Despite challenges, IU School of Medicine had another record year of research productivity and kept the pipeline of physicians flowing.

Our clinical faculty were confronted by the challenge of facing a new, deadly disease of which so little was initially known. Their sacrifices—in time away from family, in serving at personal risk to themselves—epitomized the very definition of courage, and of public service.

Our student body responded with initiative and great character. In the spring, about one-third of the Class of 2020 volunteered to graduate early so they could be available to serve on the frontlines of the pandemic. By year’s end, our student volunteers were administering the vaccine.

But perhaps our greatest achievement of 2020 was how IU School of Medicine, with our colleagues in public health, channeled its considerable expertise to the task of keeping all of Indiana University safe.

Despite these challenges, the School of Medicine had another record year in research productivity, even with temporary interruptions. We kept the pipeline of physicians flowing with another stellar graduating class while enrolling a new class. Importantly, we also took steps to ensure we have a more inclusive environment for our learners, faculty and staff.

In short, we nimbly adapted to the circumstances and created a new template for our research, our study and our public service. In a year of great challenges, IU School of Medicine rose to meet them all.

Jay L. Hess, MD, PhD, MHSA
Executive Vice President for University Clinical Affairs
Dean of the School of Medicine
Indiana University
PHYSICIANS AND scientists strive to provide answers and clarity, but the arrival and spread of COVID-19 in 2020 proved to be a monumental challenge. At Indiana University School of Medicine, our faculty and students banded together to help confront this new adversary. They created a safety net of testing and tracing. They learned quick lessons about providing care. They devised new means of protection and how the disease moves among us. By year’s end, they began administering a vaccine.

In March, Indiana University made the unprecedented decision to suspend most in-person operations, including research and instruction. In the months that followed, the School of Medicine played an integral role in not only formulating a plan to return students, faculty and staff safely to campuses across the state, but in confronting COVID-19 in our hospitals and our laboratories. IU President Michael A. McRobbie tasked School of Medicine Dean Jay L. Hess to lead a team of experts to advise the university on how to resume operations. This led to the creation of a Medical Response Team, which planned and implemented health and safety strategies to protect students, faculty and staff. They were also asked to help campus leadership make decisions informed by expert analysis and with a knowledge of clinical care and public health.

ENGAGING THE THREAT

In the face of a pandemic, faculty and students created a safety net of testing, tracing and care—all while IU School of Medicine became a clinical trial site for an awaited vaccine.

SYMPTOMATIC TESTING

A significant part of that response involved testing. With 110,000 students and nearly 9,000 faculty
Our main themes are making sure that we identify infections quickly,” Cole Beeler, MD said, “and that we isolate or quarantine their contacts as fast as possible.”
FOR THE fifth-straight year, Indiana University School of Medicine set a school record for research funding received from the National Institutes of Health, showcasing its continued leadership in the field of medical research. IU School of Medicine scientists and physicians were awarded more than $213 million in NIH research funding in the 2020 federal fiscal year—notting about $24 million more than the school record from the previous year and surpassing the $200 million mark for the first time in school history. Over the past five years, the school has increased its NIH funding by more than $104 million, or 95 percent.

Combining grants across several disciplines, the school ranked fifth in the country in funding from the National Institute on Aging, the NIH branch that is the primary funder of Alzheimer’s disease research. And once again, the Department of Pediatrics ranks sixth out of all U.S. departments of pediatrics. “Our continued growth in NIH funding is a testament to the leadership and expertise of our faculty. I extend my thanks for their tremendous effort,” said Jay L. Hess, MD, PhD, MHSA, dean of IU School of Medicine and IU’s executive vice president for university clinical affairs. “NIH grants are the gold standard for research funding, but most importantly this fuels our work in finding answers for some of the most challenging questions. As we continue to navigate the pandemic, this is more important than ever.”

According to a report by United for Medical Research, every $1 million in NIH funding awarded to Indiana researchers created 18 jobs and $2.7 million in economic activity in 2019. Based on that data, IU School of Medicine’s 2020 NIH funding is responsible for more than 3,768 jobs—with 2,755 of those jobs existing here in Indiana. The income from those jobs, along with other associated expenses, generates an estimated $585 million annually in economic activity.

Strategic investments in talent and infrastructure have continued to boost research productivity at IU School of Medicine and highlight the commitment of school leadership to addressing the most pressing health challenges in Indiana and beyond. For the second year in a row, four of the five research studies that received the most NIH funding were for Alzheimer’s disease research, in alignment with the school’s top priorities.

