Preface

This book provides, in the first place, useful scientific background to those involved in pre-clinical research and to those who need to function within multi-disciplinary teams in the pharmaceutical industry (from medical chemistry and molecular biology via pharmacology to drug marketing). Today's education of researchers in the pharmaceutical industry needs to be broad and insight into pharmacological issues needs to be warranted. In this respect, the focus on G protein-coupled receptors (GPCRs) is rationalised by the fact that they constitute major cellular targets for pharmaceutical drugs.

The aim is also to provide students and investigators with a basic interest in life sciences an insight into the fast evolving GPCR field. More generally speaking, to create knowledge in the domain of molecular pharmacology. In this respect, the book will also provide necessary background for the elaboration and reading of research papers on GPCRs and even information brochures about pharmaceutical drugs (which nowadays often describe their molecular mechanism of action).

To these ends:

1. much attention is devoted to the analysis and interpretation of experimental data (radioligand binding and functional assays)
2. the now widespread use of recombinant cell lines, receptor mutants and related artifices in drug research is critically evaluated
3. special attention is also devoted to trendy but often poorly understood concepts such as insurmountable antagonism, inverse agonism and allosteric interactions.

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