communal spaces—including the lobby, the Science Café, and the Alumni Courtyard—were intentionally designed to provide unique opportunities for interactions and collaboration among the entire research network," said Vicki Match Suna, AIA, senior vice president and vice dean for real estate development and facilities. Learn more on the following pages.

Photographs by Karsten Moran

2

















"The Science **Building will** reshape the research that takes place within its walls and create new connections for our entire research community, driving collaboration, productivity, and team expansion opportunities across our campus and beyond."

.....

DAFNA BAR-SAGI, PHD, CHIEF SCIENTIFIC OFFICER AND VICE DEAN FOR SCIENCE AT NYU LANGONE

**1.** Lobby with sculpture, Energy of Endless Universe, by Mariko Mori

••••••

**2.** Exterior of the Science Building

3. Shuoshuo Wang, PhD, associate research scientist, Benjamin King, PhD, postdoctoral fellow, and Max Haase, BSc, graduate assistant/PhD candidate, Institute for Systems Genetics (Lionnet Iab)

**4.** Interactive touch screens displaying research news and upcoming events (Photo by Rene Perez)

**5.** Custom art installation, *Healing Forest*, by Ran Hwang

6. Rachel Swanson, graduate student, Jayeeta Basu, PhD, Neuroscience Institute (Buzsáki/Basu lab)

7. Ellie Hozhabri, graduate student, and Michael Long, PhD, Department of Otolaryngology— Head and Neck Surgery and Department of Neuroscience and Physiology (Long lab)

**8.** Felicia Kuperwaser, PhD candidate, Itai Yanai, PhD, Institute for Computational Medicine (Yanai lab)

**9.** Heading into the Science Café

**10.** Directions to the lab of Richard Tsien, PhD, Neuroscience and Physiology Departments

11. Rows of pipettes

12. Moving crate









## NEW PORECTIONS SCIENCE

Meet five aspiring physician-scientists in NYU School of Medicine's growing MD/PhD program.

> **NYU SCHOOL OF MEDICINE** was one of the first three medical schools in the United States to receive funding for a dual-degree program from the National Institutes of Health, back in the 1960s. More than 50 years later, NYU continues to be one of the most innovative leaders—recently offering students an opportunity to complete their training in seven years, instead of the traditional eight, through the Three-Year Accelerated MD Pathway. The Sackler Institute of Graduate Biomedical Sciences also recently expanded its Medical Scientist Training Program by enrolling almost 40 percent more students in 2016–17.

> "Students are the drivers of change," says Naoko Tanese, PhD, director of the Sackler Institute. "They are the people who

will take medical science in new directions."

"No one person makes cutting-edge discoveries alone," adds Mark Philips, MD, director of the school's Medical Scientist Training Program. "At NYU, students learn the importance of collaboration early on from the open-door policy we have in our labs to the opportunities to work across Tisch Hospital, Bellevue Hospital, and the Veterans Affairs Hospital."

As people live longer and healthcare becomes more complex, the future of translational research will require more long-standing collaborations between research and clinical practice. Here are five students whose early discoveries show how NYU is training and inspiring people to lead the way in medical science.



#### JULIA SCARPA '19, PHD (GSAS '17)

#### **AREA OF FOCUS**

Neuroscience and physiology

#### ADVISORS

Robert Froemke, PhD, and Mario Svirsky, PhD

#### THESIS TITLE

Learning and performance variability in a rodent model of multi-channel cochlear implant use

#### **RESEARCH DETAILS**

By studying neural circuits affected by cochlear implant use, which restores meaningful hearing to profoundly deaf patients, and comparing them with circuits from normal acoustic inputs, Dr. Scarpa found implications for understanding how the brain processes different auditory inputs. Her results provide a foundation for future patients, who could receive personalized postoperative regimens to capitalize on these neuroplasticity mechanisms in order to improve their device use.

#### UNDERGRAD DEGREES

University of Virginia, chemistry and neuroscience

HAILS FROM Virginia

#### ON WAY TO

Fourth year of medical school at NYU, followed by residency in otolaryngology or anesthesiology

"My thesis work would not have been possible without the rich community of mentors and collaborators at NYU. It is an amazing place to train both in clinical and basic science settings, and I knew that the Three-Year Accelerated MD Pathway would give me access to that—all while shortening my **MD/PhD training** time by a full year. As an added bonus, I get to continue to live in the East Village through residency."



