

Preface

Our understanding of adrenergic function has advanced considerably in the 15 years since three adrenergic receptor books were published in *The Receptors* series. In the late 1980s, many of the adrenergic subtypes had not yet been cloned. Most of the studies during that time focused on traditional pharmacological approaches in selected tissues and cell lines. We learned about structure–function relationships through the manipulation of the drug, not the receptor. We understood that there were multiple subtypes within each class of adrenergic receptors, but the functions of the subtypes were unclear because they seemed to control the same signal transduction and biological processes. Molecular cloning of the receptors led to the realization that there were many different subtypes, some not previously described by the tissue pharmacology. With the genes of these receptors in hand, the field has now advanced with more precise experiments and questions, but it has still suffered from the lack of highly selective ligands and antibodies. Foreseeing that these limitations would not be overcome any time in the near future, scientists in the adrenergic receptor field—using modern genetic approaches—started to redirect their work to answer questions about structure and function and the possible physiological and pathophysiological pathways that would be regulated by adrenergic receptors. *The Adrenergic Receptors: In the 21st Century* focuses on these modern approaches and was written by the scientists who developed them to elucidate adrenergic receptor function.

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<http://www.springer.com/978-1-58829-423-4>

The Adrenergic Receptors

In the 21st Century

Perez, D.M. (Ed.)

2006, XII, 404 p., Hardcover

ISBN: 978-1-58829-423-4

A product of Humana Press