

Legends of allergy and clinical immunology: Anthony J. Frew—A true European advocate of allergology and clinical immunology

Oliver Pfaar¹  | Roy Gerth van Wijk² 

¹Department of Otorhinolaryngology, Head and Neck Surgery, Section of Rhinology and Allergy, University Hospital Marburg, Philipps-Universität Marburg, Marburg, Germany

²Section of Allergology and Clinical Immunology, Department of Internal Medicine, Erasmus Medical Center, Rotterdam, The Netherlands

Correspondence: Oliver Pfaar, Department of Otorhinolaryngology, Head and Neck Surgery, Section of Rhinology and Allergy, University Hospital Marburg, Philipps-Universität Marburg, Baldingerstraße, 35039 Marburg, Germany.
 Email: oliver@pfaar.org

Keywords: respiratory allergy, occupational asthma, allergen immunotherapy, immune pathology

Tony Frew (1955–2018) was a leading member of the British Society for Allergy and Clinical Immunology and was well-respected in the European and US scientific community. Prof. Frew's outstanding aptitudes are evident from his academic achievements, teaching and research careers, and leadership and impact on the European Academy of Allergy and Clinical Immunology (EAACI).

His scientific interest began at an early age as he excelled in knowledge and enthusiasm. He demonstrated his intellectual abilities at the age of 13 when he won the prestigious scholarship to Westminster School. As a Queen's Scholar, he was invited to observe Parliament and attend elite events at Westminster Abbey. At age 17, he won a maths scholarship to Peterhouse, University of Cambridge. His interest in mucosal immunology and T cells surfaced at the age of 22 as a medical student whilst working on a research project on coeliac disease.

He completed his doctoral thesis in Barry Kay's laboratory at the National Heart & Lung Institute, London. His research focused on the immune pathology of the allergic reaction, particularly on the late-phase response, the emerging role of T cells and the interaction between eosinophils and T cells. By examining the pattern of human late-phase skin reactions to extracts of aeroallergens, he was able to elucidate the differences between skin and lung responses to allergen exposure.^{1,2} The differences between allergen-induced late-phase reactions and delayed-type hypersensitivity were evaluated.³ After defending his thesis in London, he moved to Vancouver,

Canada, to pursue postdoctoral studies on occupational asthma. His PhD and postdoctoral work paved the way to an extraordinary scientific career where he was completely committed to his students and patients in allergy and respiratory medicine.

In 1992, Tony Frew joined Stephen Holgate's group at the University of Southampton School of Medicine where he was later appointed to a personal chair as full professor. In 2005, he and his family moved to Brighton where he helped establish the medical education program at the hospital. From an early stage in his career, Prof. Frew had a broad interest in research. His first clinical work focussed on the clinical and immunological features of western red cedar asthma,⁴ comparing this type of occupational asthma with patients having irritant-induced asthma.⁵ He considered occupational asthma as a good model to study the resolution of asthma in general. In later years, he extended his research to environmental exposures and contributed to a series of scientific papers on the effects of pollutants, such as ozone, nitrogen dioxide and diesel exhaust, on airway inflammation and sensitization to allergens. In an important study, he described the cytokine profile in asthmatic airways before and after local allergen challenge.⁶ In his research, he was never far away from the patient. His observations on the immune pathology of asthmatics are examples of what is currently broadly referred to as translational research.

His clinical research also evaluated the efficacy of allergen immunotherapy (AIT). He led randomized clinical trials on AIT with

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grass pollen, house dust mite and cat epithelia. Notably, in 2006, he published a large multicentre dose-range finding trial of subcutaneous grass pollen AIT among treatment-resistant patients that underlined the importance of AIT as a valuable treatment modality.⁷ Moreover, he coordinated and was involved in many Task Force (TF) initiatives with a special focus on methodological standards in AIT trial design. As such, Prof. Frew initiated an EAACI Task Force on placebo effects in AIT trials composed of international key-opinion leaders in this fascinating field. He is a senior author of a recently published EAACI TF Position Paper, "Placebo effects in allergen immunotherapy - an EAACI Task Force Position Paper",⁸ which is dedicated to his achievements for this initiative. Together with Helen Smith, his wife and professor of Family Practice and Primary Care, he wrote several papers on the practice of allergy care, especially in primary care.⁹ They demonstrated that in the UK a substantial part of hospital-based allergy care could be carried out by general practitioners (GPs), leaving the more complex cases to specialists.

Why was Tony special? His research encompassed the different elements of basic science, clinical studies, and the implementation of science into clinical practice, but there was more than that. He was also a great teacher and mentor. He gave numerous lectures in a bright, clear, and humorous manner. After moving to Brighton, one of his great achievements was the establishment of the new medical school at Brighton University. His house was always open for junior doctors working with him.

Above all, he remained a medical doctor, working at a respiratory medicine department whilst trying to balance his clinical duties with his academic research and international travels. He was loved and respected by his patients and co-workers.

