

Preface to the Second Edition

Cell signaling remains one of the most active areas of investigation in the biological sciences and, since the publication of the first edition of the *Handbook of Cell Signaling* some six years ago, many advances have, not unexpectedly, occurred. The first edition was organized into five sections that we termed "a physiological flow" model that generally reflected the usual order of biological events characterizing cell signaling, i.e., the interaction of a ligand with a target cell, the generation of intracellular chemical responses, transcriptional modulation, the subsequent manifestation of these changes in the responses at the organelle level, and then at the organ levels. In this second edition, we have retained that organization and, in addition, created a sixth section on the pathologies associated with signaling edited by Murray Korc. The original five section editors (Jim Wells, Tony Hunter, Michael Karin, Marilyn Farquhar, and Brad Thompson) are all serving in the same role in this edition with Suresh Subramani joining as a co-editor of Part IV. There have, however, been a few changes in the subsection editors. Jim Wells have taken over for both Henry Bourne and Tom Alber in Part I, Nick Tonks and Martin Bootman have replaced Jack Dixon and Michael Berridge, respectively, in Part II, and Jerry Workman has been added to Part III. The remaining associate editors (Ian Wilson, Robert Stround, Tony Pawson, Lewis Cantley, John Scott, Jackie Corbin, Heidi Hamen, Geraldine Weinmaster, Michael Rosenfeld, Marc Montminy, Albert Fornace, and Nahum Sonenberg) are all involved in their same capacities in this edition. Although over 85 percent of the chapters have been revised or replaced with new chapters to cover the latest break-throughs, some chapters have been retained when it was felt that the original content remained sufficiently current. In keeping with our original philosophy to emphasize new material and "not cataloguing well-known information," as we added new material we necessarily removed some of the older material, as dictated by the publisher's page constraints. This was partly accomplished by eliminating some of the

deliberate redundancy of the first edition. However, in the end, we still had to make some editorial choices meaning that not every topic in the first edition and not every new advance have been covered and some older (but certainly still very important) work has necessarily been dropped. We have referenced at the beginning of each part articles in the first edition that have not been retained in the second edition and refer the readers interested in this material to that source. We hope that these omissions will be offset to a considerable degree by the web-based nature of this version and the facility with which readers should be able to rapidly screen original articles electronically.

From the beginning, we designed the Handbook to serve as a web-based reference volume as well as to appear in print format, but due to technological issues the electronic version of the first edition was issued only as a searchable CD-ROM. This edition appears in both print and web-based formats with all of the advantages that the latter format brings and we feel that, as such, it will be even more useful as both a resource to the advanced investigator and a teaching tool to individuals newly drawn to the field.

As with the first edition, we have been spectacularly fortunate to have attracted (and in most cases retained) the stellar cast of colleagues, who have served as editors, associate editors, and authors. We are well aware of the substantial efforts that were involved and we are truly grateful to all for their scholarly contributions. As before, the Handbook would simply not exist without these efforts.

We also thank Jasna Markovac, who conceived of the first edition of the Handbook and was a convincing stimulus for preparing this second edition. Thanks also go to Renske van Dijk for diligently shepherding the entire project essentially singlehandedly and for keeping us focused on the task at hand.

Finally, we thank the many individuals who have helped us in the past few years. At the same time, we anticipate that the interactions and transcription/posttranscriptional control are prime areas for drug discovery, and advances in these areas will surely grow significantly as

Ralph A. Bradshaw
Edward A. Dennis