

A low-angle photograph of a modern, multi-story building with a glass and concrete facade, identified as the University of Pittsburgh School of Medicine. The building is set against a clear blue sky. In the foreground, a city street is visible with a white bus, a dark car, and traffic lights. The entire image is overlaid with a semi-transparent dark blue filter.

University of Pittsburgh School of Medicine

Fact Book » 2016 / 2017

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OVERVIEW

The University of Pittsburgh School of Medicine has a mission to educate science-based, skilled, and compassionate clinicians prepared to meet the challenges of practicing medicine in the 21st century and conduct cutting-edge biomedical research that better the human condition and advances the fundamental understanding of medical science. In the only truly objective metric by which the overall stature of research-focused institutions can be assessed in a nationally competitive context, the University of Pittsburgh moved into the top 10 list of recipients of National Institutes of Health (NIH) funding in 1998 and has remained within this enviable echelon ever since. In fiscal year 2015, the faculty of the University of Pittsburgh ranks fifth in dollars awarded, with more than \$475 million in total funding. The faculty of the medical and public health schools also ranks fifth, with funding of more than \$414 million. The School of Medicine operates on a global stage, with active collaborations connecting Pittsburgh with China, Colombia, Ghana, Honduras, India, Italy, Kazakhstan, Malawi, the Philippines, and many other nations.

ABOUT THE COVER:
A view of Biomedical Science Tower 3
on the corner of Fifth Avenue
and Darragh Street.





About the Dean

ARTHUR S. LEVINE, MD, is senior vice chancellor for the health sciences and John and Gertrude Petersen Dean of the School of Medicine at the University of Pittsburgh. Since arriving at Pitt in 1998, Dr. Levine has been instrumental in fostering the University's remarkable rise in research ranking and many advances in medical education. Previously, Dr. Levine served at the National Institutes of Health for more than three decades, having joined the National Cancer Institute in 1967. From 1982 to 1998, he was scientific director of the National Institute of Child Health and Human Development, widely recognized as one of the world's leading centers in developmental biology. Earlier in his career, Dr. Levine played a leading role in clinical research on childhood malignancies, and he was one of the first to carry out systematic investigations on the prevention and treatment of opportunistic infections among cancer patients. His current research efforts focus on the molecular mechanisms of DNA damage and repair. Dr. Levine, who has authored or coauthored more than 270 scientific publications, has been widely recognized for his

achievements. He received the Meritorious Service and the Distinguished Service Medals of the United States Public Health Service, the Surgeon General's Exemplary Service Medal, the NIH Director's Award, and the Distinguished Alumnus Award and an Honorary Doctor of Humane Letters degree from the Rosalind Franklin University of Medicine and Science, formerly the Chicago Medical School. Dr. Levine is a graduate of Columbia College, where he majored in comparative literature. He earned his MD from the Rosalind Franklin University of Medicine and Science. Prior to joining NIH, he completed a pediatrics residency and a fellowship in hematology and biochemical genetics at the University of Minnesota.

Demographics

As of the 2016–17 academic year, 601 MD students are registered in the School of Medicine, including 281 (47 percent) women and 320 (53 percent) men. Of these, 172 (29 percent) are Pennsylvania residents; approximately 15 percent of Pitt medical students are from groups that are underrepresented within the medical profession.

There are 276 registrants in PhD programs (including those in the Medical Scientist Training Program), 82 students in MS programs, and 43 students in certificate programs.

For 2016, 5,872 applications for admission were received and 847 prospective students were interviewed for a first-year class of 148 students.

The School of Medicine has 2,239 regular and 2,185 volunteer faculty members. Of these, 86 are current members of the Academy of Master Educators, an organization that recognizes and rewards excellence in medical education.

Curriculum

Pitt's medical school curriculum blends innovative teaching methods with tried-and-true techniques. Here are some highlights:

Patient/Doctor Relationship

In addition to the rigorous traditional study of the basic sciences in the first two years of medical school, Pitt offers courses that deal with the human side of medicine from the very beginning of the medical school experience. In these courses, students encounter real patients, learn how to establish a patient/doctor relationship, and develop patient interviewing skills as well as the techniques for conducting a physical examination. Starting in their first year, students are exposed to medicine being practiced in primary care ambulatory settings, including clinics and physicians' offices.

