

Do you want to work at the interface of basic research and patient care? Are you interested in learning about human diseases and their current modes of treatment and diagnosis? Do you want to take scientific knowledge and translate it into better methods of prevention, diagnosis, and treatment of human disease? Are you inspired to help people by advancing knowledge that directly leads to new treatments for disease? Do you envision working in interdisciplinary teams that include scientists, physicians, and other health care professional? If your answer to these questions is yes, then UTMB's Human Pathophysiology and Translational Medicine (HPTM) graduate program is the scientific career opportunity for you!

HPTM Curriculum:

Key features of the HPTM Ph.D. program curriculum are:

1. *Focused medical training in biomedical graduate education for translational science.* HPTM students will be exposed to fundamental concepts and vocabulary of clinical medicine and gain focused clinical knowledge of diseases relevant to their specific area of research interest. This is accomplished by participating in clinical case-based learning exercises with first year medical students, clinical encounter sessions in alliance with laboratory rotations, and dissertation research as part of a multidisciplinary translational team which includes physicians and scientists.
2. *Integrated study of basic biomedical sciences through multidisciplinary modules.* Concepts of cell and molecular biology, pathology, physiology, immunology, pharmacology, and biochemistry are approached in a cohesive fashion through active problem-solving with emphasis on human disease processes.
3. *Interprofessional learning opportunities with medical students for concept discovery and team building.* Students will develop skills of collaboration, teamwork, and cooperation through a number of courses, seminars, enrichment activities, and research projects that involve medical students in a Translational Research Track.
4. *State of the art teaching methodologies based on principles of adult learning and focusing on authentic performance as a translational scientist.* The general teaching methodology involves guided inquiry processes, which recapitulate and model the scientific method, and promote creative problem solving, analytical thinking, skills for life-long autonomous learning, and cooperative group interactions.



Human Pathophysiology and Translational Medicine (HPTM) Program

YEAR 1											
Fall Semester				Spring Semester				Summer Semester			
Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Gross anatomy and radiology		Molecules, cells, and tissues		Pathobiology and host defense				Interprofessional translational research course			
TS	TS	TS	TS	TS	TS	TS	TS	TS	TS		
Human pathophysiology for translational scientists I				Human pathophysiology for translational scientists II				Human pathophysiology for translational scientists III			
	Clinical encounter and lab rotation I			Clinical encounter and lab rotation II		Clinical encounter and lab rotation III				Clinical encounter and lab rotation IV	
				MTT/BE elective		MTT/BE elective				MTT/BE elective	

Color code	Abbreviations
Joint HPTM/School of Medicine inter-professional courses	TS: Topics in Translational Research Seminar series
HPTM- program-specific courses	
GSBS/BBSC courses (HPTM) Electives	MTT/BE elective: Multidisciplinary Translational Teams (MTT)- or Bioengineering-specific courses

Faculty and Facilities:

The HPTM program is part of the UTMB Institute for Translational Sciences (ITS) which includes a new NIH-funded Institutional Clinical and Translational Science Award (ICTSA). Faculty within the ITS are organized into multidisciplinary translational team and will offer HPTM students access to multidisciplinary training and development resources, innovative technologies and research tools, and advanced informatics expertise focused on the application of new knowledge to clinical problems. Some of the translational research interests of the ITS faculty are listed below:

Current Areas of Emphasis of Multidisciplinary Translational Teams

- Muscle biology and protein metabolism in aging
- Vaccine development
- Pediatric respiratory infections
- Women's reproductive health
- Bioinformatics
- Bioengineering and imaging
- Burn injury and treatments
- Cancer prevention, diagnosis, and treatments
- Obesity, diabetes, and metabolic syndrome
- Asthma and allergic diseases
- Gastrointestinal inflammation and infection

Application and Admission:

Interested students should complete the standard UTMB Graduate School of Biomedical Sciences (GSBS) application form, and check the box for the HPTM program. Qualified students will be directly admitted into HPTM program and will engage in the unique HPTM curriculum immediately upon matriculation.

Benefits:

Students admitted into the HPTM program will receive a graduate assistantship stipend of \$27,000 per year in addition to comprehensive health insurance and paid tuition and fees. Other benefits include free membership at the Alumni Field House, access to a free Student Wellness center, and discounts at many local businesses and restaurants.

For more information contact:

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