



elec·tric \ i- lek-trik, e- \ ˈ

2: exciting as if by electric shock;
also: charged with strong emotion

Contents

The Vision

ROBERT I. GROSSMAN, MD, SAUL J. FARBER DEAN AND CEO,
ON TRAINING DOCTORS TO MEET THE CHALLENGES
OF THE 21ST CENTURY

4

“NYU School of
Medicine was the
first medical school
in the country to
offer accelerated
entry into any
specialty with
a guaranteed
residency spot.”

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

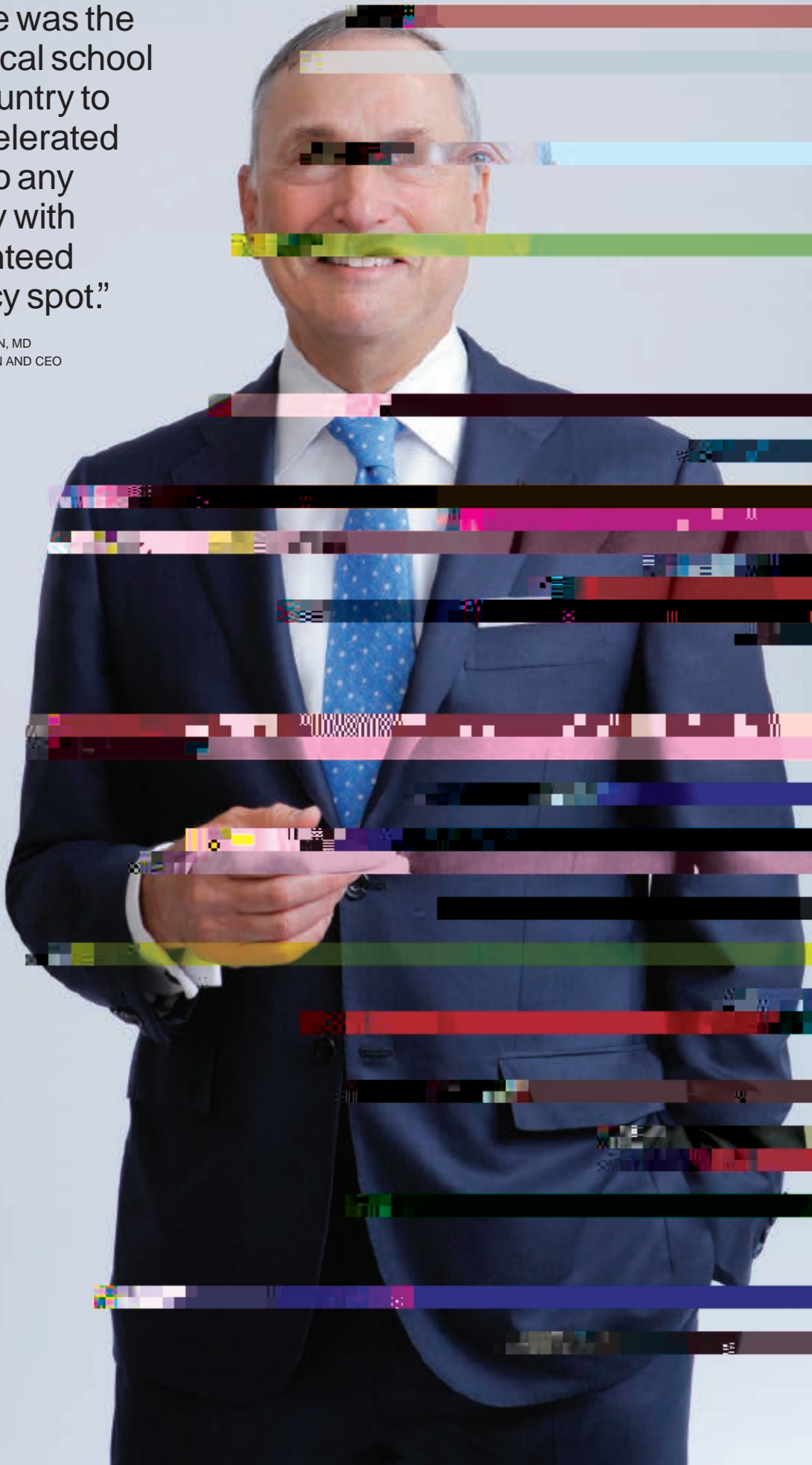


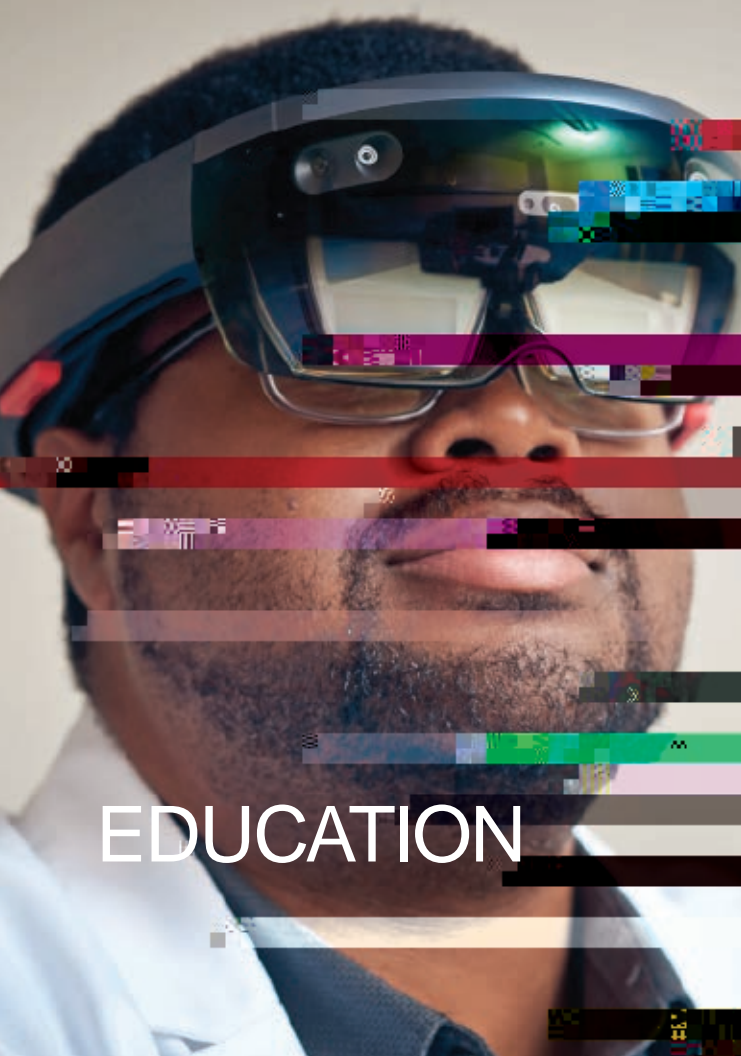
PHOTO BY JOHN ABBOTT

Training Doctors to Meet the Challenges of the 21st Century

A Q&A WITH ROBERT I. GROSSMAN, MD, SAUL J. FARBER DEAN AND CEO

At a time when medicine, science, and healthcare seem to be competing with each other for which field can change faster, medical educators face many challenges. Among the biggest, as I see it, is the cost of a medical education and the debt students assume after graduation. Shouldering a debt of more than \$189,000—the average for new doctors—is unsustainable.