Scholarly Project

At the University of Pittsburgh, all medical students engage in a scholarly research project. This program has been incorporated longitudinally throughout the curriculum as an indispensable component of medical education and has been broadly defined to provide a wide range of opportunities (including traditional laboratory-based or clinical research experiences as well as health policy, epidemiology, comparative effectiveness, and qualitative research) to appeal to individual students' interests and long-term career aspirations. The intent is to expose students to the mechanics of scientific investigation; teach them how to develop a hypothesis and how to collect, analyze, and interpret data to test it; encourage them to pursue research opportunities; and help them understand the structure of thought that is so critical to the successful practice of clinical medicine.



Among the program's distinctive elements are thorough preparatory course work designed to foster the skills that students need to successfully conduct scholarly work, an emphasis on developing strong faculty mentors to ensure the program's ongoing success, and creative use of electronic technology to promote learning and mentorship. Many students initiate their scholarly projects by participating in a summer research program between the first and second years of medical school, while others might take a year off to pursue an intensive research program at Pitt or elsewhere. Some students find the experience so rewarding that they consider careers as physician-scientists. The goal in every case, however, is to enhance their ability to think independently, critically, and creatively and, thereby, make them better equipped to practice medicine in the 21st century.

The Class of 2016 was the ninth class to complete the four-year scholarly project experience. Their endeavors resulted in 45 fellowships, grants, or other national or state awards; 88 School of Medicine or local awards; coauthorship of 145 papers submitted to peer-reviewed journals; and 257 presentations at national or international meetings.

For more information: <http://scholarlyproject.medschool.pitt.edu/>

Simulation Training

All Pitt medical students engage in comprehensive learning activities using whole-body simulators; about two-thirds of them opt for additional elective time with these sophisticated training tools, which provide the opportunity for students to develop resuscitation, defibrillation, auscultation, airway management, and other clinical skills. Task-specific models are used to develop proficiency in vascular access and suturing, among other procedures, and the proper techniques for conducting breast, pelvic, and prostate exams. Pitt's Peter M. Winter Institute for Simulation Education and Research (WISER) is considered one of the world's leading academic medical simulation training centers, featuring highly sophisticated and lifelike computer-based simulation technology designed to enable students to learn, practice, and perfect clinical procedures before performing them on actual patients.

For more information: www.wiser.pitt.edu

Problem-Based Learning

In the early 1990s, Pitt was among the first medical schools to adopt a teaching method known as problem-based learning, or PBL, which engages small, faculty-mentored groups of first- and second-year students in clinical diagnostic exercises built from actual cases of graduated difficulty. Now widely used in American medical schools and around the world, PBL builds collaborative problem-solving skills and teaches students how to "mine" vast information resources and apply them to specific clinical cases. In PBL sessions, faculty members serve as facilitators rather than traditional instructors. Pertinent facts are presented in such a way that students must continuously analyze and re-evaluate them, seek supporting evidence, and focus their thinking to reach a differential diagnosis. This mode of instruction is an important, well-integrated component of our curriculum and catalyzes the development of cognitive skills in our students.

In addition, team-based learning (TBL) has been introduced into a growing number of courses, including Human Genetics, Cellular and Pathologic Basis of Disease, and Behavioral Medicine, to enhance active learning and student engagement. TBL is a teaching method that emphasizes independent study immediately followed by intensive application of concepts to challenging problems by small teams of students.

Integrated Life Science Program

The fourth-year Integrated Life Science (ILS) Program includes a choice of courses that revisit some aspect of basic science after students have had several years of clinical experience. Because of the level of sophistication that students have developed by this stage in their medical education, they can better understand the relevance of basic science to clinical problems. Each student is required to complete one of the following ILS courses: Clinical Pharmacology, Changing Science—Changing Society, Infectious Disease in Obstetrics and Gynecology, Molecular Medicine, Neoplasia and Neoplastic Disease, Neurosurgery Technologies, Science of Resuscitation, or Surgical Integrated Life Sciences.

