

Behavioral Neurobiology

This volume focuses on the behavioral neuroscience that supports our understanding of the neurobiology of trauma risk and response. The collection of articles focuses on both preclinical and clinical reviews of (1) state-of-the-art knowledge of mechanisms of posttraumatic stress disorder (PTSD) and co-occurring disorders, (2) the biological and psychological constructs that support risk and resiliency for trauma disorders, and (3), novel treatment strategies and therapeutics on the horizon.

The Neurobiology of Brain and Behavioral Development provides an overview of the process of brain development, including recent discoveries on how the brain develops. This book collates and integrates these findings, weaving the latest information with core information on the neurobiology of brain development. It focuses on cortical development, but also features discussions on how the other parts of the brain wire into the developing cerebral cortex. A systems approach is used to describe the anatomical underpinnings of behavioral development, connecting anatomical and molecular features of brain development with behavioral development. The disruptors of typical brain development are discussed in appropriate sections, as is the science of epigenetics that presents a novel and instructive approach on how experiences, both individual and intergenerational, can alter features of brain development. What distinguishes this book from others in the field is its focus on both molecular mechanisms and behavioral outcomes. This body of knowledge contributes to our understanding of the fundamentals of brain plasticity and metaplasticity, both of which are also showcased in this book. Provides an up-to-date overview of the process of brain development that is suitable for use as a university textbook at an early graduate or senior undergraduate level Breadth from molecular level (Chapters 5-7) to the behavioral/cognitive level (Chapters 8-12), beginning with Chapters 1-4 providing a historical context of the ideas Integrates the neurobiology of brain development and behavior, promoting the idea that animal models inform human development Presents an emphasis on the role of epigenetics and brain plasticity in brain development and behavior

The question how alcohol alters mood states and why this may end up becoming an addiction is puzzling alcohol researchers since decades. In this volume, an assembly of highly distinguished experts and leaders in alcohol addiction research provides lucid presentations of the current knowledge and research challenges as well as interesting viewpoints on future research directions aimed to stimulate communication and convergence between clinical and preclinical researchers, and to renew interest in the vibrant field of alcohol addiction research among a wide scientifically minded audience. Five Current Topics are discussed in this volume: Neurobiological mechanisms of alcoholism, Genetics, Clinical phenotypes and their preclinical models, Brain imaging, and Translational approaches for treatment development, both pharmacological and non-pharmacological. These areas have in our opinion brought alcohol research substantially forward and influenced our thinking about how to reach our common paramount goal, namely to offer effective treatment solutions for an extensive group of patients with largely unmet medical needs.

This book reviews the recent research into biological aspects of suicide behavior and outlines each of the varied, recent approaches to prevent suicide. Suicidal behavior, perhaps, is the most complex behavior that combines biological, social, and psychological factors. A new frontier and new opportunities are opening with the technologies of data acquisition and data analysis. Personalized models based on digital phenotype could provide promising strategies for preventing suicide.

Behavioral Neurobiology of PTSD

An Integrative Approach

Behavioral Neuroscience of Motivation

Behavioral Neuroscience

The book highlights important new research using current state-of-the-art approaches by prominent researchers in the field of depression. A broad range of topics is covered, beginning with a description of the phenotypic features of clinical depression, followed by chapters on the cellular and molecular basis, functional neuroimaging correlates and information-processing accounts. Finally, existing and novel treatment approaches are covered. In this way the volume brings together the key disciplines involved in the neurobiological understanding of depression to provide an update of the field and outlook to the future. Together, the volume chapters provide focused and critical reviews that span a broad range of topics suitable for both students and established investigators interested in the present state of depression research. Animals often exhibit intriguing and captivating patterns of behaviour, from migration and homing, to communication. But how is this behaviour controlled? Behavioral Neurobiology introduces undergraduate students and other readers to the fascinating field of neuroethology - the study of the neurobiological processes underlying animal behaviour. Written in a lively, easy to read style, it examines the key concepts and ideas which underpin this intricate and elegant subject, and describes many of the ground-breaking discoveries that have helped us to unravel the mechanisms behind the behaviours we can observe. Beginning with a look at the history of the study of behaviour, from Aristotle to recent breakthroughs and predictions for the future, the book then reviews the ethological and neurobiological concepts that constitute the essential tools of behavioural neurobiology, before moving on to the field of neuroethology itself. In each chapter, the text not only describes the major findings in each area, but also the methods used to obtain these results. This title is available as an eBook. Please contact your Sales and Learning Resource Consultant for more information. New to This Edition: A new chapter on Active Orientation and Localization The chapter on Communication has been significantly expanded by covering recent research in the neurobiology of cricket phonotaxis. The chapter on Cellular Mechanisms of Learning and Memory has been significantly expanded by adding information particularly on place cells and the role of adult neurogenesis in learning and memory formation. New learning features have been added: a 'Key Concepts' list at the start of each chapter, 'The Bigger Picture' section at the end of each chapter linking the chapter's content to the wider field of research and application, and new short-answer questions at the end of each chapter. Additional online resources: multiple choice questions and Journal Club material are now available for each chapter.