#### ARAM MODREK '18, PHD (GSAS '16)

#### AREA OF FOCUS

Molecular oncology and tumor immunology

#### ADVISOR

Dimitris Placantonakis '03, PhD

#### THESIS TITLE

Astrocytoma mutations IDH1, P53, and ATRX cooperate to block differentiation of neural stem cells via epigenetic silencing of SOX2

#### **RESEARCH DETAILS**

To identify molecular players involved in the genesis of gliomas, Dr. Modrek developed a humanized brain tumor model using embryonic stem cells, which allowed him to study the mutation in normal human brain stem cells, thereby mimicking the earliest stage of tumor formation. His results lay a foundation to help other scientists understand how brain tumors develop and could ultimately help treat patients suffering from glioma.

#### UNDERGRAD DEGREE

University of California, Irvine, biomedical engineering

HAILS FROM California

ON WAY TO Residency in radiation oncology at NYU



"There is a rising need for dually trained physician-scientists. who have command of an extensive body of knowledge and familiarity with the technical and administrative challenges unique to both fields, to design and lead complex collaborations. The environment at NYU encouraged my selfdirected work while offering countless opportunities to work with othersincluding basic science researchers. clinical researchers, engineers, audiologists, surgeons, and industry collaborators."

#### SAMUEL MAX COHEN '18, PHD (GSAS '16)

AREA OF FOCUS

Neuroscience and physiology

#### **ADVISORS**

Richard Tsien, PhD, in collaboration with Gordon Fishell, PhD

#### THESIS TITLE

Signaling to the nucleus in excitatory and inhibitory neurons

#### **RESEARCH DETAILS**

Using cell biological techniques, Dr. Cohen examined activitydependent gene expression in excitatory neurons and parvalbumin+ interneurons in the mammalian cortex. His work has expanded the understanding of how synaptic activity leads to changes in gene expression through calcium signaling in the brain.

#### **UNDERGRAD DEGREES**

Wesleyan University, molecular biology and biochemistry

HAILS FROM Massachusetts

#### ON WAY TO

Residency in otolaryngology at Stanford Medicine

NYU SCHOOL OF MEDICINE

"I chose this career path so I could harness my love of science to helping patients. Selecting the right question to investigate is critical for research. and I hope that my clinical work will highlight questions that are both biologically interesting and therapeutically promising. NYU has been a great place to grow as a young physician-scientist, with every resource available in the labs plus supportive people around every corner who are willing to share their insights. I felt like I became part of a community verv quickly here."



#### JORDAN JASTRAB '18, PHD (GSAS '16)

AREA OF FOCUS Microbiology

ADVISOR Heran Darwin, PhD

#### THESIS TITLE

A bacterial proteasome activator involved in the stress response and virulence of *Mycobacterium tuberculosis* 

#### **RESEARCH DETAILS**

To understand the *Mycobacterium tuberculosis* proteasome system, Dr. Jastrab identified a new protein degradation pathway that's required for the tuberculosis bacterium to cause disease. His work has contributed to advancing a globally important area of biomedical science, and may someday lead to the development of novel antibiotics for a disease that continues to kill more than 1 million people every year.

**UNDERGRAD DEGREE** Tufts University, biochemistry

HAILS FROM

New Jersey

#### **ON WAY TO**

Residency in internal medicine at Brigham and Women's Hospital

incredible individuals. and I was lucky to train with so many phenomenal scientists and physicians-tobe. In particular, a collaboration with members of the Froemke lab and the Buzsáki lab at NYU led to several experiments that helped reinforce the significance of my findings for understanding human physiology and disease."

**"NYU attracts** 



#### VICTORIA FANG '19, PHD (GSAS '17)

AREA OF FOCUS Immunology and inflammation

#### ADVISOR

Susan Schwab, PhD

#### THESIS TITLE

Oh, the places a lymphocyte goes: SPNS2-regulated S1P gradients in immune responses

#### **RESEARCH DETAILS**

To study how lymph node cells organize themselves in order to better protect against foreign invaders, Dr. Fang used confocal microscopy in mouse models and examined where different cell types live and what happens during an infection. She also studied ways to prevent T-cells from traveling to sites of inflammation, which has important implications for the development of therapeutic solutions to treat autoimmune diseases.

**UNDERGRAD DEGREE** Amherst College, biology

HAILS FROM New Jersey

#### ON WAY TO

Fourth year of medical school at NYU, followed by residency in dermatology or hematology/oncology

"I think the students in **NYU's Medical Scientist Training Program are** among the happiest. The research community is extremely collegial, which encourages collaboration among labs; the administration has an open-door policy, so people are always accessible and receptive; plus, we get support through many social and professional events throughout the year. I even met my partner here."