With more than $32 million in grants, the Department of Pediatrics remained ranked at sixth in the nation—accounting for 15 percent of the school’s total NIH funding. Among the 69 studies the department received NIH funding for were sizable grants for work on cystic fibrosis therapies and congenital heart defects in babies.
**EDUCATION**

**PASSION PROJECTS**

Scholarly concentrations enable medical students to mold their training in a way that fits their interests—and become the physicians they aspire to be.

IU SCHOOL of Medicine launched scholarly concentrations in early 2019. Program offerings expanded greatly in 2020, giving medical students throughout the state more options for concentrated study in an area of medicine they are passionate about. Today, the School of Medicine offers 17 scholarly concentrations. Four are available to students throughout the state, while the others are offered at one of the School’s nine regional campuses, drawing upon the faculty expertise and characteristics of each campus.

Scholarly concentrations offer medical students unique mentorship opportunities, the chance to develop specialized skills and complete scholarly projects which are valuable for residency applications and professional development.

As of September 2020, 224 IU medical students were enrolled in scholarly concentrations throughout the state. An additional 129 first-year medical students have been accepted and will enroll in scholarly concentration programs in Spring 2021.

**STATEWIDE OPTIONS**

**BUSINESS OF MEDICINE**

In a partnership with IU’s Kelley School of Business, future physicians learn to apply the fundamentals of business in clinical environments. Merging evidence-based management with evidence-based medicine, students learn how to improve medical outcomes, reduce costs and lift staff morale.

**MEDICAL HUMANITIES**

A collaboration with the Medical Humanities and Health Studies Program in the School of Liberal Arts at IUPUI, this interdisciplinary course of study provides medical students with qualitative humanistic and socio-cultural perspectives on health care.

**PUBLIC HEALTH**

A partnership with the Richard M. Fairbanks School of Public Health at IUPUI, this concentration provides foundational knowledge in public health. That includes an understanding of the U.S. health system; trends impacting public health; and evidence-based interventions.

**RELIGION AND SPIRITUALITY IN MEDICINE**

Students are introduced to major spiritual traditions and how they interact with health. A variety of religious traditions, as well as non-religious spiritual are covered.

**REGIONAL CAMPUS OPTIONS**

**BIOMEDICAL ENGINEERING AND APPLIED MEDICAL TECHNOLOGY // WEST LAFAYETTE**

In partnership with Purdue University’s Weldon School of Biomedical Engineering, students develop their understanding and application of biomedical engineering for the ethical design, development and translation of medical and related technologies.

**BIOMEDICAL RESEARCH // INDIANAPOLIS**

Students engage in the critical concepts that underpin biomedical and clinical research. They acquire essential research tools including critical reasoning skills, using the scientific method in design of study, research rigor and reproducibility, research ethics, and disseminating research results for peer review.

**CARE OF HISPANIC AND LATINO PATIENTS // WEST LAFAYETTE**

Students learn to provide culturally sensitive medical care to improve outcomes for the nation’s growing Hispanic and Latino population. Additionally, students can improve Spanish-speaking fluency and practice using Spanish in clinical settings.

**ETHICS, EQUITY AND JUSTICE // SOUTH BEND**

Students learn the basic skills for separating the morally beneficial from the morally troubling practices of medicine. It enables future physicians to better serve and advocate for their most vulnerable patients on a variety of topics—from clinical ethics to health equity—are covered.

**GENETICS IN MEDICINE // INDIANAPOLIS**

Students take a deep-dive into the latest genetic developments and concepts that are transforming the practice of medicine. They may explore clinical research, clinical case reports with literature reviews, or other areas of interest in the rapidly changing field of medical genetics.

**HEALTH INFORMATION TECHNOLOGY // INDIANAPOLIS**

Students gain an understanding of the components and relationships necessary to create, implement and use clinical information systems effectively. Through coursework and hands-on experiences, they learn to leverage technology in increasingly complex health care systems.

**HEALTH INTEGRATION AND HEALTHY AGING // FORT WAYNE**

This concentration is based on health systems science—the “third science” in medicine after basic and clinical sciences. With an emphasis on patient-centered care, it focuses on improving outcomes while reducing costs of health care for patients/populations in a community setting. Topics are examined through the lens of healthy aging.

**HEALTH PROMOTION AND DISEASE PREVENTION // MUNCIE**

Students learn to help patients implement evidence-based lifestyle choices that lead to better health outcomes, working with a team of exercise physiologists, nutritionists, mental/behavioral health counselors, social workers and other health professionals.