TO HELP ALLEVIATE THIS BURDEN, we established the Three-Year MD Pathway Program in 2013 for those who qualify. At that time, NYU School of Medicine was the first medical school in the country to offer accelerated entry into any specialty with a guar -



EDUCATION



TOP LEFT: PHOTO BY SASHA NIALLA. TOP RIGHT: PHOTO BY KARSTEN MORAN. BOTTOM: PHOTO BY JULIANA THOMAS



“We’re innovating ways to follow our students right through residency—as if they’re still with us.”

STEVEN B. ABRAMSON, MD
VICE DEAN FOR EDUCATION,
FACULTY, AND ACADEMIC AFFAIRS,
CHAIR OF THE DEPARTMENT OF MEDICINE

PHOTO BY KARSTEN MORAN

How Do We Train Tomorrow's Doctors? It's Personal.

A Q&A WITH STEVEN B. ABRAMSON, MD, SENIOR VICE PRESIDENT AND VICE DEAN FOR EDUCATION, FACULTY, AND ACADEMIC AFFAIRS, AND CHAIR OF THE DEPARTMENT OF MEDICINE

HOW HAS THE CURRICULUM FOR THE 21ST CENTURY REINVENTED MEDICAL EDUCATION AT NYU SCHOOL OF MEDICINE?

Most important, we've personalized learning

Helping Medical Students Graduate Sooner, and with Less Debt

MANY STUDENTS CONSIDERING CAREERS IN medicine
find themselves weighing the significant financial
burden it imposes—and often decide on another

“By making medical education more affordable, if not free, we put ourselves in a position to attract the very best medical students.”

KENNETH G. LANGONE
CHAIR, BOARD OF TRUSTEES

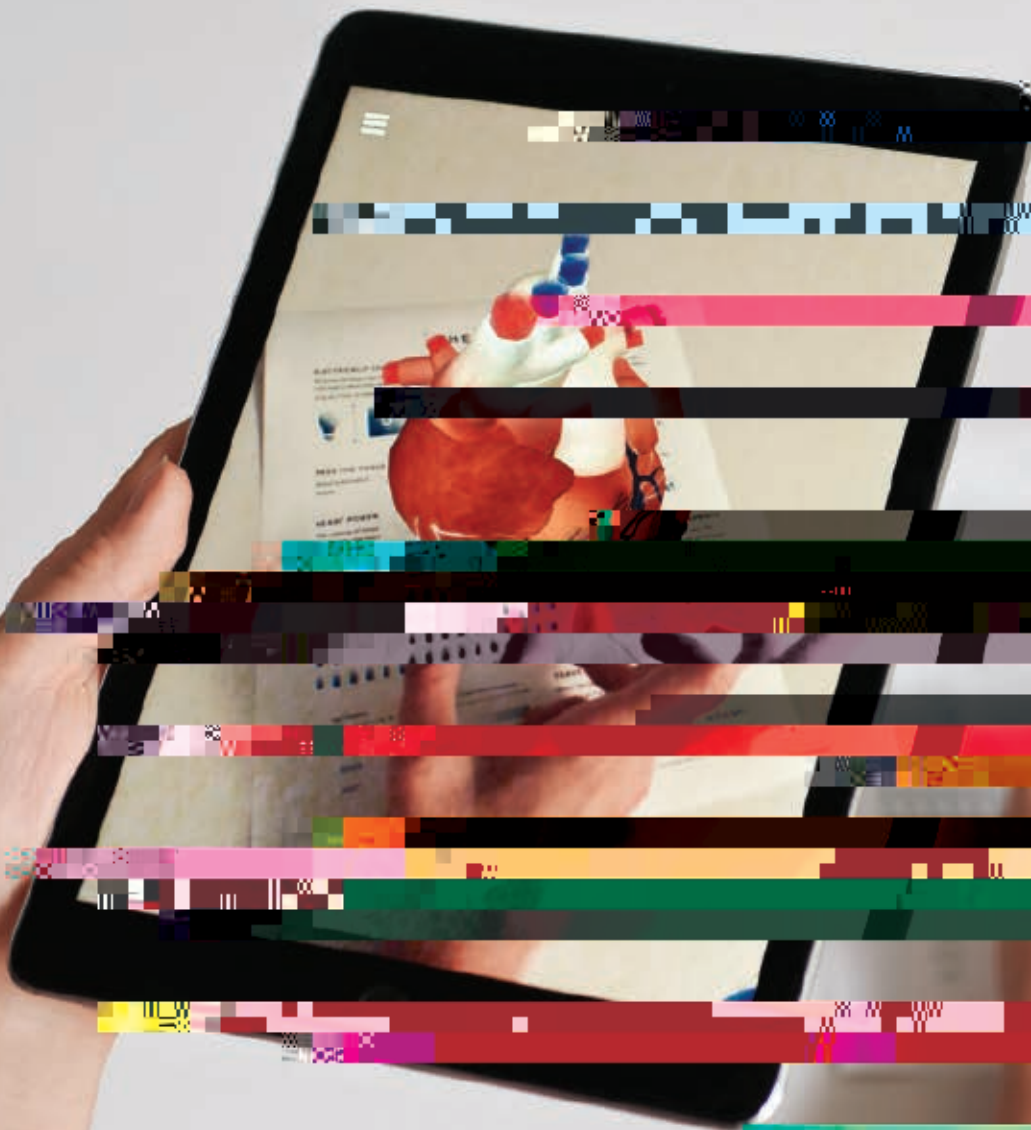




A PERFECT MATCH Neurosurgery resident Travis Hill, MD, who graduated from NYU School of Medicine in three

