

*The Cytoskeleton: Cell Function
and Organization*

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The Cytoskeleton: Cell Function and Organization

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PREFACE

The 1986 Spring Meeting of the British Society for Cell Biology at the University of East Anglia, Norwich, marked a new departure for the Society. For the first time, a major BSCB meeting was organized in cooperation with the British Society for Developmental Biology as a step towards establishing closer ties. The meeting focused on three major themes, one of which, 'The Cytoskeleton: Cell Function and Organization', forms the basis of this volume. In thinking about our programme we were concerned not simply with catering for the specialist, but to put together a series of talks that would appeal to a broad cross-section of cell and developmental biologists. With this in mind, we chose to emphasize five main areas.

The first set of papers deals with microscopical techniques. Technical advances provide new insights into the organization of cytoskeletal proteins and in particular have allowed us to visualize cytoskeletal assemblies at work in living cells. Bob Allen was to have presented the inaugural lecture on new developments in video light microscopy but, sadly, died shortly before the symposium began. His co-worker, Dieter Weiss, presented their joint work at short notice and the first contribution is a tribute to Bob Allen's contribution to the visualization of living cytoplasm.

The second section deals with the roles of the three main classes of cytoskeletal filaments in organizing the cytoplasm. It includes two contributions on the relationship between the cytoskeleton and the nuclear matrix, underlining the point that fibrous proteins structure the whole cell and help organize its metabolic activity.

Section three is concerned with more dynamic aspects of the cytoskeleton. More is now being learned about the turnover of cytoskeletal proteins and how this contributes to the movement of arrays. This applies to the movement of cells, organelles and chromatids – all of which are represented.

So-called simple organisms have contributed greatly to our understanding of the cytoskeleton as is shown in the fourth section. Their cytoskeletons are not necessarily simpler but they have the advantage that their developmental cycles are often more accessible to experimentation and they are certainly more amenable to genetic analysis.

This leads on to the fifth section, which was organized jointly with the British Society for Developmental Biology. This final section shows the progress that is being made in understanding how the cytoskeleton contributes to the acquisition of polarity in multicellular tissues.

The aim, therefore, was to provide a list of speakers, spanning molecules and tissues. Generous support from The Company of Biologists Limited, and the sponsorship of Flow Laboratories, Unilever Research, Amersham International and CIBA Geigy ensured a strong list of international speakers. This (together with the fact that the weather provided no incentive to leave the lecture theatre) contributed to an enjoyable meeting and it is hoped that some of its flavour is conveyed in this volume.

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