Standardized Patients

Throughout their medical education, students encounter standardized patients—actors and actresses who are specially trained to present realistic and consistent behavior, symptoms, and medical histories in simulated doctor-patient interactions. These sessions are designed to help students develop their clinical skills and learn how to deal with unusual or unexpected circumstances in a safe and constructive environment. Students find that these experiences reinforce lessons they have learned through other components of the curriculum and, in a realistic way, make them relevant. A standardized patient can contribute to the learning process by stepping out of character to offer feedback on the encounter and an assessment of the student's performance.

Evidence-Based Medicine

An important skill set for physicians today is being able to interpret and evaluate new findings reported in the medical literature and to apply these advances to real-life circumstances. For instance, the ability to understand and rapidly evaluate conflicting reports on a new or even a commonly used drug is increasingly important in daily patient care. Evidence-based medicine—an ongoing focus of our curriculum—teaches students how to critically evaluate the medical literature and to use medical databases to make patient care decisions based on best practice.

Addiction Medicine and the Opiate Epidemic

Health professionals from all disciplines are joining forces to address substance abuse, with a particular focus on opiate abuse. Students begin learning about these conditions early in the first year and continue the process throughout the curriculum during sessions that provide essential knowledge and patient-counseling skills in pain management and addiction. New Web-based instructional modules are being introduced to provide students with added exposure to patient cases in these areas.

Longitudinal Patient Experiences

Students may opt to have additional patient experiences through the Longitudinal Alliance Project, which pairs a student with a patient. The students maintain relationships with these patients throughout the course of their education. Students grow as they accompany the patients to medical visits and observe the course of their health and over time. The clinical experience is supported by a program of physician-mentored small group sessions, where students debrief on what they have experienced and learned from the perspectives of their colleagues.

Global Engagement

The School of Medicine operates on a global stage, with active collaborations connecting Pittsburgh with China, Colombia, Ghana, Honduras, India, Italy, Kazakhstan, Malawi, the Philippines, and many other nations. Medical students and young investigators who train in this milieu encounter a wide variety of influences and discover a great many opportunities to broaden their horizons. Here are a few examples:

The School of Medicine recently renewed a historic agreement with **Tsinghua University**—one of China's elite institutions of higher learning for science and technology—for a second five-year term. Since 2012, a significant proportion of students from Tsinghua's new medical school spend two years in Pittsburgh immersed in biomedical research. Pitt's Tsinghua Scholars program now has more than 65 alumni and 26 active scholars on campus.

Also in 2012, the School of Medicine began a collaboration with China's prestigious Central South University **Xiangya School of Medicine**. Under the five-year agreement, Pitt provides two years of rigorous biomedical research training to medical students, most of whom have already undergone six years of medical school, including clinical training. As of September 2016, 24 of these medical students are on campus, and 10 have recently returned to Changsha to graduate from medical school after their two years in Pittsburgh. In 2014, Xiangya Hospital formed a partnership with UPMC to establish an international medical center that will improve access to high-quality care for patients within the region.

The **Ri.MED Foundation** was created in 2006 as an international partnership among the Italian government, the Region of Sicily, the University of Pittsburgh, and UPMC. Since 2007, Ri.MED has sponsored research fellowships at the School of Medicine for young Italian investigators. These Ri.MED scientists will form the core faculty of the new Biomedical Research and Biotechnology Center, to be built in Sicily.

In 2012, the School of Medicine was selected to guide the **Republic of Kazakhstan's Nazarbayev University** (NU) as it establishes its own medical school, which aims to educate physician-scientists to become this Central Asian nation's next leaders in health care, medical education, and biomedical research. Pitt has partnered with NU to institute a U.S.-style curriculum; design and develop teaching facilities; recruit and train school leadership and faculty; plan organizational and administrative structures, policies, and procedures; and develop courses, syllabi, and clinical experiences with the participation of physician-educators from Kazakhstan and around the globe. In August 2015, the NU School of Medicine welcomed its first class of 20 students, followed by a second class of 32 students in August 2016.