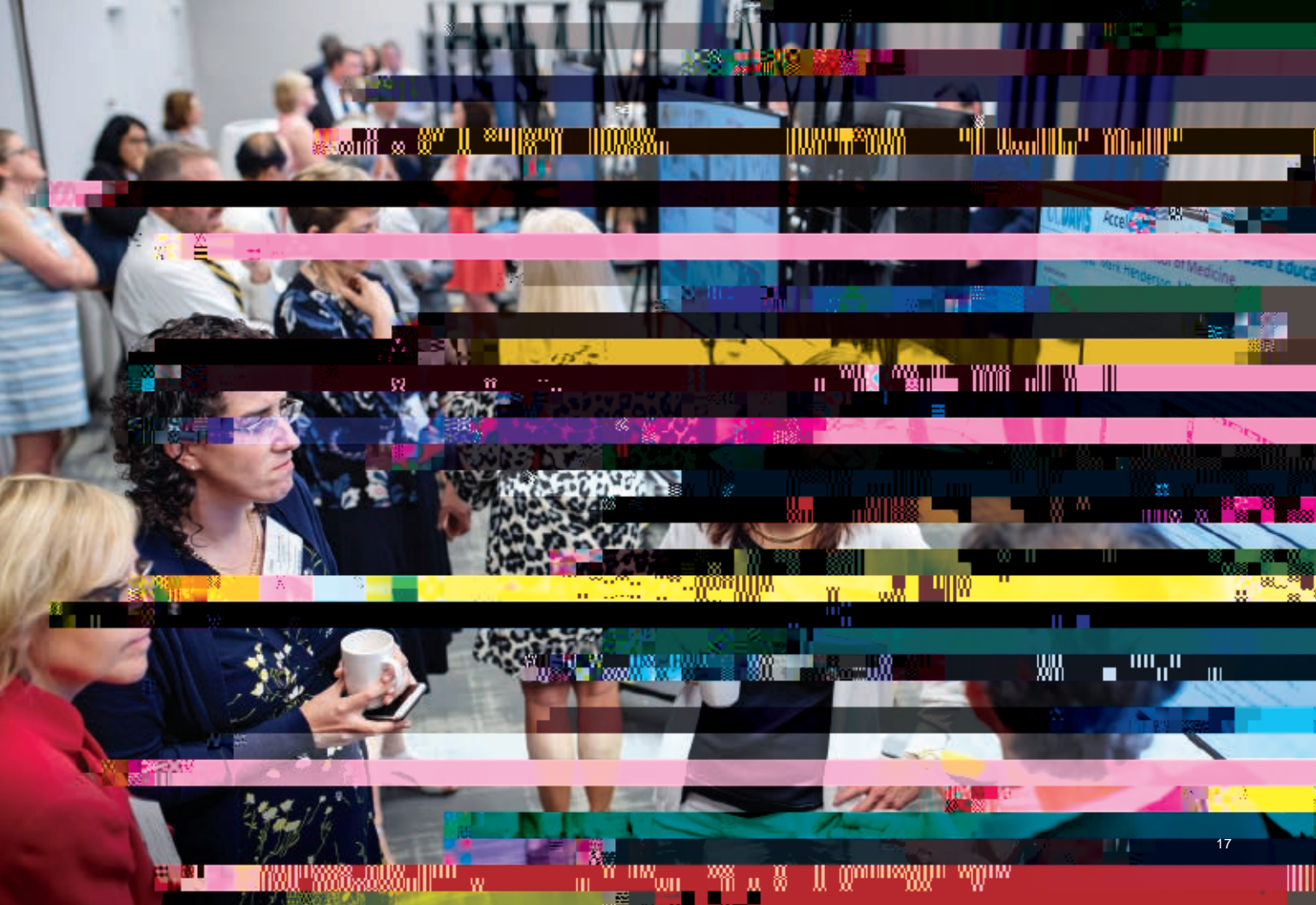
“New technologies are merely a means to an end. The goal is to improve the ways we teach and learn.”

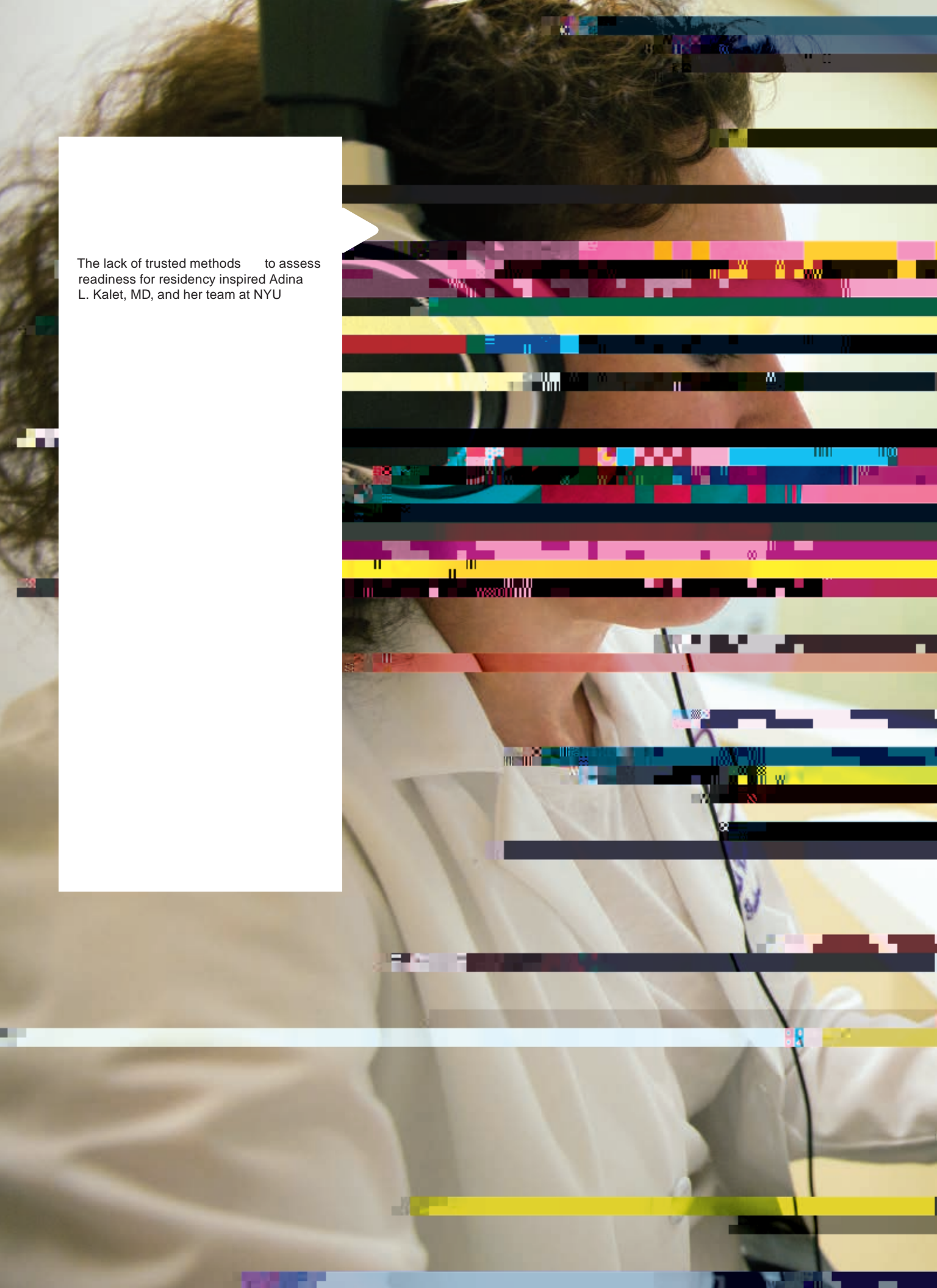
MARC M. TRIOLA, MD
DIRECTOR OF THE IIME, ASSOCIATE DEAN
FOR EDUCATIONAL INFORMATICS



Bridging the Gap between Medical School and Residency

FEW EXPERIENCES ARE more stressful in the life of a doctor than making the leap from medical school to residency. "Right now, the model is that you finish medical school, and even though your education continues, there is no coherent transition to residency," says Steven B. Abramson, MD, vice dean for education, faculty, and academic affairs, and chair of the Department of Medicine. "The freshly minted graduate essentially starts all over again, with little attention to building upon that individual's particular knowr thc8. (e)-9.66(c)-23 TD [(a)-47.7 61kili i 9,f a 2aedical schooe in maaon that (l)-17 (6)-47.7 (n)-28.4 (s)-11.4 (i)-3.





