

Editorial

The future of allergy and clinical immunology lies in evaluation, treatment, and research on allergic disease

Dr Shearer's rostrum article in this month's issue of the Journal presents the case for clinical immunology as a distinct medical subspecialty.¹ In keeping with a previous position paper, he argues that additional training in clinical immunology could provide the strength that allergy needs to solidify its future within Medicine and Pediatrics.^{1,2} However, whereas the argument of Rich² was for an amalgamation of allergy and rheumatology, recognizing the strong immunology component in each, Dr Shearer is arguing for a new board in clinical immunology with a separate training program.

There are 3 elements to the proposal. First, it is well recognized that there are large numbers of individuals (MDs, PhDs, and others) working within medical centers who see immunology as their primary scientific discipline. Second, Dr Shearer declares, these individuals would welcome and benefit from a subspecialty structure/training program in "clinical immunology." Third, he argues, there are major weaknesses in the practice of allergy and the field would benefit from a close alignment with clinical immunology.

Despite some specific examples, the details of what he is proposing for allergists are not clear. Is it proposed that all allergists do a third year of "clinical immunology," which encompasses a wide range of different diseases? Or is the clinical immunology training to replace allergy training?

The clinical immunologist concept first arose in the 1970s at the time of the great expansion of immunology, which included all of the following: the discovery of IgE by Ishizaka; the definition of T cells and B cells by Mitchell, Miller, Claman, Good, and others; the elucidation of a genetic control of immune responses by McDevitt and Benaceraff; and the establishment of immunoglobulin injections as a treatment for hypogammaglobulinemia.³⁻⁶

Although immunopathology became well recognized, attempts to establish a defined role for clinical immunologists failed in both England and the United States. Although immunopathology is a significant part of clinical practice, the role of the hospital-based immunopathologist has been severely undermined by the centralization of pathology services. As Dr Shearer recognizes, this trend has played a major role in the progressive decline in clinical and laboratory immunology training programs. However, equally important is the fact that very few trainees in allergy and immunology have been willing to undertake a further year of training. There are strong groups of immunologists within gastroenterology, endocrinology, hematology, transplant surgery, dermatology, nephrology, and so forth. However, each of these specialties has a powerful clinical and scientific fiefdom. It is very unlikely that any significant number of these "clinical immunologists" would commit major effort to a new training program. At the University of Virginia, the Beirne Carter Center for Immunology, directed by Thomas Braciale, unites a large and diverse group of immunologists from many different fields of medicine and many different basic science departments. The Center has more than 100 members, and it plays a major role in graduate programs in immunology but does not run a clinical program. Half of the members hold PhD degrees; accordingly, a training program under the Accreditation Council for Graduate Medical Education is not applicable to them. As for those with MD degrees, it is unlikely that any would take a year out to obtain additional certification. In today's climate of excessively long training and, in many cases, significant debt, it is not clear why anyone would pursue an additional year of training.

The future of allergy and immunology within Internal Medicine and Pediatrics looks stronger today than it did 5 years ago. Most training programs have an abundance of excellent applicants for training. We simply do not recognize the negative picture that Dr Shearer has of our subspecialty. Immunotherapy is the primary preventive treatment for venom anaphylaxis, a major part of the treatment of rhinitis, and a significant part of the treatment of asthma.⁷⁻¹⁰ Much of the practice of immunotherapy uses standardized/potent extracts. Furthermore, the controlled trials supporting the use of immunotherapy are more convincing than many of the trials used to support pharmacologic therapy. Our past fellows in allergy practice are clinically very busy; many are recruiting new

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partners; and they all seem to be reimbursed well for their work. None of the 20 fellows whom we have trained since 1985 have felt compelled, or been attracted by offers, to work in pharmaceutical companies. In addition, most of the trainees have established themselves with solid positions in the medical community treating allergic diseases. Some fellows training in allergy and clinical immunology choose to go into regulatory work in Washington, DC, others to carry out research within the National Institutes of Health, and still others to join pharmaceutical companies. However, Dr Shearer's vision of a new career path that includes joining a "biotechnology firm immediately" or that is dedicated to designing therapeutic trials does not reflect the reasons that our fellows choose to train as allergists. Furthermore, the prospect that this could lead to collaborating with "leading scientists at major universities" seems to ignore the more attractive possibility of doing scientific research within allergy divisions. Many allergy programs include leading scientists who are doing research in immunology, immunochemistry, molecular biology, or other areas relevant to our specialty. Currently, 4 of our trainees here at the University of Virginia are working with the Division. Surely the subspecialty would be better served by having a larger number of fellows stay on to do cutting-edge research in allergic disease.

There are important problems facing allergy and immunology, just as there are for many other subspecialties. We need to broaden the specialty clinically and scientifically so as to provide more consistent investigation and improved management of diseases that have an allergic component. Obvious examples are atopic dermatitis, food allergy, chronic sinusitis, urticaria/angioedema, and the complications of fungal colonization or infection.¹¹⁻¹³ We need to remain ahead of the game in recognizing and developing tests for new allergens—eg, *Harmonia oxymyris* and mouse urine¹⁴—as well as for latex, venoms, and antibiotics. We also need to take on the investigation of severe asthma, in which the best treatment requires accurate definition of the causes. This includes aspirin desensitization, the diagnosis and management of vocal cord dysfunction, the specific use of antifungals, and allergen avoidance.^{12,13,15-17} We are on the verge of truly understanding the mechanisms of T-cell regulation; however, everything that we know says that this should be investigated and almost certainly should be treated with an allergen-specific approach. I agree entirely with Dr Shearer that it is important for newly graduated fellows to continue to apply new advances in research to their practices. However, the clinical immunologist model that he envisages has been tried. The medical world is extremely specialized, and it is not possible to

provide specialist care in multiple clinical fields. There will continue to be immunologists working in a wide range of clinical fields, but they do not need diplomas. Furthermore, the last thing that academic medicine needs is to take on the administration of another training program. The Academy needs to continue to strengthen the training programs in all possible ways, but the only likely outcome of creating a new subspecialty would be to weaken the current subspecialty.

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