Opportunities for In-Depth Study

The **Medical Scientist Training Program** (MSTP) provides an opportunity for medical students interested in a biomedical research career to undertake doctoral work at either the University of Pittsburgh or Carnegie Mellon University in basic science, engineering, or public health. After two years of medical school, students complete PhD work before returning to medical school. Throughout the process, MSTP-specific classes and clinics integrate MD and PhD training. Both degrees are completed in an average of seven-and-a-half years. The program, funded by a grant from NIH with support from the Office of the Dean, offers full tuition and a yearly stipend.

For more information: www.mdphd.pitt.edu

The **Clinical Scientist Training Program** (CSTP) gives medical students interested in clinical research careers an opportunity to delve more deeply into their scholarly projects during a fifth year of training. Students apply to the CSTP in January of the year they plan to commit to full-time research (typically between the third and fourth years of medical school). Selected students are appointed as research fellows and receive a living stipend, travel funds, health insurance, and tuition toward a graduate certificate or master's degree in clinical research. After successful completion of the fellowship year, they receive a CSTP scholarship toward the final year of medical school.

For more information: www.icre.pitt.edu/cstp-m/index.aspx

The **Physician Scientist Training Program** (PSTP) is a five-year program for exceptionally talented students who, in addition to the regular curriculum, dedicate a year and two summers to laboratory-based research training and enrichment courses that prepare them for careers in academic medicine. PSTP students receive partial tuition assistance for the four years of medical school plus a stipend during the two research summers and the research year.

For more information: www.pstp.pitt.edu

Other Research Opportunities

Upon completing their first year of medical studies, approximately 80 percent of the students in the Class of 2019 engaged in various summer research programs. In addition, some medical students take a year off at some point to earn a master's degree in public health, biomedical ethics, or a related field; others participate in a year-long program of specialized study or research available through Pitt's CSTP, PSTP, or an individual department; and still others take part in prestigious national fellowship programs like those sponsored by NIH, the Sarnoff Cardiovascular Foundation, or the Howard Hughes Medical Institute.

Degree Programs

Degrees offered at the School of Medicine include the doctor of medicine (MD), doctor of philosophy (PhD), master of science (MS), and several specialized certificates.

The **Interdisciplinary Biomedical Graduate Program** (PhD) combines a core curriculum with research and a dissertation focused on a choice of molecular genetics and developmental biology, cell biology and molecular physiology, cellular and molecular pathology, immunology, molecular pharmacology, or molecular virology and microbiology.

Laboratory research in theory and practice is a major focus of the cross-campus **Center for Neuroscience Graduate Training Program** (PhD), which aims to develop general competence in neuroscience as well as expertise in one or more areas of specialization.

The **Biomedical Informatics Training Program** (PhD, MS, or certificate) applies modern information technology to health care, education, and biomedical research.

Offered by the University of Pittsburgh and Carnegie Mellon University, the **Joint Program in Computational Biology** (PhD) is designed to develop expertise in the use of computational methods to identify and solve complex biological problems.

The interdisciplinary **Molecular Biophysics and Structural Biology Graduate Program** (PhD) trains students in a broad range of cutting-edge technologies used to study the function of biological macromolecules in physical terms and covers a diversity of research topics in molecular biophysics and structural biology.

The goal of the **Integrative Systems Biology Program** (PhD) is to train students in emerging transformative methodologies that emphasize genomics, proteomics, complex cellular pathways, and the dynamics of cellular and organismal function. Students in this program operate at the exciting interface between basic bench-top biology, computational analysis of big data sets, and the emergence of 21st century clinical translation.

Among offerings from Pitt's **Institute for Clinical Research Education** (ICRE) are programs in **Clinical and Translational Science** (PhD), **Clinical Research** (MS or certificate), **Medical Education** (MS or certificate), and **Comparative Effectiveness Research** (certificate).