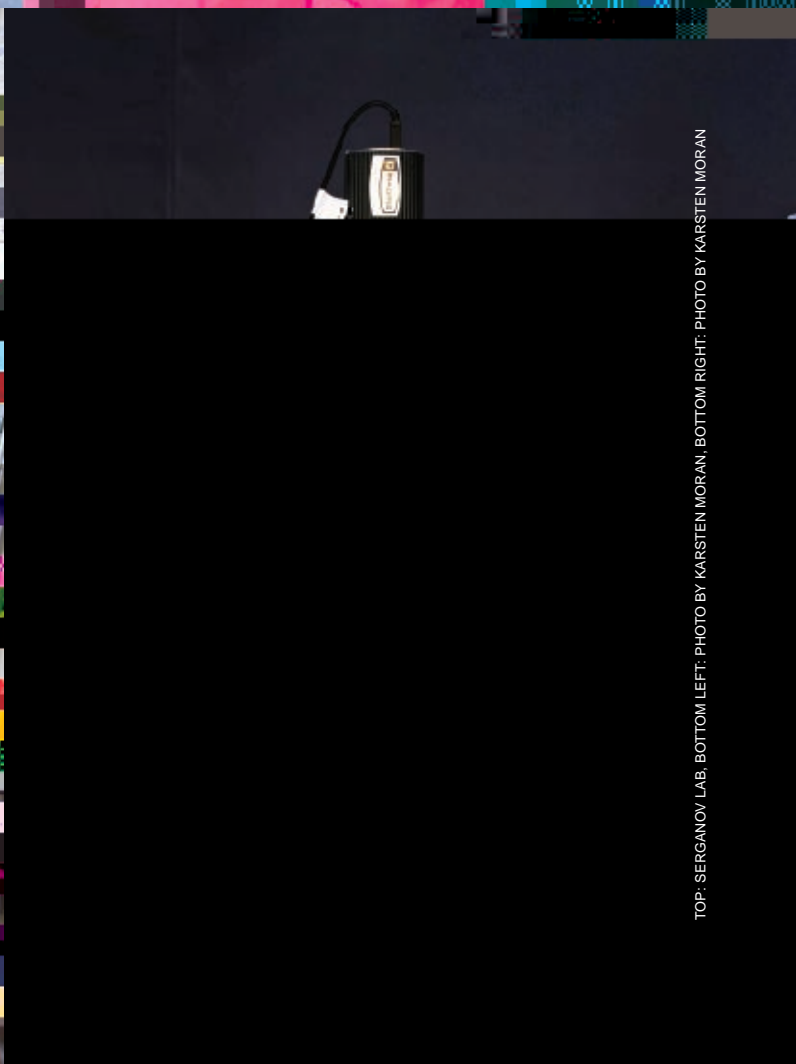
The lack of trusted methods to assess readiness for residency inspired Adina L. Kalet, MD, and her team at NYU

“We believe that the Night-OnCall simulation will provide a reliable means of assessing preparedness for residency.”

THOMAS S. RILES, MD
ASSOCIATE DEAN FOR MEDICAL
EDUCATION AND TECHNOLOGY



RESEARCH



TOP: SERGANOV LAB. BOTTOM LEFT: PHOTO BY KARSTEN MORAN. BOTTOM RIGHT: PHOTO BY KARSTEN MORAN

These are just a few of the ways NYU School of Medicine empowers its researchers to investigate medicine's deepest mysteries.



“I believe that people who pursue research do so because they love it. It’s not only their vocation, but their avocation.”

DAFNA BAR-SAGI, PHD
SENIOR VICE PRESIDENT,
VICE DEAN FOR SCIENCE,
CHIEF SCIENTIFIC OFFICER

PHOTO BY SASHA NIALLA

Energy, Ingenuity and the Future of Biomedical Research

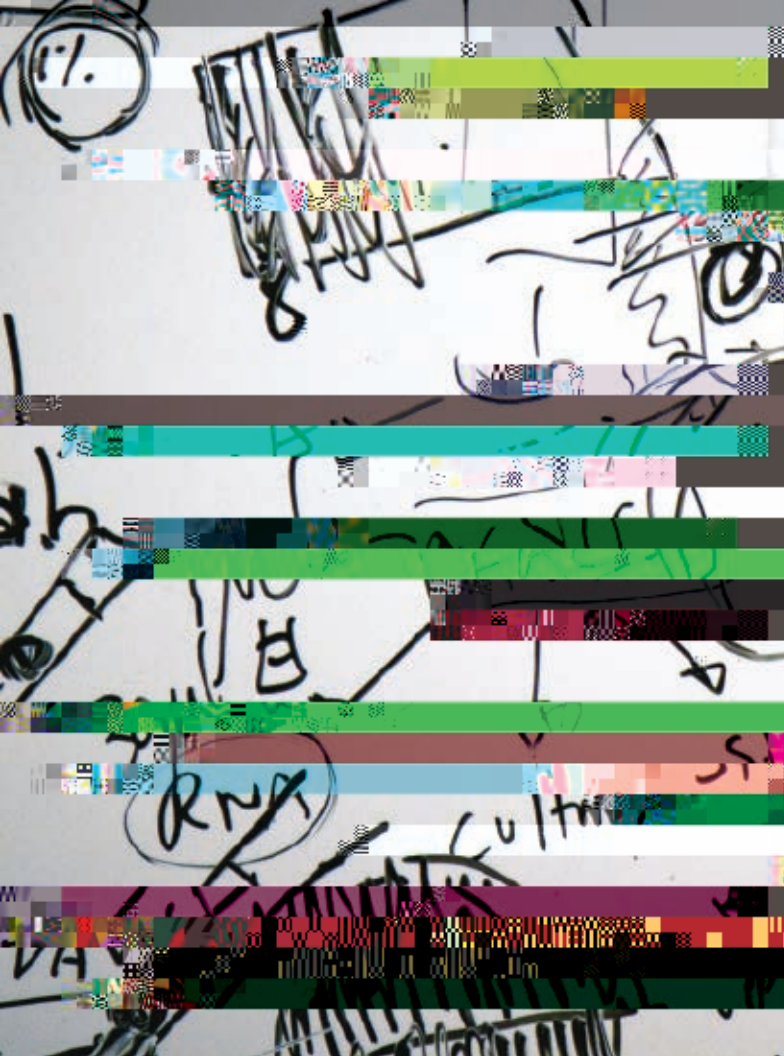
A Q&A WITH DAFNA BAR-SAGI, PHD, SENIOR VICE PRESIDENT, VICE DEAN FOR SCIENCE, AND CHIEF SCIENTIFIC OFFICER


BIOMEDICAL RESEARCH AT NYU SCHOOL OF MEDICINE HAS EXPERIENCED TREMENDOUS GROWTH IN THE PAST FIVE YEARS. WHAT'S BEHIND THIS SURGE?

