
Preface

Progress within any scientific discipline rests firmly on the development of methodologies that afford new ways to address unsolved questions. In the past decade, the development and application of novel technologies and approaches for structure determination, biochemical characterization, and molecular manipulation of signaling molecules have resulted in remarkable progress in the understanding of signal transduction pathways. Thus, whereas not so long ago small molecules known as second messengers were the only identified mediators of transmembrane signals, it is now clear that many (perhaps most) signal transduction pathways operate through complex networks of protein-protein interactions.

In recognition of this central mechanism, *Transmembrane Signaling Protocols* is largely devoted to techniques that are widely used to study molecular crosstalk between signaling molecules. The two underlying goals of the chapters assembled in this volume are: to offer technical information that allows reproduction of these methods and to provide the general principles on which these are based. In addition, introductory reviews have been included to furnish a comprehensive overview of recent advances in fundamental areas of cell signaling, and to relate specific techniques to the larger picture.

I thank the many authors who spent time and effort to contribute to this endeavor. It is hoped that *Transmembrane Signaling Protocols* will serve as a resource for future progress in the rapidly expanding field of signal transduction.

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