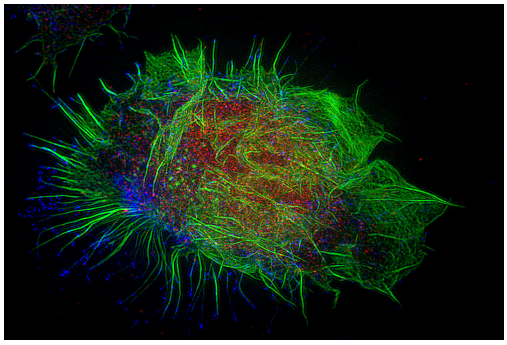
IMMUNOLOGY PROGRAM

Immunology student Anu Srinivasamani is photographed while working with T cells.



A super-resolution microscopy image of a T cell.

RESEARCH OVERVIEW

The Immunology Graduate Program at The University of Texas MD Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences (GSBS) is dedicated to providing advanced training in the application of experimental, computational, and molecular approaches to solving basic, translational, and clinical immunology problems. Across both MD Anderson and The University of Texas Health Science Center at Houston (UTHealth), Immunology faculty research interests include cancer immunology, infectious diseases, and inflammation with special interests in innate responses, adaptive responses, immune regulation, development of prophylactic vaccines, and development of vaccines or immunotherapy for a form of cancer, allergy or autoimmunity.

PROGRAM HIGHLIGHTS

The Immunology Graduate Program promotes education that builds a rigorous foundational understanding of the behavior, mechanisms, and impacts of the immune system, and applies that understanding to a host of interdisciplinary research topics ranging from tropical disease to cancer immunotherapy to the role of the immune system in neurological disorders.

The program offers core didactic and literature-based curriculum that develops the foundation of immunologic knowledge as well as scientific communication and presentation skills, but also allows a great deal of freedom to pursue elective courses from a variety of programs and faculty so that the learning experience can be tailored to each student's needs or interest. The program also offers student development and support through our Immunology Club and Faculty Seminar series that deliver on our goal of promoting student success during and after graduate school.

ABOUT OUR FACULTY

We currently have 71 faculty members from both MD Anderson and UTHealth representing 26 departments. Research conducted by our faculty reflects the complexity and diversity of the immune system. Faculty members are committed to fostering a highly interactive and supportive environment that enables students to complete our rigorous curriculum and receive advanced training in basic and translational immunology research.

THE UNIVERSITY OF TEXAS MD Anderson Cancer Center | UTHealth The University of Texas Health Science Center at Houston

Graduate School of Biomedical Sciences

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GSBS.UTH.EDU/IMMUNOLOGY

DISCOVER YOUR FUTURE

Immunology Club *Each month the GSBS Immunology Program students hold an Immunology Club meeting to host workshops and faculty-led chalk-talks on varying subjects within or related to immunology, experimental methods, graduate school, and career advancement. A number of social events for students are also held at this time.*

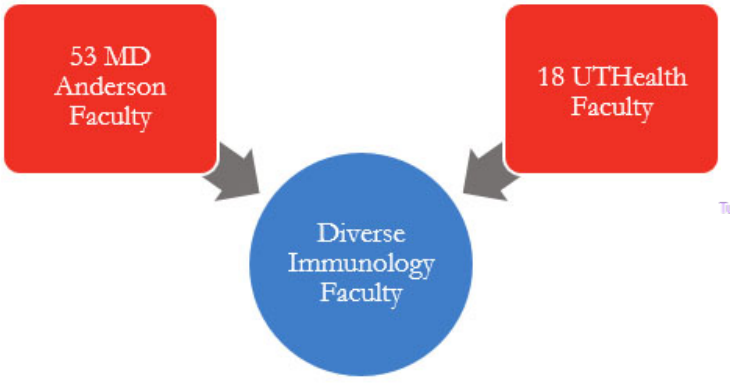
Faculty Seminars *This series is a monthly lecture series highlighting basic and/or translational Immunology research by GSBS faculty across UTHealth and MD Anderson Cancer Center.*

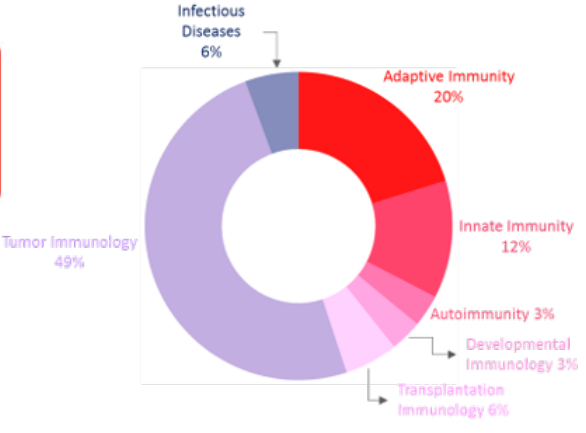
Immunology Retreat *Each year the Immunology Program sponsors a student-organized research retreat, which includes student talks, poster sessions, and a keynote speaker. The retreat is considered to be valuable time away from the laboratory allowing students and faculty to become better acquainted with each other.*

Immunology students and faculty play a game during an Immunology Club meeting

Immunology students and faculty strike a pose during the annual Immunology Program Retreat.

FACULTY DISTRIBUTION





BASIC IMMUNOLOGY

Aging and Inflammation
Complement Disorders
DNA Damage & Epigenetics
Gut Microbiome
Immune Response to Stroke
Inflammatory Response
Innate Immunity Development
Lymphatic System
Stem Cell Development & Renewal
B & T-cell Signaling

TRANSLATIONAL IMMUNOLOGY

Antibiotic Development
Autoimmune Disease
Bispecific Antibody Development
Bone Marrow Transplantation
Fungal & Parasitic Infections
Graft vs. Host Disease
Immune/Lung Interactions
Immune/Neurological Interactions
Immunotherapy Biomarkers
Vaccine Adjuvants

TUMOR IMMUNOLOGY

Adoptive Cell Transfer
CAR-NK Therapy
CAR-T Therapy
Checkpoint Blockade
Radiation Therapy Resistance
TIL Therapy
Tumor Antigen Presentation
Tumor Microenvironment
Tumor Resistance
Tumor Vaccination