GRAPEVINE ALUMNI MAGAZINE SPRING

# Heard

## FOLLOW US!

Stay connected on social media and be the first to learn about news and events.

INSTAGRAM: @NYUSCHOOLOFMED

TWITTER: @NYUSCHOOLOFMED

FACEBOOK: @NYUSCHOOLOFMEDICINE We're grateful to all the individuals, employers, and community members who share the personal and professional accomplishments of our alumni. Please send news of career advancements, publications, research findings, awards, family milestones, and other achievements to the *Grapevine* at **alumnirelations@nyumc.org**.





Happy 90th birthday to **RICHARD D. AMELAR '50, former** director of the male infertility services at Bellevue Hospital Center and a longtime professor of clinical urology at NYU School of Medicine. Dr. Amelar is renowned for establishing and directing the first free vasectomy clinic in the United States. He is also a leader of NYU School of Medicine's Alumni Association, still serving today on the Alumni Board of Governors and as the president in 1984-85. In 2005, he received the NYU School of Medicine's Jerome S. Coles Award.



Congratulations to DR. AND MRS. IRA J. GELB '51, who recently renewed their wedding vows on board the *Crystal Mozart* in Budapest.

**'70**s



SHELDON M. FELDMAN '75 was named chief of the breast surgery division and director of breast cancer services at Montefiore Medical Center after a long and successful career as chief of the breast surgery division at New York-Presbyterian Hospital/ Columbia University Medical Center. Dr. Feldman is a recognized leader in the development of innovative minimally invasive techniques to diagnose breast cancer. He has been included in the annual "Guide to America's Top Surgeons," listed as one of the New York Metro Area's Top Doctors every year since 2004.



**STEVEN C. HORII '76** recently completed a three-year term as chair of the Radiological Society of North America's Research and Education Fund Trainee Grant Study Section. He continues to serve as a reviewer for the study section. In 2017, Dr. Horii was also honored by SPIE, the international society for optics and photonics, as an elected fellow. SPIE holds a medical imaging symposium annually, and Dr. Horii has presented papers at nearly all the symposium meetings since 1982. Additionally, he has twice served as the symposium's co-chair.

#### **BRUCE J. GOLDBERG '78, PHD**

(GSAS '76), was honored as a co-recipient of the 2017 SNOMED International Award of Excellence, which is given for outstanding contributions (continued on page 30)

### DOUGLAS R. LOWY '68 WINS LASKER PRIZE FOR HPV VACCINE DEVELOPMENT

Deputy director of the National Cancer Institute (NCI), part of the NIH, is recognized for his work to prevent cancer

**DOUGLAS R. LOWY '68,** along with his longtime collaborator John Schiller, PhD, won the 2017 Lasker–DeBakey Clinical Medical Research Award for developing the technology that underlies the vaccine against the human papillomavirus (HPV). The Lasker Awards, given since 1945 by the Albert and Mary Lasker

Foundation, are often referred to as the "American Nobels," because so many recipients—85 to date—have gone on to receive the Nobel Prize.

The HPV vaccine has the potential to prevent 19 million cases of cervical cancer as well as other HPV-associated cancers and 10 million deaths from the disease during the next 65 years. Released in 2006, more than 20 years after HPV was linked to cervical cancer, the vaccine induces very high levels of protective antibodies because it faithfully mimics the structure of the virus particle. Over the past decade, the vaccine has proven to be highly safe and effective, with long-lasting results. However, only around 40 percent of girls and 30 percent of boys receive the full course of treatment in the United States. This award should encourage higher rates of adoption.

Dr. Lowy has spent the majority of his career at the National Institutes of Health (NIH), which funds his research. Today, he serves as the deputy director of the National Cancer Institute (NCI), part of the NIH, after serving as the acting director of the NCI for the past two and a half years. He is also the chief of the NCI Laboratory of Cellular Oncology and a member of the National Academy of Sciences and the National Academy of Medicine. Along with Dr. Schiller, he was awarded the National Medal of Technology and Innovation, given by the president of the United States in recognition of major technological advances.

When Dr. Lowy was still a student at NYU School of Medicine, he worked in the lab of another groundbreaking researcher, Jan Vilcek, MD, PhD (Hon. '06), a longtime faculty member and now also a trustee, as well as the co-inventor of Remicade, a leading anti-inflammatory drug.

"Doug stood out as unusually bright and inquisitive at the time he was a medical student," said Dr. Vilcek of Dr. Lowy. "He went on to build a brilliant career in science and science administration. His work that enabled the development of the HPV vaccine is as significant as that of Albert Sabin and Jonas Salk—two other NYU School of Medicine graduates, who pioneered the vaccine against polio."