Institutes and Centers

Aging Institute
Charles F. Reynolds III, MD, director

Brain Institute
Peter L. Strick, PhD, director

Center for Military Medicine Research
Rocky S. Tuan, PhD, director

Center for Vaccine Research
Donald S. Burke, MD, director

**Clinical and Translational
Science Institute**
Steven E. Reis, MD, director

Drug Discovery Institute
D. Lansing Taylor, PhD, director

Vascular Medicine Institute
Mark T. Gladwin, MD, director

Institute for Clinical Research Education
Wishwa N. Kapoor, MD, MPH, director

Institute for Precision Medicine
Adrian Lee, PhD, director

Magee-Womens Research Institute
Yoel Sadovsky, MD, director

**McGowan Institute for
Regenerative Medicine**
William R. Wagner, PhD, director

**Pittsburgh Institute for
Neurodegenerative Diseases**
J. Timothy Greenamyre, MD, PhD,
director

**Thomas E. Starzl
Transplantation Institute**
Fadi G. Lakkis, MD, director

**University of Pittsburgh
Cancer Institute**
Nancy E. Davidson, MD, director

Research Strengths

Within the School of Medicine, areas of research concentration include genome stability and tumorigenesis; regenerative medicine and biomedical device development; vascular, developmental, structural, and computational and systems biology; comparative effectiveness research; immunology, including immunological approaches to cancer; cancer virology; and clinical research/clinical trials, among others.

Drug Discovery

The University of Pittsburgh **Drug Discovery Institute** (DDI) investigates the underlying biological and chemical processes of human disease to identify drug targets and develop novel therapeutics that are effective, safe, and potable. Researchers at DDI use quantitative systems pharmacology (QSP), an approach that combines computational and experimental methods to elucidate, design, validate, and apply new pharmacological concepts and strategies to the development and use of therapeutics and diagnostics. QSP provides an integrated “systems” approach assisted by high-content screening techniques to explore mechanisms of drug action and is a major theme of DDI’s partnership with academia and industry. DDI is on the cutting edge of the effort to fully illuminate the therapeutic applications of new and existing drugs for precision medicine.

Vaccine Development

Faculty at Pitt’s **Center for Vaccine Research** are working to develop vaccines for viruses and other infectious agents of global importance, including those that occur naturally as well as those that could potentially be used as agents of bioterrorism. Building on the University’s existing strengths in the study of SARS, AIDS, influenza, immunology, and drug discovery, the center engages a cross-section of scientists from an array of disciplines in infectious disease research. Active investigations span basic research on molecular mechanisms of infectious diseases to the development of diagnostics, therapeutics, and vaccines.

Imaging

Imaging technologies are important tools for Pitt faculty investigating the human body and, in particular, the brain. The University’s **Center for Biologic Imaging** is one of the largest optical imaging facilities in the country, enabling sophisticated microscopy, biophotonics, and live-cell visualization. Advances in brain imaging made at Pitt include high-definition fiber tracking, which

reveals internal brain structures in three-dimensional, color-coded detail, and Pittsburgh Compound B, an agent that enables imaging of Alzheimer's disease-related amyloid plaques.

Neuroscience

In addition to imaging tools, Pitt faculty use surgery and clinical and basic science expertise to unlock the mysteries of normal and abnormal brain function. Concentrated primarily in the Departments of Psychiatry, Neurobiology, Neurological Surgery, and Neurology in the School of Medicine and the Departments of Neuroscience and Psychology in the Dietrich School of Arts and Sciences, these investigators are working to develop novel treatments and cures for brain disorders, including neurodegenerative diseases, spinal cord injuries, tumors, and psychiatric illnesses. Since 2014, their efforts have received additional support through the creation of a University-wide **Brain Institute**.

Precision Medicine and Big Data

The programmatic focus of the **Institute for Precision Medicine** (formerly the Institute for Personalized Medicine) is to apply new knowledge in genetics, genomics, and other disciplines toward the advancement of evidence-based medicine, with the goal of improving disease prevention and treatment models. Current goals focus on research and clinical implementation of pharmacogenomics, studies on bioethics, and development of computational infrastructure for analysis and sharing of large-scale phenotype (clinical) and genotype data. The School of Medicine has recently received federal and state grants, in collaboration with the Pittsburgh Supercomputing Center and Carnegie Mellon University, to handle and analyze biomedical Big Data.

