The Histamine H3 Receptor

#histamine H3 receptor #H3 receptor antagonists #neuromodulation #sleep-wake cycle #brain histamine system

The Histamine H3 Receptor is a G protein-coupled receptor predominantly found in the central nervous system, where it acts as an autoreceptor and heteroreceptor to modulate the release of histamine and other neurotransmitters. It plays a crucial role in regulating various physiological processes, including the sleep-wake cycle, cognition, and arousal, making it a significant target for pharmacological research into neurological disorders and cognitive enhancement.

Educators may refer to them when designing or updating course structures.

The Histamine H3 Receptor

In the early eighties when the H3 receptor was identified, many thought that an H3 ligand, an agonist or an antagonist, would become available as a therapeutic agent. This has not occurred. The reason for this could be the fact that many investigators consider histamine mainly, if not only, as a mediator present in for example mast cells being released during allergic events. However, it has become apparent that histamine is an important neurotransmitter. Its role in the nervous system, especially in the central part of it, is rather extensive. The H3 receptor is mainly found as a presynaptic one, both on histaminergic neurons (the auto-type) and on other neuronal systems (the hetero-type). Both the H3 agonist and the H3 antagonist cause important pharmacological effects. Several ligands have become available now, including radiolabelled analogues. In this book, the current state of affairs with regards to the medicinal chemistry and pharmacology of the H3 receptor and the several ligands available are presented by a number of experts in the field. The book presents an extended review of what has happened since the first H3 paper appeared. The editors hope that publication of this work will lead to an increase in interest of both academia and industry for the H3 receptor, especially as a target for drug development.

The Human Histamine H_1tn3-receptor

Reveals an Emerging Avenue of Potential Treatments for a Host of Challenging Diseases and Dis-ordersThe H3 receptor is known to play a major role in a range of CNS disorders, including those affecting cognitive functions such as ADHD and Alzheimer's disease, as well as sleep disorders, obesity, epilepsy, schizophrenia, depression, and neurodege

The Third Histamine Receptor

Research in the field of histamine receptors over the past 100 years went hand-in-hand with the devel-opment of modern pharmacology. Advances in histamine research led by outstanding scientists was so

incisive that the clinical approach to treat allergies and gastrointestinal ailments was revolutionized. The pharmacological treatment of peptic ulcer and gastroesophageal reflux was indeed a revolution, as it ended the surgical intervention. Interest in histamine pharmacology was resurrected by the discovery of another histamine receptor, number 4, using genomics-based reverse pharmacological approaches for screening orphan GPCRs. This receptor is preferentially expressed by immune cells and its discovery raised hopes for its translational exploitation as a new therapeutic target for unmet medical needs ranging from asthma to cancer. However, several drawbacks emerged and dramatically slowed down research in the field. A better understanding of receptor intra-and interspecies heterogeneity will certainly improve and accelerate the translation of experimental data into clinical practice. Also, the plethora of data on brain histamine is hinting at a fundamental role of this system as a hub that receives internal and peripheral stimuli to allocate the necessary excitation to specific brain circuits that preside the appropriate behavioral responses. The development of new histaminergic ligands is an ongoing process that constantly provide new preclinical tools. The aim of this book is to cover the most important aspects of histamine receptor function and pharmacology in the central nervous system and to provide a comprehensive overview of the preclinical and clinical advances made in recent decades and the exciting prospects for the future. It highlights the clinical areas where there is a great need for new therapeutic approaches and where novel histaminergic agents may be useful for personalized medicine.

Molecular Analysis of the Histamine H3 Receptor

A comprehensive and detailed overview of the current state of preclinical research on histamine and histamine receptors. Part of the book focuses on novel approaches to the study of histamine receptors such as polymorphism, genetic linkage, and computational analysis, and on the use of new histaminergic ligands in diseases such as asthma and dermatitis. Several chapters will be devoted to the role of histamine in the control of homeostatic and behavioral responses such as the sleep-wake cycle, regulation of the blood brain barrier, food intake, alertness, itch, and memory formation and consolidation.

