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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 betters 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 an analysis of NIH funding for federal fiscal year 2016, the faculty of the University of Pittsburgh ranked fifth in total grants awarded, with more than \$513 million in funding—approximately 90 percent of which went to the School of Medicine. In federal fiscal year 2016, Pitt researchers earned 1,090 total awards from NIH, of which 846 were to the School of Medicine. The School of Medicine operates on a global stage, with active collaborations connecting Pittsburgh with China, Colombia, France, Haiti, India, Ireland, Italy, Kazakhstan, Mozambique, and many other nations.



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 systemic 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 2017–18 academic year, 591 MD students are registered in the School of Medicine, including 300 (51 percent) women and 291 (49 percent) men. Of these, 186 (31 percent) are Pennsylvania residents; approximately 16 percent of Pitt medical students are from groups that are underrepresented within the medical profession.

There are 273 registrants in PhD programs (including those in the Medical Scientist Training Program), 87 students in MS programs, and 27 students in certificate programs.

For 2017, 6,151 applications for admission were received and 796 prospective students were interviewed for a first-year class of 148 students.

The School of Medicine has 2,264 regular and 2,213 volunteer faculty members. Of these, 81 are current members of the Academy of Master Educators, an organization that recognizes and rewards excellence in medical education.

Curriculum

Students experience a variety of **teaching methods** at Pitt. During the first two years, students spend only about one-third of their time in lectures and team-based learning sessions. Another third is spent in small-group sessions; the remainder includes self-directed learning, computer-based study, community visits, clinical experiences, and other activities.

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 Research Project

All medical students engage in a scholarly research project that has been incorporated longitudinally throughout the curriculum. A wide range of opportunities includes traditional laboratory-based or clinical research experiences — as well as alternatives, such as health policy, epidemiology, and comparative effectiveness research — that appeal to individual students' interests and long-term career aspirations. Projects aim to illustrate the mechanics of scientific investigation; teach students how to develop a hypothesis and how to collect, analyze, and interpret data to test it; encourage students to pursue research opportunities; and help students understand the fundamental thought processes that lead to success in clinical medicine.





The Class of 2017 was the 10th class to complete the four-year scholarly research project experience. Their endeavors resulted in 40 fellowships, grants, or other national or state awards; 60 School of Medicine or local awards; coauthorship of 168 papers submitted to peer-reviewed journals; and 241 presentations at national or international meetings.

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

Simulation Training

Simulation training allows medical students to engage in comprehensive learning activities using whole-body simulators; most students seek additional elective time with these sophisticated training tools, which help them 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 medical schools in the United States 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, Cell Communication and Signaling, 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 Program includes courses that revisit some aspect of basic science. The level of sophistication that students have developed by this stage in their medical education promotes a deeper understanding of the relevance of basic science to clinical problems.

Standardized Patients

Throughout their medical education, students encounter standardized patients—actors 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

Evidence-based medicine — an ongoing focus of the 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 Opioid Epidemic

Health professionals from all disciplines are joining forces to address substance abuse, with a particular focus on opioid 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. Faculty from the Department of Family Medicine choose moderately complex cases and 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've 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, France, 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 79 alumni and 35 active scholars on campus. In 2017, the original

group of Tsinghua Scholars graduated from Tsinghua University's medical school, becoming the first Pitt-trained Tsinghua Scholars to earn their medical degrees or doctorates.

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 clerkships. As of September 2017, 24 of these medical students are on campus, and 12 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, which has improved access to high-quality care for patients in the region since opening in 2015.

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.

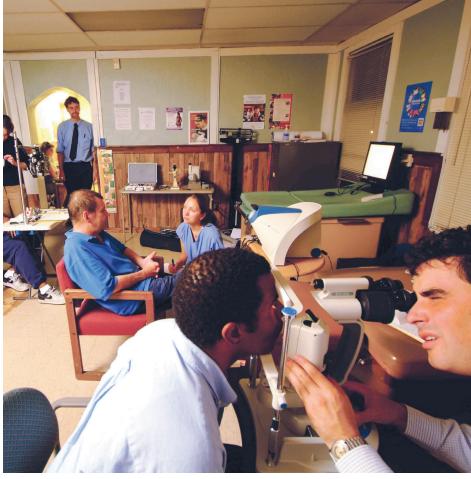
In 2012, the School of Medicine was selected to guide the **Republic of Kazakhstan's Nazarbayev University** (NU) as it established its own medical school, which aims to educate physician-scientists to become this Central Asian nation's next leaders in health care, medical education, and biomedical research. 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. In 2017, the NU School of Medicine began accepting international students.