Clinical and Translational Science

In 2016, the National Institutes of Health (NIH) announced awards to the University's **Clinical and Translational Science Institute** to help build the foundational partnerships and infrastructure needed to launch the Cohort Program of President Obama's Precision Medicine Initiative, which aims to engage 1 million or more U.S. participants to revolutionize how disease is prevented and treated based on individual differences in lifestyle, environment, and genetics. Pitt was awarded \$4.2 million the first year, with a potential of up to \$46 million over five years. Plans for Pitt's project, called PA CARES, include enrolling approximately 175,000 patients in the region and funding pilot studies using accrued data to advance precision medicine.

Vision Restoration

The School of Medicine and UPMC have partnered with the Sorbonne's Vision Institute in Paris, widely recognized as the world's leading center for basic and clinical research on vision. The thrust of this collaboration is the development of treatments for diseases such as retinitis pigmentosa, age-related macular degeneration, and vascular eye disease using pharmacologic approaches, gene therapy, stem cell implantation, and the artificial retina.



\$475
MILLION IN NIH
FUNDING IN 2015

\$727
MILLION FOR
RESEARCH IN 2016

Research Funding

Funding from the National Institutes of Health (NIH) is considered the benchmark of overall stature among research-intensive academic health centers. Since 1998, **the University of Pittsburgh has ranked among the top 10 recipients of NIH funding**. In an analysis of NIH funding for fiscal year 2015, the faculty of the University of Pittsburgh ranks fifth in dollars awarded, with more than \$475 million in total funding and more than 90 percent of this funding going to the Schools of the Health Sciences. **The faculty of the medical and public health schools also ranks fifth, with total NIH funding of more than \$414 million.**

Overall, the University of Pittsburgh spent approximately **\$727 million** for research of all kinds in fiscal year 2016; **approximately 79 percent of this amount was for research in the health sciences**. As a result of its success, the School of Medicine has invested significantly in new research infrastructure in disciplines like developmental, cellular, structural, and computational and systems biology and in faculty recruitment.

UPMC (University of Pittsburgh Medical Center)

Through its affiliation with UPMC, the School of Medicine offers students opportunities for clinical training, educational experiences, and research in virtually any medical specialty. Although legally separate and distinct entities, the School of Medicine and UPMC share mutual interdependence and a synergy that is reflected in a common commitment to excellence in education, research, and clinical care.

As an integrated global health enterprise and one of the nation's leading academic health care systems, with \$13 billion in revenues, UPMC has more than 60,000 employees; approximately 5,700 affiliated physicians, including 3,500 employed by the health system and 1,400 who are also full-time faculty of the School of Medicine; more than 20 tertiary care, specialty, and community hospitals; as well as specialized outpatient facilities, cancer centers, rehabilitation facilities, retirement and long-term care facilities, imaging services, doctors' offices, and a health insurance plan covering nearly 3 million members.

As of August 1, 2016, the UPMC Medical Education Program has 1,140 medical residents and 368 clinical fellows in programs approved by the Accreditation Council for Graduate Medical Education plus 28 clinical fellows in other programs.



For the 17th time in recent years, UPMC appears on the U.S. News & World Report Honor Roll of America's Best Hospitals for 2016.

UPMC Presbyterian Shadyside ranked 12th overall, making it the highest-ranked medical center in Pittsburgh, and was one of only 20 hospitals nationwide that made the Honor Roll of the "nation's best" in the 2016 survey. Nationally, UPMC is recognized for excellence in 15 of 16 specialty areas and is among the top 10 hospitals in four specialties: ear, nose, and throat; gastroenterology and GI surgery; pulmonology; and rheumatology. In addition, Children's Hospital of Pittsburgh of UPMC is ranked seventh overall and ranked in nine of 10 pediatric specialties included in the magazine's survey, four of which were ranked in the top 10.

