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Preface  
**Aerobiology**



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*Guest Editor*

It has been well over 10 years since aerobiology was the topic of an issue of the *Immunology and Allergy Clinics of North America*, although various aspects such as immunotherapy have been addressed in other issues. A revisit seems in order. The central role that aeroallergens play in the expression of atopic diseases is more apparent than ever. In certain regions, the intensity of pollen exposures at certain times of the year has an immense impact on quality of life for a significant percentage of the population. The constant march of atopic disease prevalence, well documented over the past century, has been linked in part to aeroallergen exposure, especially in the indoor environment. There is evidence that aeroallergen sensitization may be augmented by interaction with particulate matter such as diesel exhaust. Whether exposure to aeroallergen during infancy potentiates or protects against allergy development has been debated, especially in light of the “hygiene hypothesis” and the link between animal dander and endotoxin exposure. Therefore, aspects of aerobiology have become more relevant in the assessment of the atopic diathesis.

This issue of the *Immunology and Allergy Clinics of North America* is divided into two sections: the first dealing with outdoor exposures, the latter with the indoor environment. The first article, which is devoted to sampling devices, has relevance not only for outdoor pollen, mold, and allergenic particle sampling but also for the demonstration of indoor sources, a topic that is revisited in the latter section. A discussion of floristic zones follows to categorize the types of plants most likely found in the greatly varying geography and climates of North America. The importance of point sources in the urban setting and the perturbation of endemic flora with city planning are addressed. The clinical relevance

of pollen and mold spore counts is addressed next, along with a review of the extensive literature in this area, which is then tabulated in an accessible manner. A discussion of the complex interaction of meteorological variables and their impact on aeroallergens follows, and the section concludes with the difficulties and advancements in the art of pollen forecasting.

The first four articles in the section on indoor exposures review the specific allergenic sources that have been recognized as major incriminants in allergic disorders. The section begins with house dust mites, recognized since the late 1960s as a major constituent of indoor dust in homes, and follows with the impact of animal danders. The importance of the cockroach as an important aggravant of inner-city asthma has become apparent over the past 5 years, and indoor mold exposure is perhaps one of the most high-profile and controversial issues demanding attention at present. Issues specific to evaluation of the indoor environment are addressed. Finally, this issue concludes with an assessment of the effectiveness of indoor allergen control measures.

I would like to recognize the outstanding contributions that the authors in this issue have made. I believe the articles are written in a manner that is clear and concise, and clarify those various aspects of aerobiology pertaining to the study of allergies. I hope that readers find this issue to be a useful reference for understanding the nature of exposure, the factors that impact exposure, and the methods available to assess the magnitude of exposure. In addition, I hope that readers become aware of the promising advances in pollen forecasting and the daunting task of indoor allergen control.

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