Opportunities for In-Depth Study

Optional **areas of concentration** enable students to cultivate their enthusiasm for a particular aspect of medicine through hands-on experiences, faculty mentoring, research projects, and other activities throughout all four years. Topics include disabilities medicine, medical humanities, geriatric medicine, women's health, health care to underserved populations, neuroscience, global health, integrative health, resuscitation medicine, public health, and patient safety and quality improvement.

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 training. Both degrees are completed in an average of seven-to-eight 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 research 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 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 90 percent of the students in the Class of 2020 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

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

The cross-campus **Center for Neuroscience Graduate Training Program** (PhD) introduces students to the fundamental issues and experimental approaches in neuroscience and trains them in the theory and practice of laboratory research.

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.

The **Program in Microbiology and Immunology** (PhD) aims to train highly motivated graduate students as self-reliant scholars in an environment with ready access to the breadth of expertise, approaches, and sub disciplines that constitute the diverse fields of microbiology and immunology.

The **Biomedical Master's Program** (MS) is designed for students who desire additional training, mentoring, and advising to strengthen their academic and professional credentials for admission to health professional schools or for entry into the biomedical workforce.

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

Toren Finkel, MD, PhD, director

Brain Institute

Peter L. Strick, PhD, director

Center for Military Medicine Research

Rocky S. Tuan, PhD, director

Center for Vaccine Research

Saleem A. Khan, PhD, interim director

Clinical and Translational Science Institute

Steven E. Reis, MD, director

Drug Discovery Institute

D. Lansing Taylor, PhD, 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

UPMC Hillman Cancer Center

Robert L. Ferris, MD. PhD. director

Vascular Medicine Institute

Mark T. Gladwin, MD, director

Research Strengths

Within the School of Medicine, areas of research concentration include comparative effectiveness research; organ transplantation/immunology; stem cell biology and tissue engineering; vascular, developmental, structural, and computational and systems biology; and clinical research/clinical trials, among others.

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 identifies Alzheimer's disease-related amyloid plaques.

Immunotherapy

The University of Pittsburgh and UPMC are collaborating to harness the body's natural defenses and improve treatment outcomes through immunotherapy in the areas of cancer, transplant, and chronic disease. Building on a longstanding record of success in patient care and research, Pitt and UPMC are investigating ways to fine-tune the immune system to fight cancer cells, exploring immune transplantation in conjunction with solid organ transplantation to reduce rejection and reliance on immunosuppressive medicines, and examining how immunotherapy can combat conditions like cardiovascular disease, obesity, and sickle cell anemia. Active investigations range from combined lung and bone marrow transplants to genetically engineered T cells that find and kill a variety of cancers.

Neuroscience

In addition to imaging tools, faculty associated with Pitt's **Brain Institute** use clinical and basic science expertise to unlock the mysteries of normal and abnormal brain function. Concentrated primarily in the Departments of Neurobiology, Neurology, Neurological Surgery, Ophthalmology, and Psychiatry 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 neuro-degenerative diseases, spinal cord injuries, tumors, and psychiatric illnesses.

Precision Medicine and Big Data

The programmatic focus of the **Institute for Precision 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

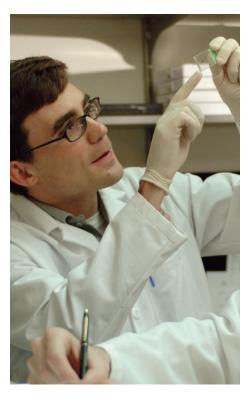
In 2016, the National Institutes of Health announced awards to the University's **Clinical and Translational Science Institute** to help build the foundational partnerships and infrastructure needed to launch the Cohort Program of President Obama's Precision Medicine Initiative, which aims to engage 1 million or more research 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. Pitt's project, called PA Cares for Us, began enrolling the first of an anticipated 150,000 patients in the region in mid-2017 and plans to fund 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, which is widely recognized as the world's leading center for basic and clinical research on vision. The major thrust of this new collaboration is the development of treatments for currently untreatable retinal 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.

