Preface

Cell fusion is a specialized cellular event that is critical for the conception, development and physiology of a multicellular organism. Known as a phenomenon for over a hundred years, cell fusion took center stage in the early analysis of gene expression, chromosomal mapping, monoclonal antibody production, and cancer therapy. It is only recently, however, that the molecular mechanisms of cell fusion have begun to come to light, thanks to the application of new technologies in genetics, cell biology, molecular biology, biochemistry, and genomics.

Exciting work in the past decade has revealed commonalities and differences among individual cell fusion events. The aim of *Cell Fusion: Overviews and Methods* is to bring together a collection of overviews that outline our current understanding of cell fusion and methods that present classic and state-of-the-art experimental approaches in a variety of systems. The first half of this volume consists of nine overviews that describe different cell fusion events from yeast to mammals. The second half consists of thirteen chapters illustrating commonly used methods to assay cell fusion in different systems.

The overall goal for this book is to serve as a comprehensive resource for anyone who is interested in this fascinating biological problem. It is intended for both newcomers and active researchers in the field to either acquire basic knowledge on cell fusion or to compare and contrast different cell fusion events. The user-friendly format of the method chapters should enable beginning students and experienced researchers to conduct assays in a variety of cell fusion systems.

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