The Functional Roles of Histamine Receptors

Brain aminergic pathways are organized in parallel and interacting systems, which support a range of functions, from homoeostatic regulations to cognitive, and motivational processes. Despite overlapping functional influences, dopamine, serotonin, noradrenaline and histamine systems provide different contributions to these processes. The histaminergic system, long ignored as a major regulator of the sleep-wake cycle, has now been fully acknowledged also as a major coordinator of attention, learning and memory, decision making. Although histaminergic neurons project widely to the whole brain, they are functionally heterogeneous, a feature which may provide the substrate for differential regulation, in a region-specific manner, of other neurotransmitter systems. Neurochemical preclinical studies have clearly shown that histamine interacts and modulates the release of neurotransmitters that are recognized as major modulators of cognitive processing and motivated behaviours. As a consequence, the histamine system has been proposed as a therapeutic target to treat sleep-wake disorders and cognitive dysfunctions that accompany neurodegenerative and neuroinflammatory pathologies. Last decades have witnessed an unexpected explosion of interest in brain histamine system, as new receptors have been discovered and selective ligands synthesised. Nevertheless, the complete picture of the histamine systems fine-tuning and its orchestration with other pathways remains rather elusive. This Research Topic is intended to offer an inter-disciplinary forum that will improve our current understanding of the role of brain histamine and provide the fundamentals necessary to drive innovation in clinical practice and to improve the management and treatment of neurological disorders.

The Histamine H3 Receptor in the Rat Brain

Histamine Receptors—Advances in Research and Application: 2012 Edition is a ScholarlyPaper™ that delivers timely, authoritative, and intensively focused information about Histamine Receptors in a compact format. The editors have built Histamine Receptors—Advances in Research and Application: 2012 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Histamine Receptors in this eBook to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Histamine Receptors—Advances in Research and Application: 2012 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed

sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at http://www.ScholarlyEditions.com/.

Histamine Receptors

This book illustrates the current state-of-the-art in histamine research, with a focus on the appropriate methodologies to investigate the pharmacological properties and the therapeutic exploitation of HRs and their ligands. In addition, the range of techniques described provides an introduction to complementary cross-methodological disciplines beyond these fields. This multi-disciplinary approach is required to define the ‘decision gates’ that determine the development of more effective and safer therapeutic options for many forms of highly prevalent and debilitating diseases, such as asthma, dementias, dermatitis, and arthritis. Written for the Methods in Pharmacology and Toxicology series, chapters concentrate on practical, hands-on protocols from experts in the techniques. Authoritative and thorough, Histamine Receptors as Drug Targets seeks to aid pharmacologists, biochemists, drug discovery researchers, molecular biologists, chemists, toxicologists, lab scientists, medical doctors, principle investigators, research scientists, lab directors and technicians, as well as graduate students around the world in pursuing the study of this vital scientific area.

Histamine in the brain

With its focus on drugs so recently introduced that they have yet to be found in any other textbooks or general references, the information and insight found here makes this a genuinely unique handbook and reference. Following the successful approach of the previous volumes in the series, inventors and primary developers of successful drugs from both industry and academia tell the story of the drug's discovery and describe the sometimes twisted route from the first drug candidate molecule to the final marketed drug. The 11 case studies selected describe recent drugs ranging across many therapeutic fields and provide a representative cross-section of present-day drug developments. Backed by plenty of data and chemical information, the insight and experience of today's top drug creators makes this one of the most useful training manuals that a junior medicinal chemist may hope to find. The International Union of Pure and Applied Chemistry has endorsed and sponsored this project because of its high educational merit.

Histamine H3 Receptor Antagonists with Multitargeting Properties at GPCRs and Enzymes

Recent research into the anatomy and pathophysiology of the blood-brain and blood-spinal cord barriers suggests that a breakdown in these barriers can result in several diseases affecting the central nervous system (CNS). This book presents new findings in the area of blood-brain barrier research that suggest barriers play important roles in health and disease conditions. It also discusses the development of new drugs that can modulate the barrier function in the CNS and may provide new approaches to treating neurological diseases such as Alzheimer's disease and other motor neuron diseases, as well as spinal cord trauma. Key Features * Presents the recent progress made in the research on the blood-brain and spinal cord barrier * Contains numerous illustrations of light and electron micrographs * Includes Foreword written by two eminent researchers in the field, Milton Brightman and Jorge Cervos-Navarro

Histamine Receptors—Advances in Research and Application: 2012 Edition

Histamine antagonists in developing rats delay puberty, disrupt sexual behaviour in males, and abolish sex differences in the open field test suggesting that this system may regulate sexual differentiation. The effects of histamine during the critical period for androgenic masculinization of the nervous system are currently unknown. Perinatal exposure to the H3 antagonist thioperamide on the development of sexually dimorphic behaviours in adult Sprague-Dawley rats was investigated. Pregnant dams (E14-E20) and their pups (PND1-PND7) were subcutaneously injected with thioperamide (5mg/kg) or saline and observed for changes in the elevated plus maze, open field test, sexual behaviour, and radial arm water maze. Thioperamide attenuated sex differences in the elevated plus maze and open field test but did not affect sexual performance or learning in the radial arm water maze. The present findings suggest evidence of long-term neurobehavioral consequences in anxiety and exploratory behaviours after developmental manipulation of the histaminergic system.