## Heard

## CHARLES DEBROVNER '60 ESTABLISHES SCHOLARSHIP FUND

Former infertility specialist at NYU Langone gives back and retires to advocate for the highest standards of medical and ethical conduct

**CHARLES DEBROVNER '60,** a retired clinical professor who served in NYU's Department of Obstetrics and Gynecology for nearly 50 years, made a generous gift of more than \$1 million to NYU School of Medicine, where he trained, and to NYU Langone, where he spent his entire career as a highly respected OB/GYN specialist in infertility. Dr. Debrovner helped hundreds of couples conceive and deliver healthy babies.

"I decided to make a donation because I wanted to honor my parents and to express my gratitude to the medical center for all that I've benefited from it over the years," he said. "I had a wonderful experience there, first as a student and then as a faculty member. NYU was a wonderful family to be a part of."

Dr. Debrovner was a pioneer in the field of infertility long before in vitro fertilization was an available option.

#### "Infertility is one of the very few specialties in all of medicine where you're treating a couple, rather than one patient," he said. "You're involved in their most intimate relations, and that requires their greatest trust. Then you

may deliver the baby whose creation you were a part of. All those things were very challenging and very fulfilling."

Dr. Debrovner grew up in Brooklyn and found his two true loves during high school. First, at age 17, he met his wife of nearly 60 years, Patricia Bruder Debrovner, an actress who appeared in *As the World Turns* for more than 35 years. His second love was medicine and while still in high school, he started working at a neighborhood hospital, initially cleaning out the operating rooms after surgical procedures and eventually being permitted to assist in surgery. After high school, he majored in combined zoological and medical studies at Yale University. He was able to complete his major after his third year there, when he was accepted into medical school at NYU. Dr. Debrovner credits his mentor, Sophia Kleegman '24—an infertility specialist who was the first woman appointed to the School of Medicine teaching faculty—for inspiring his focus on infertility. Today, he still remains on the faculty at NYU, attending weekly staff conferences, despite his retirement from clinical practice.

"I'm a big believer that you should not just retire *from* something, but that you should retire *to* something," Dr. Debrovner said. "Now I work for the New York State Department of Health in its Office of Professional Medical Conduct. I'm the medical coordinator for OB/GYN. Any patient who is dissatisfied with the care they've received from a doctor in New York has the right to complain to our office and I coordinate the investigation of the OB/GYN cases. It gives me a lot of intellectual and personal satisfaction to help support high standards of care for both doctors and patients."

#### "NYU WAS A WONDERFUL FAMILY TO BE A PART OF."

Just like Dr. Debrovner, you can establish an endowed scholarship fund. For information, please contact Diana Robertson at 212-404-3510 or diana.robertson@nyumc.org.



## Heard

(continued from page 26) to the improvement and implementation of SNOMED CT, a comprehensive and precise clinical health terminology product. Dr. Goldberg has been continuously involved as an advisor and active participant in different areas including the consultant terminologist program and the event, conditions, and episodes project group.

## **'80**s



ROBERT D. BLANK '88, MS (GSAS '85), PHD (GSAS '88), chief of endocrinology at the Medical College of Wisconsin and president of the International Society for Clinical Densitometry, was recently appointed academic editor of PLoS One. He also serves on the editorial boards of The Journal of Bone and Mineral Research, Osteoporosis International, and Clinical Reviews in Osteoporosis and Related Research. After 10 years as chair of the Federation of American Societies for Experimental Biology's Science Research Conferences Advisory Committee, he will be stepping down in 2018 but will continue to work with the organization on a project addressing how transparency and rigor can best be communicated in scientific meetings.

## **'00**s



TARA C. GANGADHAR '04, an oncologist and assistant professor of medicine at the

Perelman School of Medicine of the University of Pennsylvania, married Mark Allen Mitchell in August 2017 at the Omni Nashville Hotel in Nashville. The couple met in 2015 through a mutual friend in Philadelphia who emailed each of them in 2011. The groom did not respond until checking that email account four years later, playfully writing, "Welcome to Philadelphia! I'd be happy to show you around once you get settled in!"

#### ELIZABETH O. ROSS '04

launched a podcast called "The House of Pod: A Medical Podcast," featuring two doctors and a guy named Joe to answer questions, cover news, and help pull back the curtain on the world of medicine. The series is accessible on iTunes.

