

PREFACE

In selecting topics for the fourth volume of the *Annual Review of Cell Biology*, our editorial committee has proceeded from the premise that, in the vast domain of contemporary life sciences, cell biology is part of a large, common, and continuous body of knowledge properly described as cellular and molecular biology. Over the last decades, this common body of knowledge has become the starting base from which biological research either has advanced in further depth in exploring patterns of organization potentially valid for all cells or has spread laterally to many biological systems differentiated by evolution itself or by scholarly traditions.

In keeping with these premises, this volume includes chapters covering new fields of research bound to affect our understanding of the functional organization of all cells, as well as research in differentiated domains dealing with prokaryotic, plant, neural, or developmental cell biology. The volume also covers cell production of macromolecules for extracellular matrices and cell interactions with such products. This active research area is beginning to provide new insights into principles and mechanisms involved in constructing supracellular levels of biological organization, in guiding developmental processes in organismic ontogeny, and in maintaining a short-range communication system on cell-extracellular matrix interactions.

Cell biology is already extensively diversified. Moreover, it is also growing simultaneously and rapidly in many different directions. It has hardly any dormant sector. Although this unusually happy situation calls for rejoicing, it also creates a few practical difficulties. For instance, it is not easy to generate a well balanced *Annual Review* of a large, diversified research field with so many sectors in ferment. Our editorial committee is fully aware of this problem and is trying to provide a fair and informative—yet by necessity selective—representation of work done in the entire field of cell biology. But given the inherent difficulty of the task and the diversity of the field, the committee welcomes suggestions, comments, and criticism from the readers of the *Annual Review of Cell Biology*, from the scientific community at large, and especially from the membership of the American Society of Cell Biology.

As generally recognized, cellular and molecular biology has advanced at a spectacular rate over the last decades. In the process, it has succeeded in attracting a large number of scientists originally belonging to other fields of basic or applied biological and biomedical research. We are witnessing, in fact, a movement of widespread conversion of minds and labels because the appeal generated by the concepts, technologies, and experimental strategies developed in cellular and molecular biology proves

to be stronger than the traditionally expected respect for formal discipline boundaries, which in any case no longer effectively exist. One of the immediate results of this development is that many topics that naturally belong to cell biology are covered in other Annual Review series.

There is nothing regrettable about this situation since the final result is that cell biological problems and their solutions are becoming more and more widely known. Since in the process, cellular and molecular biology is gaining rather than losing ground, there is no reason to consider any kind of defensive measures of the type applied in other countries for other important products of human endeavor. We do not need a "controlled labeling" comparable to the "appellation contrôlée" of the wines and brandies of France. For its continued success, the *Annual Review of Cell Biology* should rely on its close contact with the mainstream of research in cellular and molecular biology and on its ability to provide an integrated view—rather than disconnected glimpses—of what is going on in this amazingly fertile field.

GEORGE E. PALADE
EDITOR