The core of the health system is located in the Oakland, Shadyside, and Lawrenceville neighborhoods of Pittsburgh, where the following health care facilities are interwoven with University of Pittsburgh facilities: UPMC Presbyterian, UPMC Montefiore, Eye and Ear Institute, Magee-Womens Hospital of UPMC, Western Psychiatric Institute and Clinic of UPMC, Hillman Cancer Center, UPMC Shadyside, and Children's Hospital of Pittsburgh of UPMC.

Hillman Cancer Center is the flagship facility in the UPMC CancerCenter network of more than 40 clinical care facilities and home of the University of Pittsburgh Cancer Institute, one of only 47 facilities in the nation (and the only one in Western Pennsylvania) designated by the National Cancer Institute as a Comprehensive Cancer Center for cancer treatment, research, education, and prevention.

UPMC's clinical programs have earned international recognition, drawing patients from around the world. In addition, the medical center is now transporting its expertise to other countries, including Italy (where it manages the Mediterranean Institute for Transplantation and Advanced Specialized Therapies in Palermo) and Ireland, as well as ventures in Canada, China, Colombia, and Kazakhstan. With a long and distinguished record of pioneering and perfecting organ transplantation, UPMC dominates the field not only in terms of clinical expertise for the number and types of procedures performed but also in terms of research, development of new therapies, and training of transplant surgeons and physicians.

In recognition of its leadership in using information technology to improve clinical outcomes and efficiency, **UPMC was named one of the country's "Most Wired" health systems for the 18th consecutive year**—the only health care organization to be consistently recognized with that distinction during that time frame—according to *Hospitals & Health Networks*, the journal of the American Hospital Association (AHA).

For more information: www.upmc.com

Pittsburgh

City of Bridges

The city of Pittsburgh is home to three rivers (the Allegheny and Monongahela converge here to form the Ohio), more bridges than any other city in the world (by some estimates), eight colleges and universities, six Fortune 500 companies, and the remnants of Fort Duquesne, which was built in the 1750s and later renamed Fort Pitt.

The population of the seven-county region is nearly 2.4 million, with some 304,000 living within the city. Pittsburgh is vibrant, safe, and affordable; it features the amenities and liveliness of a large city with small-town civility and neighborhood feel. And it's a city of great taste: Zagat, the international restaurant review guide, rated Pittsburgh's food scene number-one for 2015.





Cultural opportunities abound, with museums, live theater, opera, dance, gallery exhibits, botanical gardens, a zoo, aquarium, and aviary; and an eclectic music scene that spans the symphonic to the serendipitous (Bruce Springsteen has been known to drop in unannounced to join his friends Joe Grushecky and the Houserockers) to the surreal (laser shows paired with rock, pop, and electronic music at the Carnegie Science Center provide a dazzling spectacle). The annual Three Rivers Arts Festival is a summertime staple for music and art lovers and one of many annual events that celebrate jazz, art, folk culture, and more.

Three major professional sports teams—the 2009 Super Bowl champion Pittsburgh Steelers; 2009 and 2016 Stanley Cup champion Pittsburgh Penguins; and the Pittsburgh Pirates, a franchise that is now a perennial contender (having reached the postseason in 2013, 2014, and 2015 after a long absence)—provide plenty of reasons to cheer, or jeer, depending on the season. In addition, the University is home to a full range of sports teams, the Pitt Panthers, which typically offer some of the finest performances in college athletics and joined the esteemed Atlantic Coast Conference in 2013. For athletes and spectators alike, there is the Pittsburgh Marathon, usually in early May, when more than 30,000 elite and amateur athletes run up to 26.2 miles through the city of bridges.

Oakland, the neighborhood in which Pitt is located, is unquestionably the intellectual center of the community. In the heart of Pitt's campus is the 42-story Cathedral of Learning, the second tallest university building in the world and home to more than two dozen Nationality Rooms styled to reflect the culture of the faraway places to which many Pittsburghers can trace their roots.