Histamine Receptors as Drug Targets

The year 2010 marks the centennial for the identification of histamine and the first glimpse of its many physiological functions. From these initial findings a rich tapestry of research has uncovered roles for histamine in almost every physiological process with new findings emerging every year. These diverse roles of histamine have made for fertile ground for the discovery of novel therapeutics, and these drugs have been so successful that the term “antihistamine” has entered the common lexicon. This volume is an attempt to give a snapshot in time as to the current understanding of the role of histamine in just one important therapeutic area—inflammation. The first three chapters provide some background context for the rest of the book starting out with a historical perspective by Figueroa and Shankley. Bongers et al provide an overview of the pharmacology of the four histamine receptors and the chapter by Hiroshi Ohtsu describes how histamine is synthesized as well as the insights derived from mice where this synthesis is disrupted. The next several chapters discuss disease areas where histamine is known to be involved. Chapter 4 by Thomas Taylor-Clark outlines the role of histamine in allergic rhinitis, an area were antihistamines are commonly used. This is also true for ocular allergy as discussed by Ohbayashi et al. Both of these chapters highlight aspects of these conditions that are still not well-controlled and suggest the utility of new antihistamines targeting other histamine receptors.

New Ligands of the Histamine H3 Receptor

Nanomedicine in Central Nervous System Injury and Repair (IRN), Volume 137, the latest release in the International Review of Neurobiology series presents comprehensive chapters that cover a broad range of topics, including, but not limited to, how Diabetes exacerbates methamphetamine induced blood-brain barrier breakdown, edema formation, oxidative stress and myelin damage, and how Focal blast brain injury induces rapid edema formation, blood-brain barrier breakdown and intensive cellular damage. In addition, the Neuroprotective effects of a multimodal drug cerebrolysin are explored, as is how Nanowired cerebrolysin potentiates neuroprotective effects of histamine H3 receptor inverse agonist and antagonist with partial H4 agonist in Alzheimer's Disease. This series reviews current knowledge and understanding on how to repair the damaged spinal cord and brain with nanomedicine, detailing new therapeutic advances and providing a starting point for researchers and practitioners entering the field. Provides cutting-edge research on the damaged spinal cord and brain Presents new therapeutic advances Reviews current knowledge and understanding

Successful Drug Discovery, Volume 3

Biogenic Amine Receptors—Advances in Research and Application: 2013 Edition is a ScholarlyEditions™ book that delivers timely, authoritative, and comprehensive information about Serotonin Receptors. The editors have built Biogenic Amine Receptors—Advances in Research and Application: 2013 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Serotonin Receptors in this book to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Biogenic Amine Receptors—Advances in Research and Application: 2013 Edition has been produced by the world’s leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at http://www.ScholarlyEditions.com/.

Blood-Spinal Cord and Brain Barriers in Health and Disease

Together with the two previous volumes of the Handbook of Experimental Pharmacology on histamine and antihistamines the present publication yields a picture of a still rapidly developing field of research. New techniques and new experimental approaches have brought us new knowledge and deeper insight into the biomedical significance of histamine, even if many questions remain to be answered about the functional and medical implications of this old biogenic amine. The present volume covers the progress in histamine research during the past two decades. A significant chapter concerns techniques for histamine determination. As the result of a consensus meeting in Munich in December 1988, a panel of eminent specialists arrived at common recommendations as to the usefulness of the available histamine assays for the most common experimental biomedical conditions. The heterogeneity of mast cells, with great differences in their reactivity to various stimuli, has become apparent, not only among species but also among the tissues of a species. New informa tion is presented about the mechanism of exocytosis. The old questions about the role of histamine in the mechanism of gastric secretion and in cardio vascular and respiratory functions have been studied with new techniques, and the role of

HI and H2 receptors discussed. New observations have been made on the occurrence and possible functions of histaminergic neurons and histamine receptors in CNS where a new type of receptor, the H , seems to 3 be widely represented.