#### ETHAN GOLDBERG '08, an

attending physician and instructor in the Division of Neurology at Children's Hospital of Philadelphia and Department of Neurology at the Perelman School of Medicine at the University of Pennsylvania, recently won a National Institute of Neurological Disorders and Stroke grant. In December 2017, he presented his research-investigating the brain mechanisms of epilepsy using two-photon calcium imaging and optogenetic manipulation-at the American Epilepsy Society Annual Meeting in Washington, DC.



KEVIN SMALL '08, director of plastic surgery at the New York Bariatric Group, and his wife Steph welcomed their

son, Lucas Ryan Small, in August 2017.

## **\*10**s



**GREGORY KATZ '12**, a secondyear cardiology fellow at NYU Langone Health, married Tiffany Jing-Han Low in July 2017 at the Loeb Boathouse in Central Park. Dr. Katz is also a founder of Watusee Foods, a snack company in Washington.

#### **STEPHANIE JOELLE SWENSEN '13,**

executive chief resident in orthopedic surgery at NYU Langone Health, married JOHN ANDREW BUZA III, MD, a fourthyear resident in orthopedic surgery, also at NYU Langone, in September 2017 at the Montauk Yacht Club in Montauk, New York. The couple met at an advanced cardiac life support class during the first week of their intern orientation for the orthopedic surgery residency program at Bellevue in New York.



JANICE JANG '15, a third-year resident in internal medicine at NYU Langone Health, married Jona Kim in September 2017 at the Harold Pratt House, an event space in Manhattan. The couple met in 2015 at a birthday celebration in Manhattan.

### Upcoming Continuing Medical Education Courses 2018

Courses as of May 1, 2018



Alumni are eligible for continuing medical education courses at a reduced cost. Here are some of the programs available in the next few months:

ADVANCES IN CARDIOVASCULAR RISK REDUCTION: IMPROVING TREATMENT FOR PATIENTS WITH DIABETES May 3

DIETARY AND LIFESTYLE STRATEGIES FOR CARDIOVASCULAR RISK REDUCTION May 4

OPTIMIZING OUTCOMES FOR CANCER SURVIVORSHIP May 4

NYU LANGONE ORTHOPEDIC HOSPITAL 9TH ANNUAL ARTICULAR CARTILAGE REPAIR COURSE May 5

**TOTAL CLEFT CARE: FROM BIRTH TO ADULTHOOD** *May 10–11* 

2018 NEW YORK ADVANCED RHINOLOGY AND SINUS SURGERY COURSE May 11–12

**2ND ANNUAL FIGHT MEDICINE COURSE** *May 12* 

CEREBRAL PALSY: COMPREHENSIVE CARE AND NEW DIRECTIONS May 17–18 **VENOUS THROMBOSIS UPDATE 2018** *May 18* 

**38TH ANNUAL ADVANCES IN DERMATOLOGY** *June 7–*8

ADVANCES IN SCREENING, DETECTION, AND TREATMENT OF PROSTATE CANCER June 15–16

**INTERNATIONAL HIP DYSPLASIA CONFERENCE** September 13–14

**ADVANCES IN MOVEMENT DISORDERS** September 14

TEMPORAL BONE DISSECTION COURSE: ADVANCED TECHNIQUES IN ADULT AND PEDIATRIC ENDOSCOPIC EAR SURGERY, TYMPANOPLASTY, AND COCHLEAR IMPLANTATION September 14–15

PRACTICAL OPHTHALMOLOGY FOR THE NON-OPHTHALMOLOGIST 2018 September 22

**BIG GUT SEMINARS: FOCUS ON COMPLEX PANCREATIC DISEASES** *September 28* 

Note: All courses listed here take place in New York City.

For a full calendar of upcoming programs and to learn more, please contact 212-263-5295 or cme@nyumc.org, or visit med.nyu.edu/cme.



### OFER LEVY '97, PHD (GSAS '96), PROTECTS PEOPLE FOR LIFE

The director of the Boston Children's Hospital *Precision Vaccines Program* and associate professor of pediatrics at Harvard Medical School was honored with the 2018 Solomon A. Berson Medical Alumni Achievement Award at the 2018 NYU School of Medicine Alumni Reunion. Here, he discusses his passion for science, pediatrics, and family.

#### WHAT'S THE FOCUS OF YOUR WORK?

We're bringing precision medicine to vaccinology, the single most effective biomedical intervention. To do so, we're studying the human immune system and how vaccines protect vulnerable populations against infectious diseases. That information will help us build vaccines that are tailored to individuals at high risk of infection, whether they're very young, elderly, immuno-compromised, or living in resource-poor areas of the world.