Our aspiration is to be one of the most prolific biomedical research enterprises in the country, and productivity starts with talented, dynamic people. In the past five years, we have focused on recruiting investigators who can energize our institution and plant the seeds of future success. Our strategy is already reaping dividends. The size of our research faculty has nearly doubled. The new Science Building, which opens in phases starting this fall, more than doubles our research

NYU Langone's Innovative Model of Drug Discovery

THE AVERAGE DRUG takes about a decade to develop, fails 90% of the time, and can cost up to \$1 billion by the time it reaches FDA approval. Academic institutions traditionally lack the hefty resources





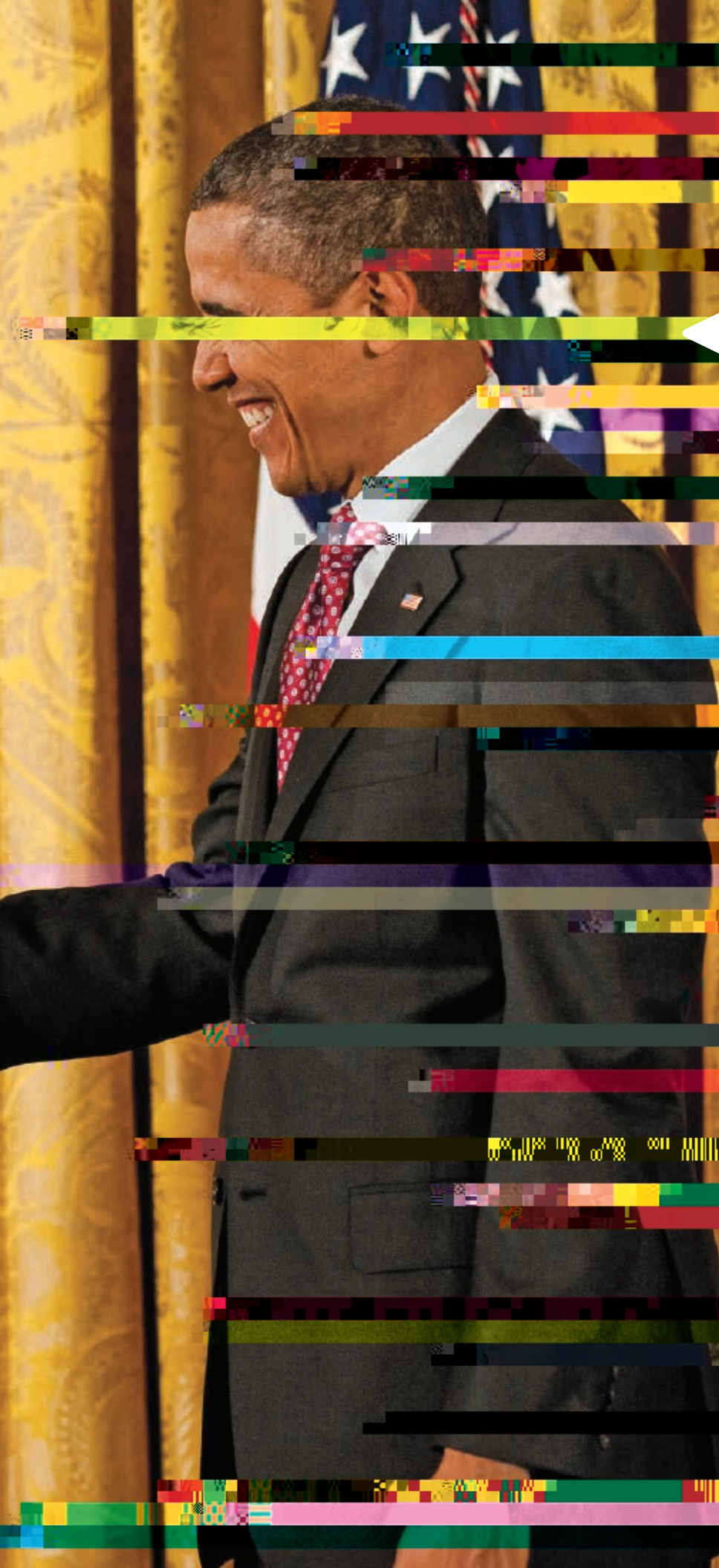
Historically, medical schools have struggled to help budding scientists bridge the abyss between research and commercialization. The prevailing wisdom has been that scientists should be scientists, and entrepreneurs should be entrepreneurs. But NYU School of Medicine is turning that convention on its head, to the benefit of researchers and patients alike.

The innovative Biomedical Entrepreneurship Program—developed by Robert J. Schneider, PhD, associate dean for therapeutics alliances at NYU Langone Health, and his colleague, program director Michal Gilon-Yanai—provides a thorough education for postdocs and PhD students in how to commercialize and license their work. “It surprises people, but entrepreneurship is something you can teach,” says Dr. Schneider.