Histamine H2- and H3-receptor Antagonists

Tourette Syndrome covers all of the main aspects related to TS, analyzing the complexity of its clinical presentation, the novel viewpoints of causes and mechanisms, the best way to assess TS patients, and the multifaceted and multidisciplinary treatment options.

Effects of a Histamine H3 Receptor Antagonist on the Development of Sexually Dimorphic Behaviours

Pharmacology of Histamine Receptors presents a summary of the pharmacology of histamine receptors. It discusses the research and developments made in the use of histamine. It addresses the biological actions of the drug in various pathological instances. Some of the topics covered in the book are the classification of histamine receptors; mepyramine and related histamine antagonists; activity relationships of drugs acting at histamine receptors; chemical structure of histamine; effects of methyl substituents in histamine; enzymes involved in histamine metabolism; and histamine in body fluids. The cellular sources of histamine in tissues and blood are fully covered. The relationship of the mast cell to basophil is discussed in detail. The text describes in depth the urinary excretion of histamine and metabolites. The pathological conditions in man are presented completely. A chapter is devoted to the fundamental properties of adenylate cyclase and its measurement. The book can provide useful information to pharmacists, doctors, chemists, students, and researchers.

Histamine in Inflammation

Since its identification by Sir Henry H. Dale a century ago, histamine has become one of the most important multifunctional biogenic amines in the field of biomedicine. The pharmacological effects of histamine are mediated through four types of membrane histamine receptors; H1R, H2R, H3R and H4R, which are all heptahelical G-protein-coupled receptors. It has been known to play the broadest spectrum of activities in various physiological and pathological conditions including cell proliferation, differentiation, hematopoiesis, embryonic development, regeneration, wound healing, aminergic neurotransmission and numerous brain functions, secretion of pituitary hormones, regulation of gastrointestinal and circulatory functions, cardiovascular system, as well as inflammatory reactions, modulation of the immune response, endocrine function and homeostasis, and other important areas. This book is a compendium of the current state of established and investigational literature on Histamine, its receptors and their Agonists and antagonists. It provides a comprehensive overview of histamine biology in the field of biochemistry, cell biology, molecular biology, immunology, allergy, neurobiology, pharmacology, microbiology and reproductive biology. The first section on Histamine biology and physiology leads into subsequent sections on enzymology, pharmacology, regulation of the immune system and cell proliferation and role in allergic and other diseases including acid peptic diseases, inflammatory diseases, autoimmune and cancer diseases, nervous system, reproductive functions and hematopoiesis. The compilation of chapters in the book presents the most recent advances in histamine research and bridges the basic and clinical aspects of histamine biology.

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Building on the success of the previous editions, Textbook of Drug Design and Discovery has been thoroughly revised and updated to provide a complete source of information on all facets of drug design and discovery for students of chemistry, pharmacy, pharmacology, biochemistry, and medicine. The book follows drug design from the initial lead identification through optimization and structure-activity relationship with reference to the final processes of clinical evaluation and registration. Chapters investigate the design of enzyme inhibitors and drugs for particular cellular targets such as ion channels and receptors, and also explore specific classes of drug such as peptidomimetics, antivirals and anticancer agents. The use of gene technology in pharmaceutical research, computer modeling techniques, and combinatorial approaches are also included.

Synthesis and Characterization of 18F and 123I Labeled Antagonists of the Histamine H3 Receptor as Putative PET and SPECT Ligands

Key Heterocycle Cores for Designing Multitargeting Molecules provides a helpful overview of current developments in the field. Following a detailed introduction to the manipulation of heterocycle cores for the development of dual or multitargeting molecules, the book goes on to describe specific examples of such developments, focusing on compounds such as Benzimidazole, Acridine, Flavones, Thiazolidinedione and Oxazoline. Drawing on the latest developments in the field, this volume provides a valuable guide to current approaches in the design and development of molecules capable of acting on multiple targets. Adapting the heterocyclic core of a single-target molecule can facilitate its development into an agent capable of acting on multiple targets. Such multi-targeting drugs have the potential to become essential components in the design of novel, holistic treatment plans for complex diseases, making the design of such active agents an increasingly important area of research. Emphasizes the chemical development of heterocyclic nuclei, from single to multitargeting molecules Provides chapter-by-chapter coverage of the key heterocyclic compounds used in synthesizing multitargeting agents Outlines current trends and future developments in multitarget molecule design for the treatment of various diseases