In our research, we're looking for fresh insights on

how existing vaccines protect people, and then we're using that information to build next-generation vaccines. Up to now, a lot of vaccine development has been by trial and error, and a "one size fits all" approach, which, although it has resulted in tremendous successes, can end up with "one size fits none particularly well," with respect to falling short on protection. Many vaccines require multiple booster doses to be effective, or protection wanes with age, and for many pathogens we do not yet have licensed vaccines. Why do we use a single vaccine formulation, regardless of whether people are young or old, male or female, living in the U.S. or Africa, have a normal immune system, or are immuno-compromised? It turns out that all those details matter-and so the more sophisticated our understanding of the immune response is for these different populations, the better we can build vaccines that are most suitable for a given population.

#### HOW DO YOU DO YOUR RESEARCH?

We have a number of ways. One is by reproducing the human immune system outside the body by taking human blood and culturing it to study how white blood cells react to different vaccine formulations. That way, we can really take a deep dive into the details of that interaction. We also study how vaccines protect in animal models, and in human studies, where we take small volumes of human blood before and after immunization and use cutting-edge systems biology approaches to ask questions like "What molecular pathways are changed when a vaccine is given, and how does that change correlate with protection against infection?" Or "How do certain vaccines work in a newborn?" We try to decipher those rules so that we can then use that information to build better vaccines for the future.

We're working on a novel influenza vaccine, and we're developing a new vaccine for respiratory syncytial virus, or RSV. We're using novel adjuvants-small molecules that you add to a vaccine to boost its effect. There is currently no licensed vaccine for RSV, and it's one of the most common viral infections of young infants. We're trying to use adjuvants that work best in early life, so we identify age-specific adjuvant molecules in our test tube models, comparing newborn, adult, and elderly white blood cells, and then use our animal models to move the effort forward. In this way, we find adjuvant molecules that work best in certain phases of life, to build optimal vaccines that would be most protective in different age groups.

#### OF ALL YOUR ACCOMPLISHMENTS, WHAT MAKES YOU MOST PROUD?

I've led a research team that's managed to put immunization and pediatric vaccinology back on the national map. In a lot of research there tends to be a default that's weighted toward adult medicine, so as pediatric researchers we have an advocacy role. I'm proud to serve on the Vaccines and **Related Biological Products** Advisory Committee, which gives the FDA advice on vaccines. I recently addressed the National Vaccine Advisory Committee, and I am scheduled to give a TEDx talk this coming fall regarding vaccine innovation. It's really about the next generation, so it's also gratifying to see the people I'm training have success, whether it's publishing their work, gaining their first grant, or taking that next step toward their own research career. As director of the Boston Children's Hospital Precision Vaccines Program, part of my work is to encourage international collaboration between academia, industry, and government around vaccine development. We have more than 200 members and many innovative collaborative

vaccinology projects around the world.

#### HOW DO YOU FEEL ABOUT WINNING THE SOLOMON A. BERSON MEDICAL ALUMNI ACHIEVEMENT AWARD?

It's really touching. I'm honored and humbled that NYU School of Medicine has recognized my dedication to pursuing new approaches in developing vaccines for the most vulnerable individuals. It's also a moment of reflection. I'm geared toward coming in every day and working hard, but it's also important to take time to reflect. At a moment like this, it's like somebody tapping you on the shoulder and saying, "Hey, others have taken note that what you're doing is innovative, important, and special, and they want to recognize that."

#### HOW WOULD YOU DESCRIBE YOUR EXPERIENCE AS AN MD/PHD STUDENT AT NYU SCHOOL OF MEDICINE?

It was an incredible time in my life. This outstanding medical school has been absolutely cardinal to my training and success as a physician-scientist. My clinical experience was excellent, and the enthusiastic mentorship of my lab mentors-Drs. Peter Elsbach and Jerrold Weiss in the Department of Microbiology-really set me on my course. I met my wife, Sharon, the night before the first day of medical school. I remember standing at an event for new medical students and seeing a young woman with a sparkle in her eye. I was taken by her sense of humor, intelligence, and warmth the moment we met

Sharon and I started medical school together, but by the time I finished my PhD, she was already a pediatrician. I switched my own specialization to pediatrics because of my wife's inspiring example as a pediatrician, her amazing colleagues, and the potential of making a positive impact in early life, thereby achieving long-term benefit.