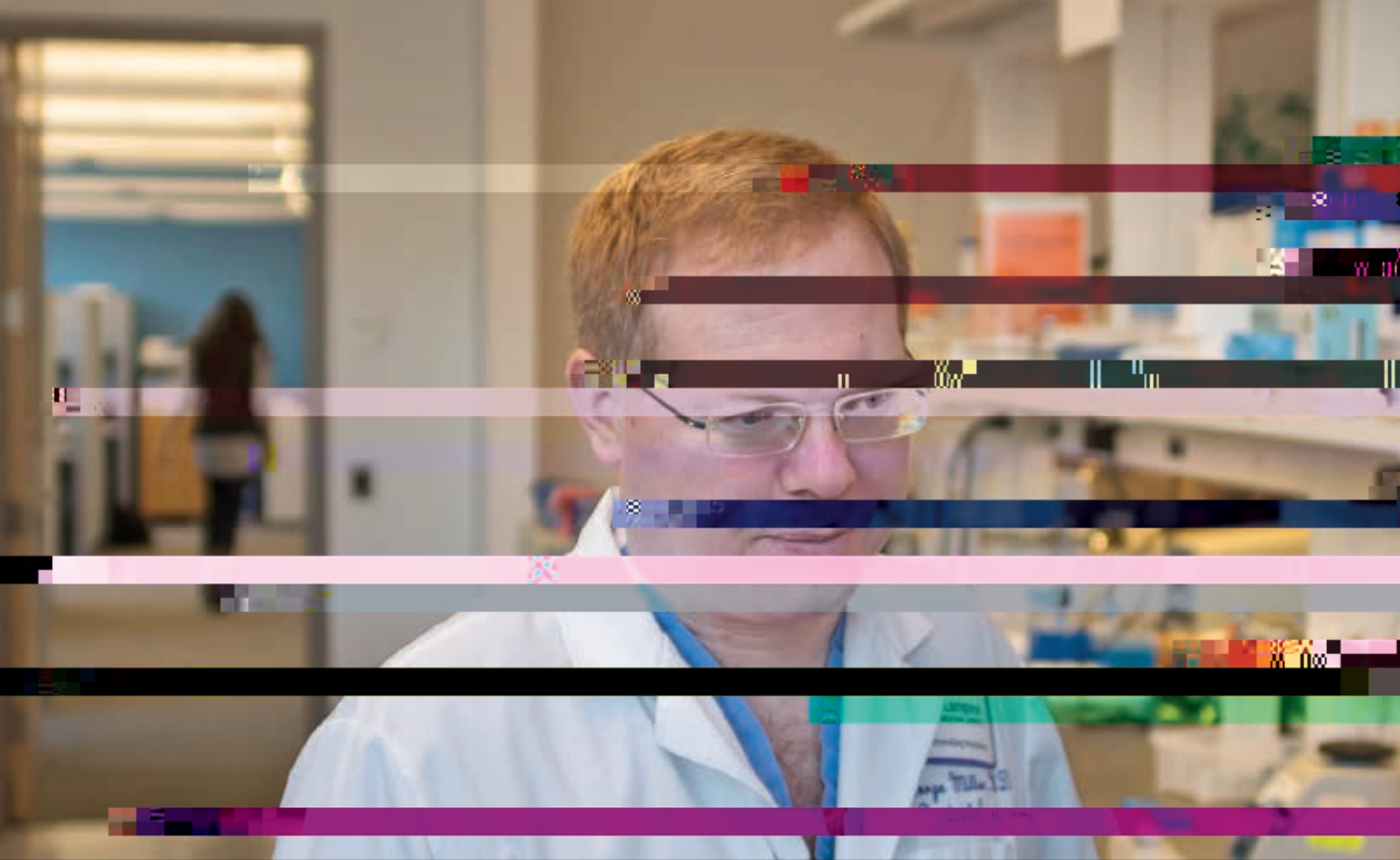


“Be bold in establishing industry contacts, and take advantage of any and all resources available ... There’s nothing more gratifying





The story of Remicade, a,



“NYU School of Medicine supports physician-investigators like me at the earliest stages of research, when it’s too early to think about commercialization, but with an eye to eventual commercialization.”

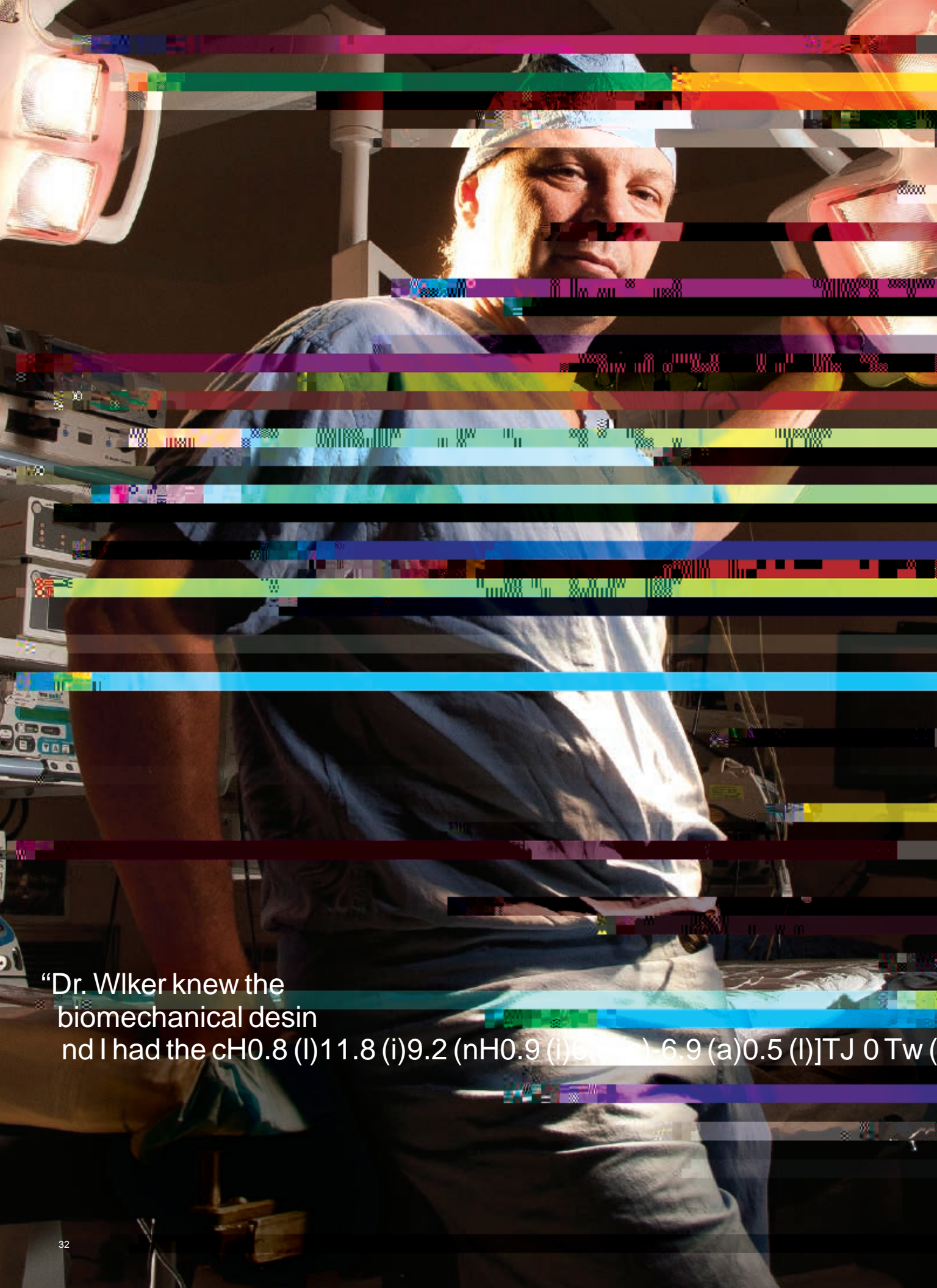
GEORGE MILLER, MD
HEPATOBIILIARY SURGEON,
CANCER RESEARCHER,
ENTREPRENEUR




INVESTIGATOR: George Miller, MD, vice chair for research, Department of Surgery, hepatobiliary surgeon, cancer researcher

PRODUCT: Monoclonal antibodies targeting newly discovered immunosuppressive mechanisms in pancreatic cancer

