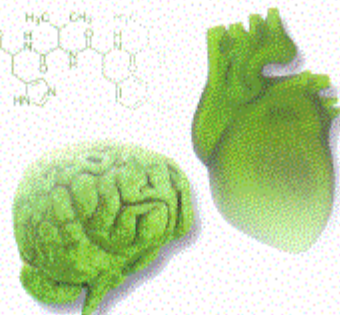
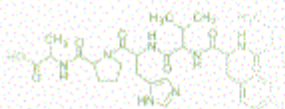




G Protein-coupled Receptors

Molecular Pharmacology

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G protein-coupled receptors (GPCRs) are membrane proteins that transduce a vast array of extracellular signals into intracellular reactions ranging from cell-cell communication processes to physiological responses. They play an important role in a variety of diseases from cancer and diabetes, to neurodegenerative, inflammatory and respiratory disorders. GPCRs are therefore of utmost interest in drug development: over half of all prescription drugs currently on the market act by targeting these receptors directly or indirectly.

G Protein-coupled Receptors – Molecular Pharmacology provides a clear summary of the current knowledge in this fast-evolving field. The book sets out with an introduction to signalling molecules and their receptors, and an overview of the technical approaches used to investigate these interactions. Structural, functional and especially pharmacological aspects of GPCRs are then discussed in more detail and much attention is devoted to the analysis and interpretation of experimental data. The now widespread use of recombinant cell lines, receptor mutants and related artifices in drug research is critically evaluated. Special attention is also devoted to topical but often poorly understood concepts, such as insurmountable antagonism, inverse agonism and allosteric interactions.

By combining general information with the major state-of-the-art concepts in GPCR research, the book equips the reader with the necessary background for understanding and critically evaluating the current literature.

Written by two experts from academia and industry, *G Protein-coupled Receptors – Molecular Pharmacology* offers a unique view of academic and applied approaches aiming to reveal new ideas in pharmaceutical research.

The book will be of interest to anyone involved in drug development and preclinical research and those who need to function within multi-disciplinary teams in the pharmaceutical industry: from investigators to product managers or clinicians who seek to have a broad mechanistic understanding of drug-receptor interactions. Final year undergraduate and postgraduate students in pharmacology and cell and molecular biology will also find the book an invaluable resource.

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