**HUMAN SEXUALITY AND HEALTH // BLOOMINGTON**

In partnership with the Kinsey Institute, students understand how sex, gender and sexuality intersect with the practice of medicine and provides an opportunity to work with Kinsey researchers.

**MEDICAL EDUCATION // BLOOMINGTON**

Students learn how they may develop into effective clinical instructors. They examine how to assess teaching effectiveness, student learning and knowledge gains through an introduction to medical education research, methodologies and scholarship literature.

**QUALITY AND INNOVATION IN HEALTH CARE // EVANSVILLE**

By participating in interactive, workshop-style courses alongside various health care professionals, students master widely recognized approaches for continuous improvement and design thinking to improve quality, safety and efficiency in health systems.

**RURAL HEALTH // TERRE HAUTE**

Students get an opportunity to learn and engage with rural communities through public health research. Coursework and projects teach students how community and behavior unique to rural populations impact public health issues.

**URBAN MEDICINE AND HEALTH CARE DISPARITIES // NORTHWEST–GARY**

Students gain an understanding of the historical and contemporary barriers that exist for the nation’s medically underserved in urban areas. Through project work, students act as advocates by developing interventions to address or reduce health disparities.
FOLLOWING THE death of George Floyd in Minneapolis in 2020, a racial reckoning swept across the United States. At IU School of Medicine, Dean Jay L. Hess identified tangible steps needed to ensure the school is welcoming and inclusive of every member of its community. Among them was the creation of a new position: Special Advisor to the Dean and Chief Diversity Officer. Named to the post was Patricia Treadwell, MD, who has taught at IU School of Medicine for more than 30 years and is now a professor emeritus of pediatrics and dermatology. She is advising the dean on matters of diversity, equity and inclusion across all areas of the school’s mission.

Treadwell said other administrators were doing some of this work already. But, even before the national discussion on race in 2020, underrepresented students were interested in having a go-to contact.

“I see my position as a little bit of overview,” Treadwell said, “collecting information when questions come up in order to try and answer those and bringing my perspective directly to the dean.”

Beyond being an advocate for underrepresented students, Treadwell intends to raise awareness about the health disparities minority populations face.

“COVID-19 has shone a light on the health care disparities and what can happen,” she said. “I had given lectures over the past several years about health care disparities, but I think this has been one that is more apparent and a number of individuals have been able to see it.”

Treadwell has considerable experience in both medicine and issues of diversity.

For 17 years, she served as Chief of Pediatric Dermatology at Riley. She’s served for 15 years as chair of the School of Medicine’s Diversity Council, to name a few of her roles.

Treadwell, 67, doesn’t consider her task a long-term role, but one in which she is eager to make a difference. “I came out of retirement to do this,” she said. “This is an issue that certainly speaks to me.”

Dean Jay L. Hess outlined a series of steps IU School of Medicine will take during the 2020-21 academic year to help foster a climate of diversity and inclusiveness:

• Reviewing data on racial diversity and inclusiveness at the School of Medicine, implementing a climate survey and openly sharing and discussing results.
• Conducting town hall meetings to review data and solicit input on ways to improve diversity, equity and inclusiveness.
• Expanding the office hours of the deans of Student Affairs and Diversity Affairs to provide more opportunities for School leadership to hear what our community has to say about our climate and how it can be improved.
• Implementing regular training for faculty and learners on unconscious bias, microaggression, cultural humility and professionalism.
• Conducting a comprehensive review of the medical school curriculum to address potential biases and microaggression.
• Enhancing the curriculum to better address eliminating health disparities.
• Integrating diversity, equity and inclusion into the competency assessment system across every level of training.
• Improving information, resources and transparency around expectations of professionalism and potential consequences of Honor Code violations, including acts of racism and bigotry.

INCLUSION

With an advisor to the dean and other steps, IU School of Medicine strives to be a welcoming environment for all.

VOCAL SUPPORT

Students and faculty came together in the wake of George Floyd’s death at the White Coats for Black Lives rally in Indianapolis.
WHILE AMERICAN philanthropy faced strong headwinds in 2020, Indiana University School of Medicine still found much to celebrate thanks to the generosity of a broad coalition of donors. Chief among the reasons for gratitude was the successful completion of the Indiana University Bicentennial Campaign, which saw the School of Medicine reap more than $1.7 billion in gifts, which exceeded an already ambitious goal of $1.3 billion. The incredible response enabled the creation of 99 new chairs and professorships that support the work of our faculty and 144 new endowed and annual scholarships that will help make the dream of medical school possible for students, including students from populations underrepresented in medicine. Thousands of donors contributed—from faculty, staff and alumni to friends and private foundations. The gifts ranged in amounts from a few dollars to eight figures. While each was welcomed with gratitude, a few were especially notable for their dramatic impact. (See breakout.) Additionally, support groups such as Miles for Myeloma (multiple myeloma) and 100 Voices of Hope (breast cancer) were among several grassroots organizations that made important annual contributions. Even in 2020, as in-person fundraising was greatly curtailed by the pandemic, IU School of Medicine received $44 million in philanthropic support during fiscal 2019-2020. By December, giving totals were ahead of the same point in 2019. It is a testimony to the depth of support the School of Medicine enjoys and to the generosity and dedication of its benefactors. A final point is key: IU School of Medicine values each gift and we are honored our donors entrust us to carry on their legacies, improve health care and train the state’s next generation of physicians and scientists.