Dr. George Miller's landmark research in pancreatic ductal carcinoma, among the toughest malignancies to treat, illuminates the inflammatory mechanisms that suppress the immune system and allow deadly tumors to evade the body's natural defenses. Could disrupting those mechanisms keep cancer in check? That's the big idea behind Nybo Therapeutics, a biotech launched by Boston-based PureTech Health. Last year, the start-up worked with NYU School of Medicine's tech-transfer programs to license Dr. Miller's immuno-oncology technology. The goal: to develop novel therapeutics to block immunosuppression in pancreatic cancer, colorectal cancer, and other solid tumors. "NYU School of Medicine helps physician-investigators like me recognize the commercial potential of our work,



“Dr. Wilker knew the biomechanical design and I had the ch0.8 (l)11.8 (i)9.2 (nH0.9 (i)6.9 (a)0.5 (l)]TJ 0 Tw (



RESEARCH | Turning Discoveries
into Medicine

INVESTIGATORS: Joseph Bosco, MD, professor and vice chair, Department of Orthopedic Surgery, orthopedic surgeon; and Peter S. Walker, PhD, research professor, Department of Orthopedic Surgery

PRODUCT: Early Intervention Knee replacement

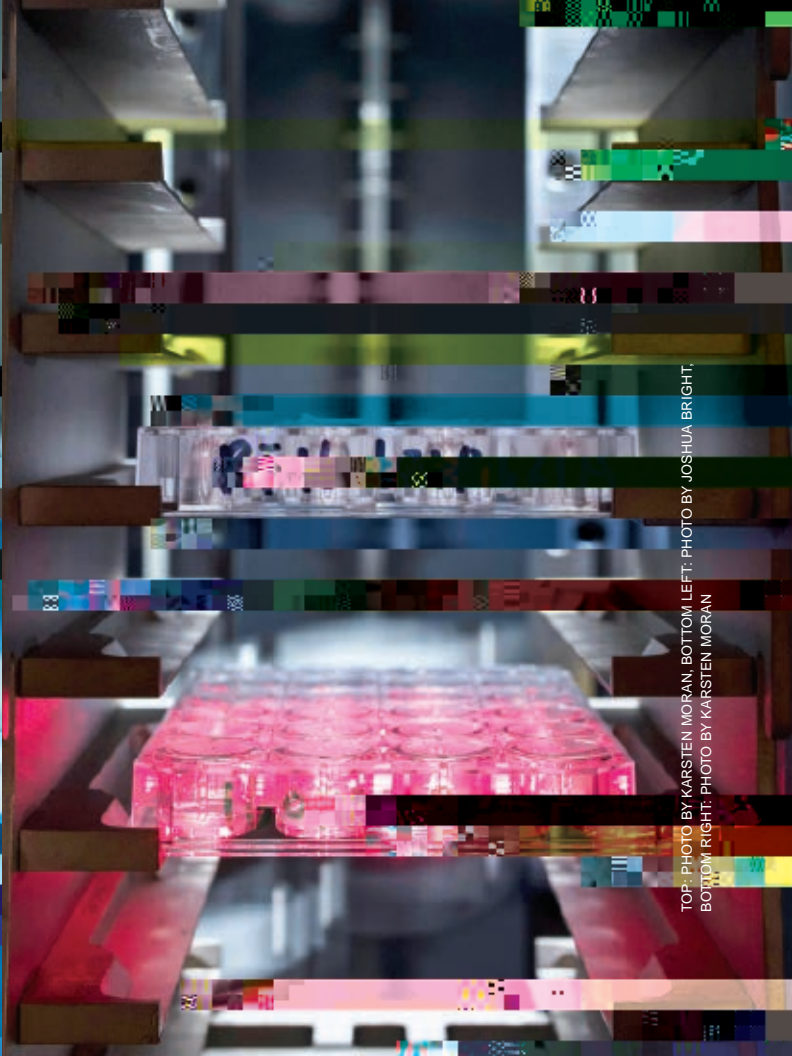
In 2010, Drs. Bosco and Walker saw an opportunity to improve the quality of life for patients with early osteoarthritis of the knee, at relatively low cost. Their solution: a partial knee replacement called the Early Intervention Knee, consisting of uniquely designed femoral and tibial components that are implanted in an outpatient surgical setting.

“Dr. Walker knew the biomechanical design and I had the clinical expertise, but we needed an industry partner to bring our device to market,” explains Dr. Bosco. “Neither of us had the entrepreneurial expertise in raising money for testing and dealing with regulatory agencies.”

NYU Langone Health's Office of Therapeutics Alliances stepped in, helping Drs. Bosco and Walker obtain four patents, which are jointly owned by NYU Langone and the surgeons, and establish Genovel Orthopedics in 2014 to bring the device to market.

“The work of clinician-scientists forms the base of evidence for so much of medicine.”

JUDITH S. HOCHMAN, MD
CO-DIRECTOR,
CLINICAL AND TRANSLATIONAL
SCIENCE INSTITUTE



TOP: PHOTO BY KARSTEN MORAN. BOTTOM LEFT: PHOTO BY JOSHUA BRIGHT.
BOTTOM RIGHT: PHOTO BY KARSTEN MORAN

Matching the Biggest Mysteries with the Brightest Minds

NYU School of Medicine's cadre of more than 400 researchers is tackling medicine's toughest challenges, from obesity to organ transplantation, through cross-discipline collaboration and creative problem solving. It's a simple formula that continues to yield extraordinary results. Here are just a few examples of the stellar science our investigators reported in 2017.

Finding the Molecular Link between Obesity, Diabetes, and Atherosclerosis

TWO-THIRDS OF AMERICANS are overweight or obese, conditions that fuel diabetes and heart disease. "Unfortunately, people with obesity and diabetes

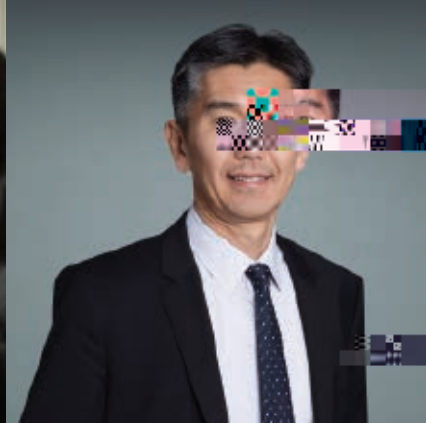
overwhelmingly die of heart disease," explains Edward A. Fisher, MD, PhD, a clinician-scientist whose research focuses on atherosclerosis, the leading cause of heart attacks. "These three conditions likely share molecular mechanisms." With a five-year, \$12 million grant from the National Heart, Lung, and Blood Institute, Dr. Fisher and his colleagues at NYU School of Medicine,

Kathryn Moore, PhD, the Jean and David Blechman Professor of Cardiology, and Ann Marie Schmidt, MD, PhD, the Dr. Iven Young Professor of Endocrinology, are zooming in on the particular role of the macrophage, a type of white blood cell.