Behavioral Neuroscientists study the behavior of animals and humans and the neurobiological and physiological processes that control it. Behavior is the ultimate function of the nervous system, and the study of it is very multidisciplinary. Disorders of behavior in humans touch millions of people's lives significantly, and it is of paramount importance to understand pathological conditions such as addictions, anxiety, depression, schizophrenia, autism among others, in order to be able to develop new treatment possibilities. Encyclopedia of Behavioral Neuroscience is the first and only multi-volume reference to comprehensively cover the foundation knowledge in the field. This three volume work is edited by world renowned behavioral neuroscientists George F. Koob, The Scripps Research Institute, Michel Le Moal, Université Bordeaux, and Richard F. Thompson, University of Southern California and written by a premier selection of the leading scientists in their respective fields. Each section is edited by a specialist in the relevant area. The important research in all areas of Behavioral Neuroscience is covered in a total of 210 chapters on topics ranging from neuroethology and learning and memory, to behavioral disorders and psychiatric diseases. The only comprehensive Encyclopedia of Behavioral Neuroscience on the market Addresses all recent advances in the field Written and edited by an international group of leading researchers, truly representative of the behavioral neuroscience community Includes many entries on the advances in our knowledge of the neurobiological basis of complex behavioral, psychiatric, and neurological disorders Richly illustrated in full color Extensively cross referenced to serve as the go-to reference for students and researchers alike The online version features full searching, navigation, and linking functionality An essential resource for libraries serving neuroscientists, psychologists, neuropharmacologists, and psychiatrists

This volume brings together the latest basic and clinical research examining the effects and underlying mechanisms of psychedelic drugs. Examples of drugs within this group include LSD, psilocybin, and mescaline. Despite their structural differences, these compounds produce remarkably similar experiences in humans and share a common mechanism of action. Commonalities among the substances in this family

are addressed both at the clinical and phenomenological level and at the basic neurobiological mechanism level. To the extent possible, contributions relate the clinical and preclinical findings to one another across species. The volume addresses both the risks associated with the use of these drugs and the potential medical benefits that might be associated with these and related compounds.

Neurobiology of the Parental Brain

Behavioral Neurobiology of Huntington's Disease and Parkinson's Disease

The Neurobiology of Cognition and Behavior

Behavioral Neurobiology of Suicide and Self Harm

Behavioral Neurobiology

Drug addiction is a chronically relapsing mental illness involving severe motivational disturbances and loss of behavioral control leading to personal devastation. The disorder affects millions of people, often co-occurring with other mental illnesses with enormous social and economic costs to society. Several decades of research have established that drugs of abuse hijack the brain's natural reward substrates, and that chronic drug use causes aberrant alterations in these reward processing systems. Such aberrations may be demonstrated at the cellular, neurotransmitter, and regional levels of information processing using either animal models or neuroimaging in humans following chronic drug exposure. Behaviorally, these neural aberrations manifest as exaggerated, altered or dysfunctional expression of learned behavioral responses related to the pursuit of drug rewards, or to environmental factors that precipitate craving and relapse during periods of drug withdrawal. Current research efforts are aimed at understanding the associative and causal relationships between these neurobiological and behavioral events, such that treatment options will ultimately employ therapeutic amelioration of neural deficits and restoration of normal brain processing to promote efforts to abstain from further drug use. The Behavioral Neuroscience of Drug Addiction, part of the Springer series on Current Topics in Behavioral Neurosciences, contains scholarly reviews by noted experts on multiple topics from both basic and clinical neuroscience fields.

