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Herts**

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Applied Aspects of Aerobiology

INTRODUCTION

We are delighted to welcome you to this joint conference between the Association of Applied Biologists and the British Aerobiology Federation.

Aerobiology is the study of all aspects of the aerial dispersal, distribution and impact of biological particles present in outdoor and indoor air. Although traditionally aerobiology has focussed on studies of the airborne dispersal of pollen and spores, and their identification and quantification using optical microscopy techniques, recent interest in the dispersal of microbes, and other plant and animal material, has expanded this field and has led to an improved understanding of biodiversity, ecology and the potential impacts of climate change on the aerial biota.

Aerobiology is multidisciplinary, drawing on aspects of physics to explain the movement of air and the material suspended in it, and biology to describe the biological processes affecting the production of particles and their impacts on the health of animals, including humans, and plants. The 17 papers in this Proceedings volume reflect this integration and provide a timely reminder of the role different scientific disciplines play in contributing to these subjects. The first paper, by West, helps put this in context, giving an update on recent developments in aerobiology and setting the scene for a multidisciplinary approach. The presentations by Magyar, Marceau *et al.*, Janik *et al.*, Delgado *et al.*, Skjøth *et al.*, Thomas, Havis *et al.*, Kaczmarek *et al.* and Jedryczka *et al.*, address aspects of trapping, monitoring and modelling airborne material, as an aid to better informing our knowledge of what is present in the air. Various air sampling methods are available that can now be integrated with increasingly sophisticated diagnostic techniques. Immunological and molecular methods are providing answers to the question of what is present in the air as they allow quantification of particles that may not previously have been identified accurately and can even provide information at the sub-species level (for example antibiotic or pesticide resistance, and race structure). Examples of such studies are presented by Leyronas *et al.*, Wallenhammar *et al.*, Kaczmarek, West, Saint-Jean and Kennedy. Some automated methods described by Janik *et al.* are applicable to monitoring particles in other media such as liquid (in this case, milk) and are included here as these could be used to monitor airborne particles that have been collected into liquid.

It is particularly appropriate to hold this review meeting at Rothamsted Research, the original home of many of the fundamental aerobiological studies of the 1940–1960s and still a centre of excellence in this subject.

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Rothamsted Research

P J A Burt
President
British Aerobiology Federation
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