LIVING ART These puzzle pieces are composed of nanoscopic droplets of yeast genetically engineered to produce various colored pigments naturally made by other types of microorganisms. Design by Jasmine



NEW PEOPLE



The list of distinguished faculty recruited for key clinical and research positions in 2017—still growing beyond those featured below—is just one measure of the institution’s dramatic expansion and drive for excellence.

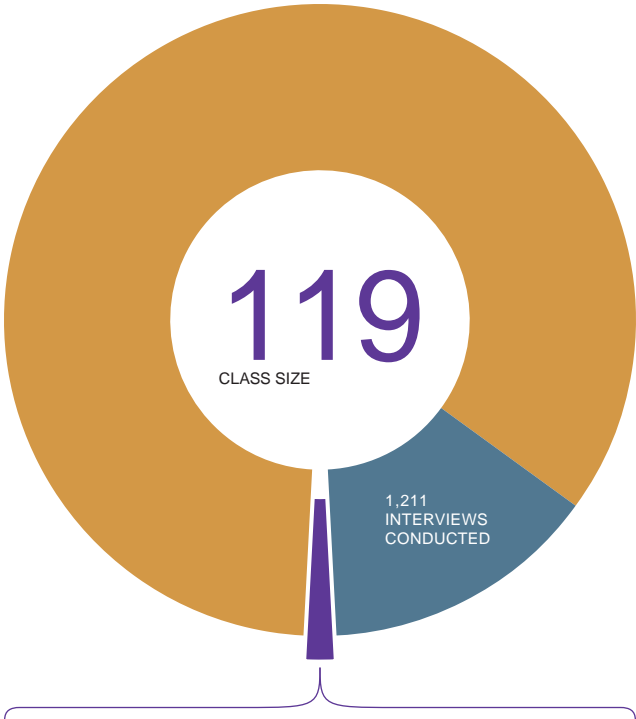
CANCER

Ahmad Samer Al-Homsi, MD, a hematologist-oncologist, was appointed director of the Blood and

NEUROLOGY

Jennifer A. Frontera, MD

ENTERING CLASS OF 2017

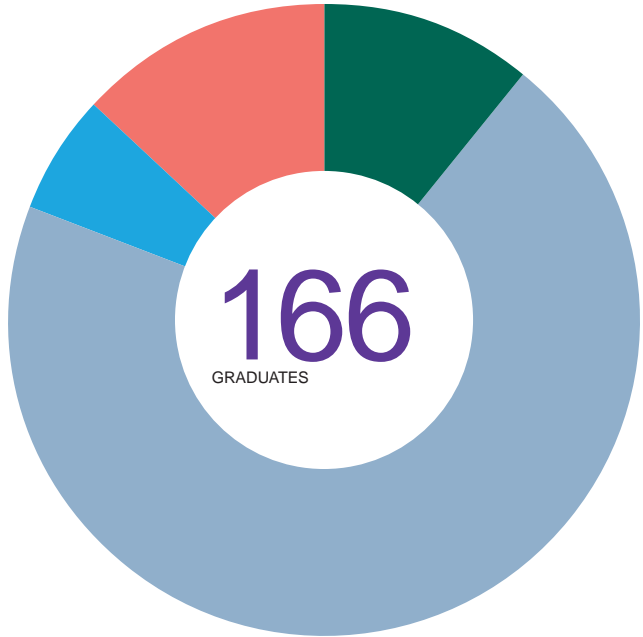


3.93
MEDIAN GPA

21%
UNDERREPRESENTED IN MEDICINE

50%
FEMALE

GRADUATING CLASS OF 2017



243
AVERAGE USMLE STEP 1 SCORE

30
MEMBERS OF THE CLASS OF 2017
INDUCTED INTO ALPHA OMEGA ALPHA,
NATIONAL MEDICAL HONOR SOCIETY

GRADUATE MEDICAL EDUCATION

1,327
RESIDENTS AND FELLOWS

TRENDS IN ACCELERATED LEARNING

Percentage of MD Graduates
Earning a Degree in Three Years



RESEARCHERS

481

RESEARCH FACULTY

421

POSTDOCTORAL FELLOWS

31

NEW RESEARCH-FOCUSED FACULTY

263

PHD CANDIDATES

FACULTY HONORS

5

Howard Hughes Medical
Institute Investigators

10

Health and Medicine Division of the
National Academies of Sciences,
Engineering, and Medicine (formerly
Institute of Medicine) Members

10

National Academy of
Sciences Members

11

American Academy of Arts
and Sciences Members

18

American Association for the
Advancement of Science Fellows

NYU TECHNOLOGY VENTURES AND ALLIANCES*

+\$1B

TOTAL AMOUNT RAISED BY STARTUPS

779

PATENTS ISSUED

#1

IN LICENSE INCOME OVER
THE PAST 10 YEARS

24

BIOMEDICAL PRODUCTS
BROUGHT TO MARKET

69

STARTUPS FORMED

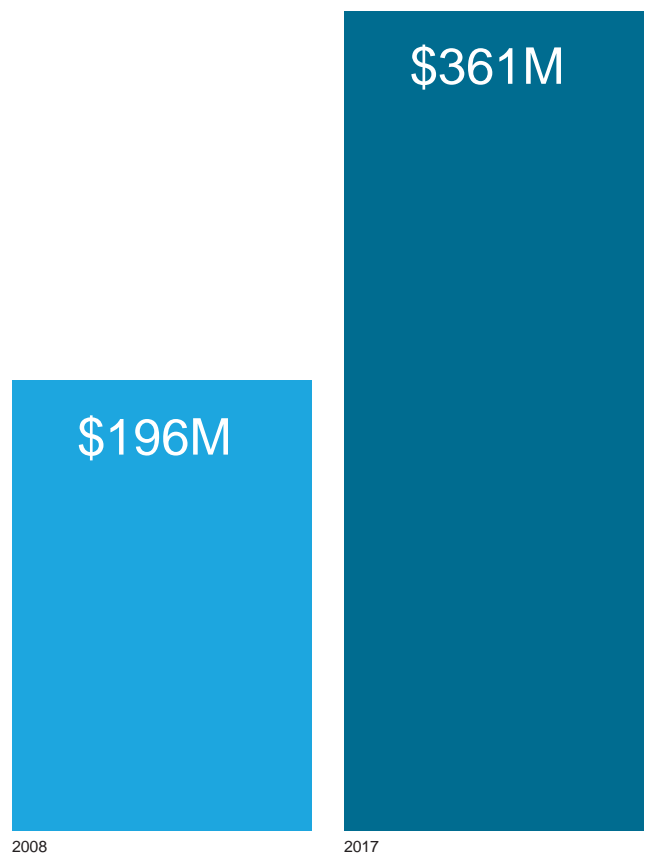
186

LICENSES SIGNED IN
THE PAST FIVE YEARS

*These numbers are cumulative and exclude other NYU schools

FUNDING

Total Grant
Revenue



2008

2017

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