"Neurobiology of Cognition and Behavior" is one of the initial textbooks of brain mapping in the field of cognitive neuroscience. This well-researched text by a leading expert in the field provides a foundational map of the human brain for cognition and behavior. This comprehensive map of essential human thinking and emotion is based on the explosion in the field of functional neuroimaging studies (fMRI, PET) in the normally functioning human brain. The approach of this text is to confirm the association of these brain regions by verifying that damage to the activated brain area results in a consistent deficit in the cognitive/behavioral operation under investigation. The approach used to form this view of mapping brain and cognition is based on cognitive neuroscience principles of defining dissociable, fine-grained cognitive units and associating these units with brain regions encoding for these units or aspects of the units from both functional imaging and lesion studies. These cognitive-brain relationships are incorporated into clinical syndromes to account for the behavior of these patients after a lesion occurs, with the added feature of presenting patient videos demonstrating the disrupted cognitive behaviors. This comprehensive textbook provides a framework of the basic architecture of cognition in the brain with this combination of activation and lesion study confirmation of the brain-behavior associations. This basic framework is useful for those students studying the interaction of cognitive science and neuroanatomy as well as being relevant to the experienced neuroscientist researcher or clinician.

The world of crickets has long been a world of scientific adventure and human fascination. Because of their remarkable ways of communicating and because their nervous and endocrine systems are easily accessible to researchers, crickets can be studied and analyzed with great effectiveness. Starting in the 1960s, vastly improved behavioral and neurobiological techniques have brought them to the frontier of the new field of neuroethology. Here, in the most comprehensive book on crickets ever compiled, twenty-five leading scientists detail the present state of cricket research both at conceptual and at experimental levels. They tell about the manifold strategies crickets use in matching development with seasons and habitats, finding mates, and avoiding parasites and predators, and they describe the physiological mechanisms, especially the neuronal mechanisms, underlying cricket behavior. Their book is at once about communication, comparative physiology and anatomy, and environmental interaction. More than half of Cricket Behavior and Neurobiology is devoted to acoustic behavior and bioacoustics. It is intended for those interested in entomology, general and comparative physiology, biophysics, endocrinology, and chronobiology. It offers new information for behavioral physiologists and ecologists, bioacousticians, and especially neurobiologists concerned with behavior.

This book offers the most up-to-date information about research surrounding the neurobiology of bipolar disorder as well as currently available and novel therapeutic options. The volume has assembled a widely respected group of preclinical and clinical researchers who bring their expertise to bear upon this illness by reviewing cutting-edge research and clinical evidence regarding the pathophysiology and treatment of bipolar disorder. Early chapters review the course and outcome and genetics of this highly heritable condition, including chapters on epigenetics and clinical endophenotypes. Several chapters offer a remarkably thorough and unique overview of the neurobiology of the disorder, including what is known from neuroimaging work and the development of animal models. Finally, the book covers treatment strategies for bipolar disorder, including both traditional and novel therapeutics, as well as non-pharmacological treatments. It offers both researchers and clinicians key insights into this devastating disorder.

Behavioral Neurobiology of Bipolar Disorder and its Treatment

Behavioral Neurobiology of Aging

The Neurobiology of Brain and Behavioral Development

Methods of Behavior Analysis in Neuroscience

Cellular Basis of Behavior

Using the most well-studied behavioral analyses of animal subjects to promote a better understanding of the effects of disease and the effects of new therapeutic treatments on human cognition, Methods of Behavior Analysis in Neuroscience provides a reference manual for molecular and cellular research scientists in both academia and the pharmaceutical

