

Abstract

The multidisciplinary UAB Immunology Training Program, "Immunologic Diseases and Basic Immunology", is focused on training highly motivated pre-doctoral students and PhD and MD graduates in the fields of translational and fundamental immunology. A major strength of the program is the broad expertise and research interests of its faculty, encompassing stem cell and lymphocyte differentiation; cellular immunology; molecular immunology; gene organization, structure and function of immunoglobulins, T cell receptors, Fc receptors, complement, and lymphokines; secretory immunity; transgenic models of immune function; immunogenetics; host responses to infectious diseases, mucosal immunology, transplantation immunology, neuroimmunology, and bioinformatics. Ten predoctoral trainees are selected from the graduate students enrolled in the interdisciplinary Cellular and Molecular Biology Program or the recently established Graduate Biomedical Sciences Program following successful completion of their first year of graduate study. Their training will last up to five years. This population includes students in the Medical Scientist Training Program. Five, now three, postdoctoral trainees with a MD, PhD or equivalent terminal degree are selected on the basis of prior academic and research performance, letters of recommendation, and personal interviews. Their training will last up to three years. In the 35 years since its inception, more than 150 trainees have participated in this training program with more than two-thirds of these individuals continuing to pursue scientific careers in academia, biotechnology, and at other research institutions. Over the last five years, 39 trainees, 16 postdoctoral and 23 pre-doctoral, have been supported by this training program. Of these, 36 (92%) are continuing in biomedical research, administration or research staff (academic staff), teaching and/or training, with 21 still pursuing PhD or post-graduate training at UAB. Our trainees have published 110 peer-reviewed manuscripts over the past five years. Eleven of the twelve pre-docs who have earned their PhDs are pursuing postgraduate training, with the remaining trainee working as a research associate outside UAB. Of the twelve post-docs who have completed their training, five (42%) have achieved faculty positions. Over the past five years, the composition of our trainees has been 41% male and 59% female; and has included 18% under-represented minorities (15% African American, 3% Native American). Because a large number of the faculty are involved in the care of patients with immunologic diseases in addition to their research programs, the program provides an interface between basic and applied immunology. Opportunities directly related to human diseases are available in autoimmune diseases, bioinformatics, vaccine development, immunodeficiencies, neoplastic diseases, immune-complex diseases, host-defense defects, dental caries, microbial pathogenesis, and transplantation immunology.