Pittsburgh's hills and valleys give way to breathtaking views and are home to **88 neighborhoods**, many of them embracing distinct ethnic and cultural flavor plus traces of Old World attitudes and culture. Possibly the most famous, *Mister Rogers' Neighborhood*, a children's television show broadcast from here for 33 years, reflected in its own simple and charming way a nice place to be—which is, perhaps, the best way to describe Pittsburgh.

All photos courtesy of the University of Pittsburgh except those listed below.

Joshua Franzos: Pages 1, 4 (top), 13, 14; Jim Judkis: Page 8 (top); Annie O'Neill: Pages 5 (bottom), 8 (bottom); Bubba Harmon: Page 16; Page 18: (top to bottom) Pittsburgh Cultural Trust, Visit Pittsburgh (left), Luiginter (right), Dave DiCello

Departments

Anesthesiology

Howard B. Gutstein, MD, Chair

Biomedical Informatics

Michael J. Becich, MD, PhD, Chair

Cardiothoracic Surgery

James D. Luketich, MD, Chair

Cell Biology

Alexander D. Sorkin, PhD, Chair

Computational and Systems Biology

Ivet Bahar, PhD, Chair

Critical Care Medicine

Derek C. Angus, MD, MPH, Chair

Dermatology

Louis D. Falo Jr., MD, PhD, Chair

Developmental Biology

Cecilia Lo, PhD, Chair

Emergency Medicine

Donald M. Yealy, MD, Chair

Family Medicine

Jeannette E. South-Paul, MD, Chair

Immunology

Mark J. Shlomchik, MD, PhD, Chair

Medicine

Mark T. Gladwin, MD, Chair

Microbiology and Molecular Genetics

Thomas E. Smithgall, PhD, Chair

Neurobiology

Peter L. Strick, PhD, Chair

Neurological Surgery

Robert M. Friedlander, MD, MA, Chair

Neurology

Lawrence R. Wechsler, MD, Chair

Obstetrics, Gynecology, and Reproductive Sciences

Robert P. Edwards, MD, Chair

Ophthalmology

José-Alain Sahel, MD, Chair

Orthopaedic Surgery

Freddie H. Fu, MD, DSci (Hon.), Chair

Otolaryngology

Jonas T. Johnson, MD, Chair

Pathology

George K. Michalopoulos, MD, PhD, Chair

Pediatrics

Terence S. Dermody, MD, Chair

Pharmacology and Chemical Biology

Bruce A. Freeman, PhD, Chair

Physical Medicine and Rehabilitation

Gwendolyn A. Sowa, MD, PhD, Chair

Plastic Surgery

J. Peter Rubin, MD, Chair

Psychiatry

David A. Lewis, MD, Chair

Radiation Oncology

Joel S. Greenberger, MD, Chair

Radiology

Jules Sumkin, DO, Chair

Structural Biology

Angela Gronenborn, PhD, Chair

Surgery

Timothy R. Billiar, MD, Chair

Urology

Joel B. Nelson, MD, Chair

Administration

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Senior Vice Chancellor for the Health Sciences

John and Gertrude Petersen
Dean of Medicine

Ann E. Thompson, MD

Vice Dean

Associate Deans

Barbara E. Barnes, MD, MS

Associate Dean for Continuing Medical Education

Donald B. DeFranco, PhD

Associate Dean for Medical Student Research

Joan Harvey, MD

Associate Dean for Student Affairs

Dena Hofkosh, MD

Associate Dean for Faculty Affairs

John P. Horn, PhD

Associate Dean for Graduate Studies

John F. Mahoney, MD

Associate Dean for Medical Education

Rita M. Patel, MD

Associate Dean for Graduate Medical Education

Beth M. Piraino, MD

Associate Dean for Admissions and Financial Aid

Gwendolyn A. Sowa, MD, PhD

Associate Dean for Medical Student Research

Richard A. Steinman, MD, PhD

Associate Dean for the Medical Scientist Training Program

Associate Dean for the Physician Scientist Training Program

Peter J. Veldkamp, MD, MS

Associate Dean for Global Health Education

Ora A. Weisz, PhD

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