#### WHERE ARE YOU HAPPIEST OUTSIDE THE RESEARCH LAB?

Traveling with my wife Sharon and our three children: Orly (19), Isaiah (17), and Emmanuel ("Manu," 10). They visit my lab and have traveled the world with me. I believe having children has strengthened me as a physician– scientist, and hopefully, being a physician–scientist has made me a better parent.



Dr. Levy with his wife, Sharon Levy '92; his children Orly, Isaiah, and Manu; and their dog Jasmine

#### WHAT WERE YOUR OWN PARENTS LIKE?

I grew up in New York City where I was raised by my mother Hanna, a pianist and composer, and my father Benjamin, a painter and sculptor. He used to say that some people think being an artist means you lie around and wait for inspiration, but he woke up every day at 4:30 am to start painting. My dad was very disciplined and productive-and I think that certainly rubbed off on me. Some have thought that by becoming a scientist, I rebelled against my parents, but there's a lot of creativity in science.

#### WHAT ADVICE WOULD YOU GIVE TO ASPIRING PHYSICIAN-SCIENTISTS?

Be curious and stay engaged. Find a community of mentors who inspire you and a topic that you feel is vital to human health, then give it your all. Science is not just done at the bench—get out there and engage.

#### "I'M HONORED AND HUMBLED THAT NYU SCHOOL OF MEDICINE HAS RECOGNIZED MY DEDICATION TO PURSUING NEW APPROACHES IN DEVELOPING VACCINES FOR THE MOST VULNERABLE INDIVIDUALS."

## Heard



Our condolences to the families and friends who have recently lost loved ones. Please notify us of alumni and faculty passings, so that we may recognize and honor our community members in future issues.

212-263-5390 alumnirelations@nyumc.org med.nyu.edu/alumni ALLAN E. DUMONT '48, a professor of surgery at NYU School of Medicine for 31 years, died on November 18, 2017, at the age of 93. He was a revered surgeon, teacher, and scientist, as well as a beloved husband, father, and grandfather. After his retirement in 1990, the surgical library at NYU was renamed the Dumont Library in his honor.

Dr. Dumont grew up in Brooklyn, attending Boys High School, then Hobart College as a member of the U.S. Naval Reserve Officers Training Corps. He graduated from NYU School of Medicine in 1948 and completed his internship and residency in surgery at Bellevue. After a two-year tour of duty in the U.S. Navy, he returned to Bellevue to serve as chief surgical resident. He then remained at NYU School of Medicine as a faculty member. He was appointed to an endowed chair as the Jules Leonard Whitehill Professor in 1973 while also chairing the Institutional Research Board of NYU Langone, safeguarding the rights of patients in medical research. He served as consulting and attending surgeon at the Manhattan VA

Hospital and at Tisch Hospital. However, Bellevue was his primary practice, where he led the third and fourth surgical divisions and then was associate director of the Department of Surgery until his retirement.

During his career, Dr. Dumont received numerous awards, including the Solomon A. Berson Medical Alumni Award in Health Science from NYU School of Medicine. He was a prolific writer—publishing more than 25 book chapters and 115 papers in journals including *Nature, New England Journal*  of Medicine, and Annals of Surgery—on research topics that included wound healing; tissue regeneration; animal physiology; and clinical management of diseases such as cirrhosis, heart failure, and filariasis. He was an expert on the lymphatic system and on surgical treatments involving the thoracic duct.

Dr. Dumont is survived by his wife Joan Auerbach, three sons and their wives, and seven grandchildren. His family wants all who knew him to remember that notwithstanding his many accomplishments, his greatest legacy is his belief that every individual in our society deserves to be treated with respect; he led his life accordingly.



ARTHUR C. FOX '48, who served as the chief of cardiology at NYU School of Medicine for 33 years, died on November 29, 2017, at the age of 91. In addition to the enormous impact he made in the field of cardiology, he left an indelible mark as a master clinician on generations of trainees and faculty throughout the institution and beyond.

After spending his childhood in Newark, New Jersey, Dr. Fox attended Harvard College before NYU School of Medicine. He then worked on the house staff at Bellevue, where he was chief resident from 1951 to 1952. Before becoming the chief of cardiology at NYU School of Medicine, a position he held from 1968 to 2001, he served in the U.S. Air Force-with one year at the National Research Council working first on the transmission of viral hepatitis by transfusion and then the development of dextran as a plasma expander-and he was an NIH research fellow with Ludwig Eichna, MD, at NYU School of Medicine. He was also the president of the New York Heart Association, the president of the New York Cardiological Society, and a governor of the American College of Physicians.