Behavioral Neuroscience: Essentials and Beyond shows students the basics of biological psychology using a modern

and research-based perspective. With fresh coverage of applied topics and complex phenomena, including social neuroscience and consciousness, author Stéphane Gaskin delivers the most current research and developments surrounding the brain's functions through student-centered pedagogy. Carefully crafted features introduce students to challenging biological and neuroscience-based concepts through illustrations of real-life application, exploring myths and misconceptions, and addressing students' assumptions head on. **INSTRUCTORS: Behavioral Neuroscience: Essentials and Beyond** is accompanied by a complete teaching and learning package! Contact your rep to request a demo. **SAGE Premium Video Figures Brought to Life** animations in the Interactive eBook boost student comprehension and bolster analysis. Watch a sample video. **Interactive eBook** Your students save when you bundle the print loose-leaf book with the Interactive eBook (Bundle ISBN: 978-1-0718-1347-8), which includes access to SAGE Premium Video and other multimedia tools. Learn more. **SAGE Coursepacks** SAGE Coursepacks makes it easy to import our quality instructor and student resource content into your school's learning management system (LMS). Learn more. **SAGE Edge** This open-access site offers students an impressive array of learning tools and resources. Learn more.

This book presents cutting edge research on the basic neurobiology of parental behavior as it relates to behavioral disorders, including postpartum depression, anxiety, and inadequate parental bonding to infants. Internationally recognized basic and clinical researchers present new research findings in humans and animals that elucidate the roles of the brain, physiological state, genes and environment in maternal and paternal care. By bridging the gap between basic and clinical research, new understandings of how the biology of the brain and the reproductive state of the parent impact their mental health and the successful rearing of young emerge. * Presents the neural network of motherhood based on fundamental and functional MRI studies of parental care - from rodents to humans * Discusses the role of gene-environment interactions in parenting * Offers parenting strategies and priorities in raising young * Discusses maternal defense - the neurobiology of maternal protection * Examines the significance and underlying causes of postpartum depression * Discusses parenting and anxiety – neurobiological basis for reductions during the postpartum period * Also includes the neurobiology of fatherhood – a fresh evolutionary and biological perspective on paternal behavior * Presents information on maternal neuroplasticity - how reproductive history changes the maternal brain * Translates research – internationally renowned researchers' insights into common factors that regulate mammalian parenting This volume covers the current status of research in the neurobiology of motivated behaviors in humans and other animals in healthy condition. This includes consideration of the psychological processes that drive motivated behavior and the anatomical, electrophysiological and neurochemical mechanisms which drive these processes and regulate behavioural output. The volume also includes chapters on pathological disturbances in motivation including apathy, or motivational deficit as well as addictions, the pathological misdirection of motivated behavior. As with the chapters on healthy motivational processes, the chapters on disease provide a comprehensive up to date review of the neurobiological abnormalities that underlie motivation, as determined by studies of patient populations as well as animal models of disease. The book closes with a section on recent developments in treatments for motivational disorders.

Behavioral Neurobiology of Alcohol Addiction

Behavioral Neuroscience for the Human Services

Cricket Behavior and Neurobiology

Foundations in Emotion, Mental Health, Addiction, and Alternative Therapies

Behavioral Neurobiology of Birdsong

The origins of tinnitus and the development of effective treatments to treat tinnitus have puzzled scientists and clinicians for centuries. Now ground breaking research is beginning to unlock its secrets. The Behavioral Neuroscience of Tinnitus provides critical and comprehensive discussions of the most recent developments in behavioral neuroscience research on tinnitus. Each chapter represents the most important contemporary account of the subject, with an emphasis on preclinical and clinical trials for the development of new diagnostics and therapeutics. New and emerging innovative approaches are covered whenever possible. Six topics are discussed in detail in this volume, which provide new insights in the etiology and mechanisms of tinnitus, new biomarkers towards objective and reliable diagnosis of tinnitus, pharmacological approaches towards curing tinnitus, bioengineering advances towards developing effective medical devices, as well as the latest in psychotherapy methods. The reviews in the volume expose researchers and clinicians both new and experienced, to exciting advancements and state-of-the-art developments from preeminent researchers in the field of tinnitus.

The endocannabinoid signaling system is a key modulator of central nervous function. This volume, essential reading for interested neuroscientists, provides in-depth coverage of the roles of the endocannabinoid signaling system in the neurobiology of behavior.

Like previous handbooks, the present volume is an authoritative and up-to-date compendium of information and perspective on the neurobiology of ingestive behaviors. It is intended to be stimulating and informative to the practitioner whether neophyte or senior scholar. It is also intended to be accessible to others who do not investigate the biological bases of food and fluid ingestion, who may teach aspects of this material or simply wonder about the current state of the field. To all readers, we present this handbook as a progress report, recognizing that the present state of the field is much farther along than it was the last time a handbook was published, but mindful of the likelihood that it is not as far along as it will be when the next handbook is prepared. This field has witnessed a spectacular accretion of scientific information since the first handbook was published in 1967. During the generation of science between then and the publication of the second handbook in 1990, numerous scientific reports have substantially changed the perspective and informational base of the field.