HEALTHY DOSE OF GENEROSITY

Loyal friends helped infuse funds to support the work of faculty and scholarships for a new generation of physicians.

SPIRIT OF GIVING

CANCER

Three gifts totaling $34.5 million from the Walther Cancer Foundation Inc. for supportive oncology, bioinformatics and a fund to support the work of the director of the IU Melvin & Bren Simon Comprehensive Cancer Center.

IMMUNOTHERAPY

A $30 million gift from IU School of Medicine alumnus and tech entrepreneur Don Brown, MD, to establish the Brown Center for Immunotherapy.

RECRUITMENT

A $25 million grant from Lilly Endowment Inc. to support an innovative recruitment strategy designed to attract top scientists to IU School of Medicine and the state.

BREAST CANCER

More than $17.5 million in gifts toward breast cancer research from the Vera Bradley Foundation for Breast Cancer, which brings its total giving to the School of Medicine to more than more than $36 million.

NEUROLOGY, PULMONOLOGY AND MEDICAL EDUCATION

Gifts to the School of Medicine totaling $7 million from alumnus James A. Caplin, MD, and his family, for pulmonary and Alzheimer’s research, medical student scholarships and a chair at the Bloomington campus. Caplin’s gifts were part of $10 million in planned gifts to IU.

MICROBIOLOGY

A $4.5 million bequest from retired faculty member Dietrich (Jack) Bauer, PhD, and his wife Lois Bauer to create a chair in the Department of Microbiology and Immunology, a scholarship for medical students, and an endowed fund in the Office of the Dean to support graduate students.

EVANSVILLE CAMPUS

A $4 million gift from the Stone Family to benefit the IU School of Medicine–Evansville as part of their $15 million gift for the collaborative health sciences campus in downtown Evansville.

Loyal friends helped infuse funds to support the work of faculty and scholarships for a new generation of physicians.
THE FUTURE

BUILT TO SUCCEED

Plans for new medical campus tightly intertwine education, research and clinical care.

IU SCHOOL of Medicine, in partnership with its clinical partner IU Health, is planning to build and operate an academic health campus at 16th and Capitol Streets downtown Indianapolis near the current locations of Methodist Hospital and the Stark Neurosciences Center.

The new campus is part of a larger project that will consolidate the operations of University and Methodist Hospitals onto one campus, with a new state-of-the-art clinical facility providing both inpatient and outpatient services. The School of Medicine will migrate all its Indianapolis-based medical school academic functions to the new campus, providing medical education, residency and fellowship opportunities to the next generation of health care providers. In addition, the school will build upon its research and clinical care.

Continuing Medical Education, Graduate Medical Education, Medical Student Education, Graduate and professional counseling, registrar, financial aid, academic and professional counseling, Graduate Medical Education, Medical Student Education, Continuing Medical Education, diversity affairs, and graduate and health professional programs.

250,000 square foot teaching facility that will include classrooms, interactive learning facilities, clinical simulation, anatomical laboratories, computational science, and interprofessional learning environments.

The facility will also house all programmatic and student support services such as admissions, registrar, financial aid, academic and professional counseling, Graduate Medical Education.

The research facilities include approximately 100,000 square feet that will house cutting-edge scientific capabilities in wet bench/basic research, computational science, animal research, and clinical trials. Construction on the educational components will begin in 2022 and are expected to be completed over around 24 months.

INSTITUTIONAL KNOWLEDGE

Umbrella entities between IU School of Medicine and IU Health will maximize expertise in cancer, cardiology and neurology.

AS PART of the continued alignment efforts, IU School of Medicine and IU Health are jointly establishing new cardiovascular, neuroscience and cancer institutes. These umbrella entities transcend multiple departments and are designed to maximize the collaborations between education, research, and clinical care. The goal is to fully realize the promise of academic medicine to better address the most pressing challenges facing patients.