In July 2017, the School of Medicine expanded this relationship to include three world-renowned French research institutions, the Université Pierre et Marie Curie of the Sorbonne Universités, the Institut National de la Santé et de la Recherche Médicale (Inserm), and the Centre National de la Recherche Scientifique, to focus on collaborative research and education in the fields of medicine and biomedical sciences.

The agreement will enable researchers from all four institutions to collaborate on fundamental research, development of novel therapeutics, and clinical trials, with an initial focus on ophthalmology, vision, and neuroscience. Along with joint research, the agreement also emphasizes exchange of academic personnel, joint academic conferences, and exchange of scientific, educational, and scholarly materials.





\$453
MILLION IN NIH
FUNDING IN 2016

\$513 MILLION FOR RESEARCH IN 2017

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 2016, the University of Pittsburgh ranked fifth in total grants awarded, with more than \$513 million in funding—nearly 90 percent of which (\$453 million) went to the School of Medicine. In fiscal year 2016, Pitt researchers earned 1,090 total awards from NIH, of which 846 were to the School of Medicine.

Overall, the University of Pittsburgh spent approximately **\$765 million** for research of all kinds in fiscal year 2017; **67 percent of this amount (\$513 million)** was for research in the School of Medicine. 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 \$14 billion in revenues, UPMC has more than 65,000 employees; approximately 5,700 affiliated physicians, including more than 3,600 employed by the health system and 1,384 who are also full-time faculty of the School of Medicine; more than 25 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 more than 3 million members.

As of August 1, 2017, the UPMC Medical Education Program has 1,132 medical residents and 370 clinical fellows in programs approved by the Accreditation Council for Graduate Medical Education plus seven clinical fellows in other programs.



UPMC has once again been named to the *U.S. News & World Report* Best Hospitals Honor Roll and is ranked nationally in **14** specialties. In addition, Children's Hospital of Pittsburgh of UPMC is ranked ninth overall and ranked in all 10 pediatric specialties included, four of which are 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, UPMC Hillman Cancer Center, UPMC Shadyside, and Children's Hospital of Pittsburgh of UPMC.

The UPMC Hillman Cancer Center is part of a network of more than 50 clinical care facilities and one of only 48 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 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 19th 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 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, destroyed by the French before the British could capture it, and later replaced by 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.











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

Joshua Franzos: Pages 1, 4, 8 (bottom), 14; Jim Judkis: Page 8 (top); Annie O'Neill: Page 5 (bottom); Dave DiCello: Page 16; Page 18: (top to bottom) Pittsburgh Children's Museum, Visit Pittsburgh (left), Kipp Madison (right) While Pittsburghers know well of all the city has to offer, it's been ranked **one of the best cities for architecture** by *Travel + Leisure*, the seventh best city for an **active lifestyle** by WalletHub, and **a worldwide top city** to visit by *National Geographic Traveller*, all in 2017.

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; the reigning (2016 and 2017) Stanley Cup champion Pittsburgh Penguins; and the Pittsburgh Pirates, a franchise that 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, 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 neighborly place to be — which is, perhaps, the best way to describe Pittsburgh.

Departments

Anesthesiology

Marshall W. Webster, MD, Interim 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, MD, PhD,

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, 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 H. Sumkin, DO, Chair

Structural Biology

Angela Gronenborn, PhD, Chair

Surgery

Timothy R. Billiar, MD, Chair

Urology

Joel B. Nelson, MD, Chair

Administration

Arthur S. Levine, MD

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

Saleem A. Khan, PhD

Associate Dean for Academic Affairs

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

Director, Physician Scientist Training Program

Peter J. Veldkamp, MD, MS

Associate Dean for Global Health Education

Ora A. Weisz, PhD

Associate Dean for Faculty Development

Darlene F. Zellers, PhD

Associate Dean for Postdoctoral Affairs

Assistant Deans

Judy C. Chang, MD

Assistant Dean for Medical Student Research

Donald DeFranco, PhD

Assistant Dean for Medical Student Research

Brad Dicianno, MD

Assistant Dean for Medical Student Research

JoAnne L. Flynn, PhD

Assistant Dean for the Medical Scientist Training Program

John Fowler Jr., MD

Assistant Dean for Medical Student Research

Janel Hanmer, MD, PhD

Assistant Dean for Medical Student Research

Rebecca P. Hughey, PhD

Assistant Dean for Medical Student Research

James J. Irrgang, PhD

Assistant Dean for Medical Student Research

Frank J. Kroboth, MD

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