

**The University of Pittsburgh**, founded in 1787, is one of the oldest institutes of higher education in the United States. The University's five campuses include 16 undergraduate, graduate and professional schools, which collectively offer greater than 440 distinct bachelor's, master's, doctoral and professional degree programs. Enrollment in 2013 was greater than 35,000 students, which accounted for approximately 5% of all students enrolled in institutions of higher education in the State of Pennsylvania. Admission to University degree programs have become more selective, with 46% of first-year students graduating in the top 10% of their high school classes, as compared to 22% in 1996. The University employs approximately 5,200 faculty, 850 research/ post-doctoral associates, and 7000 staff, and the main campus is in a metropolitan area with a population of 2.4 million.

A citation analysis ranks Pitt as the top public university in Pennsylvania in scientific output — and No. 9 among all U.S. public universities — demonstrating a rate of return any investor could respect. According to the 2012 Performance Ranking of Scientific Papers for World Universities, Pitt ranked at No. 18 among all U.S. universities (public and private) and No. 24 among all universities worldwide. The ranking, published yearly since 2007 by the Higher Education Evaluation and Accreditation Council of Taiwan and by National Taiwan University beginning in October 2012, evaluates academic journal publications from the top 500 universities worldwide in terms of research productivity, impact, and excellence.

**The six Schools of the Health Sciences** include the Graduate School of Public Health and the Schools of Dental Medicine, Health and Rehabilitation Sciences, Medicine, Nursing and Pharmacy. **Funding from the National Institutes of Health (NIH)** is considered the benchmark of overall stature among research-intensive academic health centers. The research community within the schools of the health sciences, led by the School of Medicine, receives more than 90 percent of all funds provided to the University by NIH. Since the late 1990s, the University has been among the top 10 recipients of NIH funding and has steadily climbed upward in terms of the amount of grants and contracts received, currently numbering 1069. In fiscal year 2014 (the most recent federal fiscal year with complete data), the Faculty of the University received more than \$456 million in grants and contracts from the NIH, placing Pitt among the five top universities nationwide in terms of total NIH funding. The University of Pittsburgh now receives the third largest amount of federal research money in the nation among public universities and the fifth largest amount among all schools. In terms of training grants, NIH currently supports 50 Ruth L. Kirschstein National Research Service Award (NRSA) Institutional Research Training Grants (T32) at the University of Pittsburgh, the vast majority awarded within the six Schools of the Health Sciences. The University of Pittsburgh has also moved into the top 10 institutions of higher education in terms of research and education funding from the National Science Foundation. The University of Pittsburgh now receives the third largest amount of federal research money in the nation among public universities, and the fifth largest amount among all schools. In fiscal 2011, which ended October 2012, Pitt attracted \$622.5 million in federal research money and totaled \$899.4 million in total research expenditures, according to the National Science Foundation. As a result of its success, Pitt has invested significantly in new research infrastructure in developmental, cellular, structural, and computational biology (all within the School of Medicine) and recruitment of outstanding new faculty. Overall, the Schools of the Health Sciences currently occupy approximately 4.2 million gross square feet of research, academic, and administrative space in various buildings.

In 2000, the RAND Corporation founded a Pittsburgh branch, through which it developed the RAND–University of Pittsburgh Health Institute, a collaborative venture between RAND Health, Pitt's Schools of the Health Sciences, and Magee-Womens Research Institute. The emphasis is on shared activities in research, education, and training, with particular focal areas being research in women's health, mental health, patient safety, comparative effectiveness research, patient-centered outcomes research, diversity, translation of research into evidence-based practice, and global health.

Since 1996, the year Pitt's Office of Technology Management was founded, 98 companies have been formed that were dependent upon the licensing of technology developed at the University of Pittsburgh; a majority of them were in the life sciences.

**UPMC (University of Pittsburgh Medical Center)** is affiliated with each of the University of Pittsburgh's six schools of the health sciences and is dedicated to providing exemplary patient care, educating the next

generation of health care professionals, and advancing biomedical research. As an integrated global health enterprise and one of the nation's leading academic health care systems, with \$10 billion in revenues, UPMC has more than 55,000 employees; more than 5,500 affiliated physicians, including more than 3,300 employed by the health system and more than 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 more than 2 million members. As of August 1, 2013, the UPMC Medical Education Program has 1,103 medical residents and 388 clinical fellows in programs approved by the Accreditation Council for Graduate Medical Education plus 73 clinical fellows in other programs. Internationally renowned programs include transplantation, cancer, neurosurgery, psychiatry, orthopedics and sports medicine, among others. UPMC is an ideal partner in patient care, education and advancement of new medical breakthroughs and technologies.

