

Houston Methodist is re-engineering the future of medicine with translational research and education initiatives that have a demonstrable impact on patient care. Integrated into *U.S. News & World Report*'s ranking as the No. 1 hospital in Texas and one of America's "Best Hospitals," the Academic Institute's \$31M Translational Research Initiative Product Development Fund supports the full cycle of development to efficiently and effectively deliver innovations, solutions and skills our clinicians need. Fostering key affiliations with Weill Cornell Medical College and Weill Cornell Graduate School of Medical Sciences further advances our mission to bring cutting-edge treatment to our patients faster.



EDUCATION

- 71 GME Programs, 388 Residents and Fellows
- 1,230 Graduate Students & Post-docs
- 2 Weill Cornell Graduate School of Medical Sciences PhD Programs at Houston Methodist
- EnMed: Texas A&M University School of Engineering Medicine MD and Master's Engineering Programs at Houston Methodist
- Master in Clinical Translational Management with University of St. Thomas

RESEARCH IMPACT

- 232 Licensable Technologies
- 22 Pipeline Products
- 212 Investigator Initiated Trials

• 6,690 Global Collaborations

- 2,000 Peer-Reviewed Publications
- 136 Collaborating Countries

19 Departments: Anesthesiology and Critical Care, Cardiology, Cardiovascular Sciences, Cardiovascular Surgery, Medicine, Nanomedicine, Neurology, Neurosurgery, Obstetrics and Gynecology, Ophthalmology, Oral and Maxillofacial Surgery, Orthopedic Surgery, Otolaryngology, Pathology and Genomic Medicine, Psychiatry and Behavioral Health, Radiation Oncology, Radiology, Surgery and Urology

19 Interdisciplinary Centers: Cellular Therapeutics; Bioenergetics; Cardiovascular Regeneration; Health Data Science and Analytics; Human Performance; Critical Care; Health and Nature; Robotics, Imaging and Navigation; Immunobiology and Transplant Science; Infectious Diseases; Brain and Pituitary Treatment; Musculoskeletal Regeneration; Alzheimer's Disease; Neuroregeneration; Neural Systems Restoration; Rapid Device Translation; RNA Therapeutics; Liver Disease and Transplantation

TRANSLATIONAL TECHNOLOGIES

• Translational Imaging

- Imaging innovation hub: A Siemens and Houston Methodist-led consortium with Rice University, Texas A&M, UT Health Science Center at Houston, UT Medical Branch at Galveston, University of Houston, and Baylor College of Medicine.
- 7 Tesla MRI and MAGNETOM Terra, allowing for unprecedented visualization of anatomical details, physiology and biological function.
- Cyclotron and nine ventilated hot cells (chemistry labs in lead boxes) to produce clinical grade and rare custom radiopharmaceuticals for advanced diagnostic and therapeutic imaging.
- Inveon dedicated PET system, Inveon multimodality SPECT/CT system, Caliper IVIS-200 system, and Maestro *in vivo* fluorescence imaging system.

• Translational Production & Quality and Clinical Trial Support

- Good Laboratory Practice (GLP) facilities perform risk, safety and efficacy assessment studies in compliance with FDA guidelines for preclinical proof-of-concept testing.
- Ann Kimball and John W. Johnson Center for Cellular Therapeutics to translate laboratory discoveries into cutting-edge cellular therapies for patient care.
- Center for RNA Therapeutics provides access to state-of-the-art RNA facilities for manufacturing and technology.
- Current Good Manufacturing Practices (cGMP) facilities to produce pharmaceuticals, vaccines and nanoparticles for testing and research.
- Cockrell Center for Advanced Therapeutics and Clinical Research Phase I Unit supports first-in-human and proof-of-concept clinical trials.

• 21 Core Facilities for Access to Technology, Data Analysis, and Services

- Advanced Cellular and Tissue Microscopy
- Biorepository
- Biostatistics and Bioinformatics
- Clinical Research Services
- Comparative Medicine
- Digital Solutions
- Electron Microscopy
- Event Services
- Flow Cytometry
- High-Performance Computing
- Immunomonitoring

- Intravital Microscopy
- Machine Shop
- Magnetic Stimulation Device Core
- Nanoengineering
- Preclinical Catheterization Laboratory
- Research Pathology
- RNAcore
- Translational Imaging Center
- Translational Production & Quality
- Production Facilities

COLLABORATIVE CENTERS

- Center for Neural Systems Restoration, collaboration with Rice University
- · Center for Human Performance, collaboration with Rice University
- · Center for Rapid Device Translation, collaboration with J&J Labs
- Center for Cell and Gene Therapy, collaboration with Baylor College of Medicine and Texas Children's Hospital
- · Center for Health and Nature, collaboration with Texas A&M University and Texan by Nature
- · Siemens Imaging Consortium, based at Houston Methodist with six local universities and medical centers

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