I M M U N O L O G Y

J. David Farrar, Ph.D., UT Southwestern Medical Center, 1996
Lora Hooper
Ph.D., Washington University, St. Louis, 1996
Nancy L. Monson
Ph.D., University of Wisconsin, Madison, 1996
Anne Satterthwaite
Ph.D., Harvard University, 1993
Mark Siegelman
Ph.D., M.D., UT Southwestern Medical Center, 1981, 1983
Olaf Stüve
M.D., Free University of Berlin, 1993; Ph.D., Maastricht University, Netherlands, 2006
James A. Thomas
M.D., Stanford University, 1989
Nicolai S. C. van Oers
Ph.D., McGill University, Canada, 1990

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DESCRIPTION OF THE DISCIPLINE

Since 1975, the Medical Center has offered a program through UT Southwestern Graduate School of Biomedical Sciences leading to a Ph.D. in Immunology. This course of study is interdisciplinary, with a faculty composed of members from the Cancer Immunobiology Center and the Medical School’s Departments of Biochemistry, Dermatology, Immunology, Internal Medicine, Microbiology, Neurology, Ophthalmology, Pathology, and Surgery.

A distinguishing characteristic of this Graduate Program is its multidisciplinary approach. General areas of research include a variety of topics: transplantation immunology, graft-versus-host reactions, autoimmunity, histocompatibility antigens and disease, immunoglobulin structure and function, immune response to cancer, immunotoxins, autoimmune diseases, molecular genetics of T- and B-cell receptors, cell-mediated cytotoxic mechanisms, lymphocyte activation and signaling, cytokines, T- and B-cell interactions, and regulation of immunoglobulin synthesis.
OBJECTIVES

The broadly stated objective of the Program is to train each student to function as a professional in the scientific community. The Program specifically endeavors to offer each trainee the opportunity to acquire a firm and substantial understanding of the broad field of immunology as well as the opportunity to develop certain research skills and tools that will allow him or her to advance knowledge in the field of immunology and to develop the teaching capabilities that are essential for a viable academic career.

CURRICULUM

The field of immunology encompasses many broad areas related to basic science and medicine. A major strength of the Immunology Graduate Program resides in its large faculty of individuals whose research interests include molecular immunology, cellular immunology, transplantation, immunogenetics, immunology of infectious diseases, tumor immunology, and clinical immunology. This offers students a broad-based education in all current immunologic concepts and techniques so they can become competitive for future opportunities.

During the first semester, students participate in the Core Course of the Division of Basic Science and have the opportunity to gain a broad-based scientific background in areas of modern biology. Students have an opportunity to attend journal clubs, works-in-progress seminars, and the Excellence in Immunology seminars during their first semester.

After completing the Core Course and joining the Immunology Graduate Program, a variety of courses are offered.

REQUISITE COURSES

Fundamentals of Immunology
Cellular and Molecular Immunology
Clinical Immunology
Immunology of Infectious Diseases
Immunology Research Principles

Each of these courses focuses on integrating material from basic molecular biology, cell physiology, and clinical pathophysiology. The format for these courses involves didactic information and reading of the original literature followed by critical discussion in an informal setting. Descriptions of the courses are found in the Division of Basic Science chapter of this catalog.

The Immunology Program has a weekly seminar series in which all advanced graduate students present their research on an annual basis to the entire Immunology Program. This experience affords students an opportunity to perfect their skills in oral presentation and communication to a sophisticated audience. Teaching opportunities also are available.

During the spring of the second year, students are required to pass a qualifying examination for admission to candidacy for the Ph.D. The qualifying examination consists of a written proposal and its oral defense. Successful completion of the qualifying examination is required to advance to candidacy for the Ph.D.

A supervisory research committee is appointed for those candidates. This committee reviews and evaluates the student’s progress and, upon completion of the dissertation based on original research and the student’s public presentation of the work, participates in the final oral examination of the student.