**The School of Medicine** includes the following 31 departments: Anesthesiology; Biomedical Informatics; Cardiothoracic Surgery; Cell Biology; Computational and Systems Biology; Critical Care Medicine; Dermatology; Developmental Biology; Emergency Medicine; Family Medicine; Immunology; Medicine; Microbiology and Molecular Genetics; Neurobiology; Neurological Surgery; Neurology; Obstetrics, Gynecology, and Reproductive Sciences; Ophthalmology; Orthopaedic Surgery; Otolaryngology; Pathology; Pediatrics; Pharmacology and Chemical Biology; Physical Medicine and Rehabilitation; Plastic Surgery; Psychiatry; Radiation Oncology; Radiology; Structural Biology; Surgery; and Urology. The two newest of these departments —Plastic Surgery and Cardiothoracic Surgery — reflect the School of Medicine's position at the leading edge of medical education and clinical practice, as well as the recent and rapid evolution of surgical subspecialties as independent disciplines. Similar departments are still novel in American medical schools, and the same can be said of our departments of Computational and Systems Biology, Critical Care Medicine, Developmental Biology, and Structural Biology.

Within the School of Medicine, areas of research emphasis and strength include drug discovery and design; vaccine development; comparative effectiveness research; organ transplantation / immunology; stem cell biology and tissue engineering; medical device development; vascular biology; cancer research and therapy; cardiology and cardiovascular biology; bioinformatics and computational biology; psychiatry, neurobiology, systems neuroscience, and neurological surgery; structural biology; developmental biology; precision medicine; and clinical research/clinical trials. The School of Medicine is ranked 5<sup>th</sup> in fiscal year FY 2012 NIH funding, up from 7<sup>th</sup> in FY09, with total funding of more than \$400 million. As of April 1, 2013, the School of Medicine had 2,274 regular faculty members plus 2,501 volunteer faculty. Eighty-six faculty members from throughout the school are current members of the Academy of Master Educators, which was developed to recognize and reward excellence in medical education. For 2013, the medical school received 4,982 applications for admission and interviewed 836 prospective students for the first-year class of 162 members.

In August 2013, the School of Medicine has 603 MD students (274 women, 45%; 329 men, 55%), 16% of whom are from groups that are underrepresented within the medical profession. The medical school also has 296 graduate students in PhD programs (including 80 students in the University of Pittsburgh/Carnegie Mellon University combined MD/PhD Medical Scientist Training Program), 68 students in Master's programs, and 57 students in certificate programs. Notably, each of the medical students are required to engage in a scholarly project, which may include a wide range of opportunities including traditional laboratory-based or clinical research experiences, among other less obvious choices. The intent is to expose students to the mechanics of scientific investigation, including the development of a testable hypothesis and how to collect, analyze and interpret data; encourage students to pursue research opportunities, and equip them with the skills needed to think independently, critically and creatively. The graduating class of 2013 was the sixth class to complete the four-year scholarly project experience, and resulted in 39 fellowships, grants or other national awards; 39 School of Medicine awards; co-authorship on 134 peer-reviewed articles; and 234 national presentations and abstracts. The MD/PhD Program of The University of Pittsburgh and Carnegie Mellon University was established in 1983 to offer exceptionally talented individuals the opportunity to undertake a physician-scientist training program tailored to their specific research interests, and is currently funded primarily by The Medical Scientist Training Program of the NIH. The spirit of interdisciplinary, inter-institutional collaboration that pervades The University of Pittsburgh and Carnegie Mellon University creates a dynamic environment for

promising students to launch research careers that integrate medicine and the basic sciences. Exceptional investigators at both universities serve as potential mentors for 80 MD/PhD students. Carnegie Mellon University exists adjacent to, and within easy walking distance of the University of Pittsburgh. Finally, the interdepartmental, interschool, Interdisciplinary Biomedical Graduate Program provides the opportunity to earn a PhD in the following areas: Cell Biology & Molecular Physiology, Cellular and Molecular Pathology, Molecular Genetics and Developmental Biology, Immunology, Molecular Pharmacology, Molecular Virology & Microbiology, while other PhD programs for Neuroscience, for Computational Biology, for Molecular Biophysics & Structural Biology, for Clinical and Translational Science, and for Biomedical Informatics are also very competitive.

The **Health Sciences Library System (HSLs)** supports the educational, research, clinical, and service activities of the health sciences community of the University of Pittsburgh through development and provision of innovative information resources and services. *Falk Library of the Health Sciences* serves as the flagship of the HSLs, with a wide-ranging collection of biomedical and health-related journals and monographs as well as a specialized collection of rare and historical materials. The Computer and Media Center (CMC) offers computing and Internet access, as well as educational, productivity, and media software packages. The CMC has more than 75 available computers including circulating laptops, as well as two classrooms equipped for group computer instruction and four group study rooms. The University's wireless network is available throughout the library. Falk Library is open 110 hours per week.

The HSLs staff includes 28 faculty librarians, 26 paraprofessional and technical staff. HSLs serves the University of Pittsburgh health sciences faculty, staff, and students. HSLs resources total approximately 360,000 print volumes, including more than 180,000 monographs. Approximately 170,000 older print journals and books are housed at the HSLs offsite storage facility, located about five miles from Falk Library. HSLs has increasingly shifted towards providing information electronically. Library users have access to more than 5,000 electronic journals in the health sciences. Similarly, the electronic collection includes 3,000 e-books and 97 databases or publisher collections of full-text information.