Nanomedicine in Central Nervous System Injury and Repair

Use your knowledge of pharmacology to enhance oral care! Pharmacology and Therapeutics for Dentistry, 6th Edition describes how to evaluate a patient's health and optimize dental treatment by factoring in the drugs they take. It explores the basic fundamentals of pharmacology, special topics such as pain control, fear and anxiety, and oral complications of cancer therapy, and most importantly, the actions of specific drug groups on the human body. Whether you're concerned about the drugs a patient is already taking or the drugs you prescribe for treatment, this book helps you reduce risk and provide effective dental care. An emphasis on the dental applications of pharmacology relates drugs to dental considerations in clinical practice. Dental aspects of many drug classes are expanded to include antibiotics, analgesics, and anesthetics. The Alternative Medicine in Dentistry chapter discusses chemicals used as alternative medicines and assesses their potential benefits and risks. The Nonopioid Analgesics chapter groups together non-opioid analgesics, nonsterioidal anti-inflammatory drugs, and antirheumatic and antigout drugs, making these easier to locate and study. Coverage of the endocrine system includes four separate chapters for the most comprehensive coverage. Drug Interactions in Clinical Dentistry appendix lists potential interactions between drugs a patient is taking for nondental conditions and drugs that may be used or prescribed during dental treatment, including effects and recommendations. Glossary of Abbreviations appendix includes the most common abbreviations used for drugs or conditions. New Pharmacogenetics and Pharmacogenomics chapter covers the effects of genetic traits of patients on their responses to drugs. A NEW introductory section offers tips for the study of dental pharmacology and relates pharmacology to dental considerations. An updated discussion of drug-drug interactions covers the harmful effects of mixing medications. Coverage of adverse effects and mechanisms of COX-2 inhibitors, antibiotic prophylaxis, and antiplaque agents explains the dental risks relating to common drug treatments.

Non Imidazole H3-receptor Histamine Antagonists

Advances in the Biosciences, Volume 82: Presynaptic Receptors and Neuronal Transporters documents the proceedings of the Official Satellite Symposium to the IUPHAR 1990 Congress held in Rouen, France on June 26-29, 1990. The first part of this book deals with the extensive and still increasing list of presynaptic release-modulating auto and heteroreceptors, emphasizing the various subtypes of presynaptic receptors that are characterized by functional studies, both in vitro and in vivo, using a number of experimental approaches. The next chapters are devoted to the molecular pharmacology of presynaptic receptors, of which can interfere with G proteins and modify the activity of adenylate cyclase, guanylate cyclase, or protein kinase C. The purification and molecular biology of transporter systems, including cloning and sequencing of the neuronal sodium-ion coupled GABA transporter are also discussed. This compilation concludes with insights on the function of presynaptic receptors and neuronal transporters both in the periphery and in the CNS, as well as their ubiquitous locations and physiological roles. This publication is a good reference for students and individuals researching on the presynaptic autoreceptors and neurotransmitters.

Biogenic Amine Receptors—Advances in Research and Application: 2013 Edition

The Essence of Analgesia and Analgesics is an invaluable practical resource for clinicians giving pain relief in any clinical setting, describing the pharmacologic principles and clinical use of all available

pain medications. As well as detailed overviews of pain processing and analgesic theory, sections are dedicated to oral and panteral opioid analgesics, neuraxial opioids, NSAIDs, local anesthetics, anticonvulsant type analgesics, NMDA antagonists, alpha adrenergic analgesics, antidepressant analgesics, muscle relaxants, adjuvant medications, and new and emerging analgesics. The concise format of the chapters allows for quick and easy reading and assimilation of information. Enhanced by summary tables and figures, each chapter provides an overview of a particular drug, covering chemical structure, mode of activity, indications, contraindications, common doses and uses, advantages and disadvantages, and drug related adverse events. Key references are also provided. Edited by leading experts in pain management, this is essential reading for any clinician involved in pain management.