Tony loved travelling, speaking with and learning from people from other countries, and studying other cultures. He spoke fluent German, French and Italian. In an interview, he describes his interests in European affairs to date back to the early 1970s when he worked

as a hospital porter in Hamburg. This period was a starting point for a lifelong interest in Europe and in the development of its Central and Eastern regions. From that perspective, it is easy to understand that Tony developed into a tireless advocate for Allergology and Clinical Immunology in Europe, and particularly for EAACI, the scientific organization that stands for this field.

His involvement in EAACI started in 1989. He was appointed as Secretary to the subcommittee on skin tests and allergen standardization. In 1995, he joined the Executive Committee (ExCom) of the EAACI and in 1999 became Secretary General. Under the leadership of EAACI President Gunnar Johansson, new structures in the Academy were established, including interest groups and task force sections, where Tony was a leading figure. Years later, after assuming the position of President of EAACI in 2005, he was instrumental in establishing our current system of Vice-Presidents where they assume different responsibilities, such as coordinating congresses and the dissemination of medical information. This was an essential step for shaping the Academy for the future.

Tony loved the work at EAACI. For him, the Summer and Winter Schools were marked by a combination of scientific collegiality and a sense of an academic family. He said that Europe is being seen more and more as an open place to receive attention for your work.

He witnessed the growth and success of the Academy through the years, a success that can be largely attributed to his efforts. Three years after his EAACI Presidency—as Chair of the 2010 EAACI Meeting in London—he could reap the benefits of the strong organization he helped forward and organized an EAACI Congress which became one of the largest allergy and immunology meetings held in Europe (Figure 1). He was recognized in 2011 with the Charles Blackley Award for promoting the specialty in Europe.

Tony remained committed to his "home society", the British Society for Allergy and Clinical Immunology (BSACI), where he served as Council, Treasurer, Secretary, and President. In 2016, he received the William Frankland Award in recognition of his



FIGURE 1 Tony Frew (together with Glenis K. Scadding) taking over the chair-position for the EAACI congress in London 2010

outstanding contributions to British clinical allergy. The year after, he delivered the prestigious Jack Pepys Lecture at the BSACI Annual Meeting. Few people have received these two awards, Tony was one of them.

What makes Tony remarkable? A legend? It is not a specific achievement in his research, teaching, or medical career. It is the collection of his many talents that made the inspirational man he was. In every way, he was a true European advocate of Allergology and Clinical Immunology.

In 2018, Tony passed away much too young at the age of 63. He is still missed.

CONFLICT OF INTEREST

Dr Pfaar and Dr Gerth van Wijk have nothing to declare.

ORCID

Oliver Pfaar  <https://orcid.org/0000-0003-4374-9639>

Roy Gerth van Wijk  <https://orcid.org/0000-0002-9608-8742>

REFERENCES

1. Frew AJ, Kay AB. The pattern of human late-phase skin reactions to extracts of aeroallergens. *J Allergy Clin Immunol.* 1988;81(6):1117-1121.
2. Frew AJ, Kay AB. The relationship between infiltrating CD4+ lymphocytes, activated eosinophils, and the magnitude of the allergen-induced late phase cutaneous reaction in man. *J Immunol.* 1988;141(12):4158-4164.
3. Gaga M, Frew AJ, Varney VA, Kay AB. Eosinophil activation and T lymphocyte infiltration in allergen-induced late phase skin reactions and classical delayed-type hypersensitivity. *J Immunol.* 1991;147(3):816-822.
4. Frew AJ, Chan H, Lam S, Chan-Yeung M. Bronchial inflammation in occupational asthma due to western red cedar. *Am J Respir Crit Care Med.* 1995;151(2 Pt 1):340-344.
5. Chang-Yeung M, Lam S, Kennedy SM, Frew AJ. Persistent asthma after repeated exposure to high concentrations of gases in pulp mills. *Am J Respir Crit Care Med.* 1994;149(6):1676-1680.
6. Bodey KJ, Semper AE, Redington AE, et al. Cytokine profiles of BAL T cells and T-cell clones obtained from human asthmatic airways after local allergen challenge. *Allergy.* 1999;54(10):1083-1093.
7. Frew AJ, Powell RJ, Corrigan CJ, Durham SR, UK Immunotherapy Study Group. Efficacy and safety of specific immunotherapy with SQ allergen extract in treatment-resistant seasonal allergic rhinoconjunctivitis. *J Allergy Clin Immunol.* 2006;117(2):319-325.
8. Pfaar O, Agache I, Bergmann KC, et al. Placebo effects in allergen immunotherapy - an EAACI Task Force Position Paper. *Allergy.* 2020; <https://doi.org/10.1111/all.14331>
9. Smith HE, Wade J, Frew AJ. What proportion of adult allergy referrals to secondary care could be dealt with in primary care by a GP with special interest? *Clin Transl Allergy.* 2016;6:3.