Dr. Fox participated in landmark bedside hemodynamic studies of cardiogenic shock and seminal studies on energy metabolism in the failing heart. He showed that levels of creatine phosphate were low in experimentally induced severe heart failure and that myocardial hypertrophy due to experimental pressure overload produced a characteristic shift in LDH isoforms. He was the first to demonstrate the production of adenosine during pacing-induced ischemia in humans, as well as the usefulness of nucleoside efflux from human and canine hearts as an index of current and prior ischemia. In recognition of his many achievements, he received the Great Teacher Award of NYU and was named a master of the American College of Physicians.

Dr. Fox is remembered for his remarkable intellect and his keen wit. He educated, as well as entertained, many of the senior cardiologists in NYU's Division of Cardiology and at a host of leading academic medical centers throughout the country. He is survived by his longtime loving companion Heidi Young, two of his three brothers, his eight nieces and nephews, and his 14 great-nieces and great-nephews.

#### **IN MEMORIAM**

**MORRIS L. JAMPOL '43D BERNARD N. BRODOFF '46,** BA (WSC '43) **ARNOLD TOPILOW '46, BA (WSC '44) JOSEPH T. MURRAY '47 ALLAN E. DUMONT '48 ARTHUR C. FOX '48 JEROLD F. LUCEY '52 GERALD WEINTRAUB'54** HUGH V. MAIOCCO '55, **BA (WSC '51) LAWRENCE J. SONDERS '56 MELVIN TRESSER '56 BURTON C. D'LUGOFF '57, BA (WSC '51) RODNEY W. STUART '57 ROBERT D. AUERBACH '58, BA (WSC '54) CHARLES F. NICOL '59 SOLON I. FINKELSTEIN '61 BERNARD P. LANE '63 JOHN J. STINE '63 KENNETH J. FRANK '72 ROY S. GOODMAN '75 RANDALL L. BARNHART '76** PHILLIP R. SMITH '86

#### Faculty

ALBERT B. ACCETTOLA, MD ROBERT W. BEASLEY, MD CHARLES P. DEFEO, JR., MD MICHAEL L. GRUBER, MD LISA J. KRENZEL, MD NATHAN LIBBY, MD GIDEON E. NACHUMI, MD BARBARA O'BRIEN, MD RAVINDRA RAJMANE, MD

## Look Back

In a recent alumni survey, Frank Spencer, MD (Hon. '99), was named one of the most influential professors at NYU School of Medicine. Staff and colleagues love seeing Dr. Spencer on campus.

Dr. Spencer, a pioneering cardiologist and a beloved professor at NYU Langone Health for 50 years, is known for introducing innovative techniques at Bellevue that successfully used a Gibbontype pump–oxygenator to maintain circulation during surgery. In addition, he made important contributions to medical science through his transformative work in general cardiothoracic surgery, surgery for congenital heart disease, valvular heart surgery, thoracic aneurysm, and experiments with artificial hearts.

"VIVID IN THE NYU MEDICAL STUDENT'S MEMORY IS THE BARELY AUDIBLE VOICE OF DR. FRANK C. SPENCER LOOKING IN THE EYES OF A CHIEF RESIDENT STANDING IN 'THE PIT' AND ASKING, 'WHAT DID YOU LEARN?'"

Excerpted from the 1969 Medical Violet Yearbook



## WHY I GIVE



"My years at NYU meant the world to me. I enjoyed every day, and I'm so grateful to contribute to the training and promotion of Mohs surgery. I performed about 47,000 skincancer surgeries during my more than 40 years of practice at NYU. I taught in nearly 50 countries and

in four languages. I saved lives and made a difference. NYU Langone Health paved the way. To show my appreciation, I have included funds in my will to be given to the Department of Dermatology after I'm gone (but never forgotten, I hope)!"

#### PERRY ROBINS, MD PROFESSOR EMERITUS OF DERMATOLOGY AT NYU SCHOOL OF MEDICINE

NYU School of Medicine is grateful to Dr. Robins, a world-renowned dermatologist who created the first fellowship training program for chemosurgery in the United States at NYU. In 1979, he also founded the Skin Cancer Foundation, spreading the message about sun protection and skin cancer around the globe. At 87, he is going strong, still working closely with the foundation and writing his memoir. He and his fiancée, Dr. Marcia Robbins-Wilf (MA '75), an NYU graduate, travel extensively and love visiting their grandkids.

#### HELP SUPPORT THE NEXT GENERATION OF PHYSICIANS. INCLUDE A GIFT TO NYU SCHOOL OF MEDICINE IN YOUR ESTATE PLAN.

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