Histamine and Histamine Antagonists

These proceedings cover the most recent advances on histamine research from basic science to clinical medicine. Histamine is an endogenous compound that is synthesized, stored, and released primarily by mast cells and after release exerts profound effects on many tissues and organs. It is one of the cellular mediators of the immediate hypersensitivity reaction and the acute inflammatory responses, as well as primary stimulant of gastric acid secretion. A central neurotransmitter role for histamine has been also established. Histamine research has been very dynamic since it discovery in 1910. Among recent important advances are: Generation of Histamine H1, H2, H3 receptors and histidine decraboxylase (HDC) knockout mice; Clarification of the constitutive activity of the H1, H2 and H3 receptors; Characterisation of H3 receptor isoforms with distinct signaling properties; and Characterisation and cloning of the H4 receptor.

Tourette Syndrome

Advances in itch research have elucidated differences between itch and pain but have also blurred the distinction between them. There is a long debate about how somatic sensations including touch, pain, itch, and temperature sensitivity are encoded by the nervous system. Research suggests that each sensory modality is processed along a fixed, direct-line communication system from the skin to the brain. Itch: Mechanisms and Treatment presents a timely update on all aspects of itch research and the clinical treatment of itch that accompanies many dermatological conditions including psoriasis, neuropathic itch, cutaneous t-cells lymphomas, and systemic diseases such as kidney and liver disease and cancer. Composed of contributions from distinguished researchers around the world, the book explores topics such as: Neuropathic itch Peripheral neuronal mechanism of itch The role of PAR-2 in neuroimmune communication and itch Mrgprs as itch receptors The role of interleukin-31 and oncostatin M in itch and neuroimmune communication Spinal coding of itch and pain Spinal microcircuits and the regulation of itch Examining new findings on cellular and molecular mechanisms, the book is a compendium of the most current research on itch, its prevalence in society, and the problems associated with treatment.

Pharmacology of Histamine Receptors

Numerous phenomenal advances have been made towards understanding the role of neurotransmitters in the pathophysiology of neurological disorders, and these have resulted in a large number of novel molecules with the potential to revolutionize the treatment and prevention of such disorders. This book provides a comprehensive and detailed explanation of brain neurotransmitters and their receptors and associated channels. It includes a basic introduction, and also discusses the functions and recent advances and their pharmacology, highlighting the role of various computer aided drug design (CADD) strategies for the development of therapeutic ligands to modulate these receptors/ion channels. Written in an easy-to-read style, it is intended for neuroscience and pharmaceutical students and researchers working in the area of brain neurotransmitters.

Development and Characterization of Histamine H3 and H4 Receptor Ligands as Pharmacological Tools

Developing Therapeutics for Alzheimer's Disease: Progress and Challenges provides a thorough overview of the latest advances toward the development of therapeutics for Alzheimer’s disease, along with the major hurdles that still must be overcome and potential solutions to these problems. Despite the lack of progress toward developing therapeutics that can slow or stop the progression of this disease, important discoveries have been made and many promising approaches are advancing in preclinical studies and clinical trials. This book outlines the special challenges related to specific targets and

approaches, while presenting a realistic, comprehensive and balanced view of drug discovery and development in this area. Written by international leaders in the field, the book assesses prospects for the emergence of effective agents and allows readers to better understand the challenges, failures, and future potential for research in Alzheimer’s disease. This book is a valuable resource to academic scientists carrying out translational research in Alzheimer’s disease, industrial scientists engaged in Alzheimer's drug discovery, executives in biopharmaceutical companies making strategic decisions regarding the direction of internal research and potential outside partnerships, and graduate-level students pursuing courses on Alzheimer's therapeutics. Provides a realistic but promising assessment of the potential of various therapeutic approaches to Alzheimer’s disease Focuses primarily on neuro-protective agents and cognitive enhancers, as well as approaches to targeting the amyloid B-peptide, tau and Apolipoprotein E Discusses alternative approaches, preclinical and clinical development issues, related biomarkers and diagnostics, and prevention and nonpharmacological approaches

Biomedical Aspects of Histamine

Seafoods covers selected but vital topics of fish processing with an emphasis on quality, technology and nutraceutical applications in an up-to-date survey. The aspects of seafood quality covered range from the impact of slaughter procedures, through protein functionality, texture, flavour, histamine toxicity to the practical evaluation of quality and measurement. Technological aspects concentrate on automation in processing, waste-water treatment and reuse of scraps. Marine nutraceuticals/functional foods are discussed in detail. This book is highly recommended for scientists and technologists in the seafood industries, plus fish processing professionals, quality managers, and nutritonists..

Textbook of Drug Design and Discovery, Third Edition

Key Heterocycle Cores for Designing Multitargeting Molecules