Last year, a big first step was taken in the recruitment of directors for each of the institutes. (See below.) The institutes are designed to complement the role of departments at IU School of Medicine and capitalize on their strengths. Each institute leader or leadership team will have oversight of significant new funds from IU Health and the School of Medicine to invest in innovations and strategic priorities. It is expected that in many cases these funds will be co-invested with department leadership to support strategic recruitment or, as an example, to fund new fellowship or clinical positions. This should create a nimble pathway for launching new programs or piloting new ideas that currently exist.

The same is true of our research centers. The IU Simon Comprehensive Cancer Center, Stark Neurosciences Research Institute, Kranert Institute of Cardiology and other such centers will continue to pursue their research programs. Through their participation in the institutes, we expect to more closely align and maximize the synergies of our education, research and clinical programs.

WHO’S IN CHARGE?

CARDBIARIOUS

SUBHA RAMAN, MD

Raman took over the Division of Cardiology in February 2020 after arriving from Ohio State. An engineer by training, Raman is an expert in MRI and maintains an active research program dedicated to the early detection of heart and vascular disease.

CANCER

KELVIN LEE, MD

Before taking the helm of IU Simon Comprehensive Cancer Center, Lee led the immunotherapy group at the Roswell Park Comprehensive Cancer Center. He focuses on multiple myeloma and is a lead investigator on a trio of clinical trials.

NEUROSCIENCES

BRUCE LAMB, PHD

Lamb leads the Stark Neuroscience Research Institute and is an expert in modeling Alzheimer’s disease. He also helps lead the NIH-backed MODEL-AD program, which engineers a variety of mouse models that mimic late-onset disease progression.

NEUROSCIENCES

LAURIE GUTMANN, MD

Gutmann started as chair of the Department of Neurology in October 2020. Her areas of research have included stroke and neuromuscular disorders. In her role, she wants to foster collaboration between scientists and clinicians.

NEUROSCIENCES

SHELLY TIMMONS, MD, PHD

Timmons has led the Department of Neurological Surgery since 2019. Her expertise is neurotrauma and neurocritical care. She is also past president of the American Association of Neurological Surgeons.
IN 2020, IU School of Medicine received a $7 million grant from the Health Resources & Services Administration (HRSA) to help the school educate medical students to better care for underserved populations. As the state and nation continue to deal with the devastating effects of the COVID-19 pandemic, as well as addressing racial inequities captivating the national consciousness, this grant is aimed at helping IU School of Medicine lead the way in eliminating health care deficits. The grant will fund a project called Primary Care Reaffirmation for Indiana Medical Education (PRIME). Its goal is to provide doctors with the tools needed to offer better care to medically underserved and vulnerable communities, both in primary and specialty care.

PRIME will enhance the IU School of Medicine curriculum by focusing on social determinants of health, primary care skills and health systems science. The curriculum will incorporate telehealth, ultrasound, student-driven community improvement projects and scholarly concentrations. Experiential training opportunities also will be expanded throughout the state, particularly in underserved Indiana communities. This project reaches beyond medical school and will be coupled with primary care residency expansion around the state.

THE GAP

A major grant empowers IU School of Medicine to tackle health disparities.

Outreach clinics, such as the one in Indianapolis, allow students and faculty to care for underserved communities. a goal of giving medical students at IU School of Medicine deeper curricular and experiential exposure for providing primary care to underserved areas and populations across the state. This will be accomplished in partnership with the school’s large number of clinical partners—affiliations with 120 hospitals, clinics, practice groups and health care organizations—to assist with educational placements. Clinical partners include 26 critical access hospitals and 13 federally qualified health centers statewide.

Additionally, IU School of Medicine will strengthen undergraduate recruitment efforts focused on vulnerable populations. This includes promotion of a pipeline program in medical science designed to prepare underrepresented minority students for medical school.

THE FUTURE

On the ground

MD ANNUAL TUITION

IN STATE $36,036

OUT OF STATE $61,419

GRADUATE MEDICAL EDUCATION

TOTAL RESIDENTS + FELLOWS 1,273

TOTAL ACCREDITED PROGRAMS 97

OTHER PROGRAMS 75

GRADUATE + UNDERGRADUATE PROGRAMS

MASTER'S STUDENTS 194

PHD STUDENTS 225

HEALTH PROFESSIONS PROGRAM 277

FACULTY AND STAFF

FACULTY

VOLUNTEER 3,737

FULL TIME 2,914

PART TIME 322

STAFF

TOTAL 2,035

IN 2020, IU School of Medicine