The book is part of a series on Current Topics in Behavioral Neurosciences, which has as its focus anxiety and its treatment. We have brought together a distinguished cadre of authors with the aim of covering a broad array of topics related to anxiety disorders, ranging from clinical diagnosis, epidemiology, preclinical neuroscience, and animal models.

to established and innovative therapeutic approaches. The book aims at bridging these disciplines to provide an update of literature relevant to understanding anxiety, its consequences, and its management. Following is a brief overview of the chapters and their content, meant to serve as a guide to navigating the book. The first section covers clinical aspects of anxiety disorders. Joe Bienvenu and colleagues provide an incisive overview of diagnostic considerations in the anxiety disorders in which they emphasize the strengths and shortcomings of our current nosologic systems. This is followed by a review and update of the epidemiology of anxiety disorders by Ron Kessler and colleagues, which provides an authoritative survey of anxiety disorder incidence, prevalence, and risk factors. This is complemented by a comprehensive review of the literature on disorders that co-occur with anxiety disorders by Kathleen Merikangas and Sonja Alsemgeest Swanson. Their review highlights the tremendous comorbidity that occurs not only within the anxiety disorders, but also with other mental and physical health conditions.

Behavioral Neurobiology of Eating Disorders

Behavioral Neurobiology of Chronic Pain

Toward an Understanding of the Prosocial and Antisocial Brain

Neurobiology of Food and Fluid Intake

Behavioral Neuroscience of Drug Addiction

It has been almost forty years since Norman G. Bowery discovered and named this “non-GABAA” receptor the GABAB receptor. It has been almost ten years since the last comprehensive book presentation focused on GABAB receptors. The main goal of this book is to provide the field with a contemporary and comprehensive perspective on the GABAB receptor, its physiological relevance, and its therapeutic potential. The volume is organized into introductory and special interest sections presented by experts who study the GABAB receptor from structural, signaling, pharmacologic, physiological, pathophysiological, and therapeutic perspectives. The book aims to appeal to a broad spectrum of biomedical and clinical scientists - any scholars with an interest in GABAB receptor. The editors hope readers find this work to be thought-provoking, instructive, and informative.

Pain is the most common reason people seek medical help. The treatment of chronic pain is a major unmet clinical need and its impact on health, well-being, society and the economy is immense. Pain is an integrative, whole-systems (patho)physiological phenomenon and behavioural neuroscience plays a key role in advancing our understanding of pain. This volume brings together a series of authoritative chapters written by leading experts in preclinical and clinical aspects of pain neurobiology. Behavioural approaches to the study of persistent or chronic pain in animal models or humans are at the core of the volume, but the anatomical, physiological, neurochemical and molecular mechanisms that underpin behavioural alterations are also emphasized. ?

Social neuroscience is a rapidly growing, interdisciplinary field which is devoted to understanding how social behavior is regulated by the brain, and how such behaviors in turn influence brain and biology. Existing volumes either fail to take a neurobiological approach or focus on one particular type of behavior, so the field is ripe for a comprehensive reference which draws cross-behavioral conclusions. This authored work will serve as the market's most comprehensive reference on the neurobiology of social behavior. The volume will offer an introduction to neural systems and genetics/epigenetics, followed by detailed study of a wide range of behaviors – aggression, sex and sexual differentiation, mating, parenting, social attachments, monogamy, empathy, cooperation, and altruism. Research findings on the neural basis of social behavior will be integrated across different levels of analysis, from molecular neurobiology to neural systems/behavioral neuroscience to fMRI imaging data on human social behavior. Chapters will cover research on both normal and abnormal behaviors, as well as developmental aspects. 2016 PROSE Category winner - Honorable Mention for Biomedicine and Neuroscience Presents neurobiological analysis of the full spectrum of social behaviors, while other volumes focus on one particular behavior Integrates and discusses research from different levels of analysis, including molecular/genetic, neural circuits and systems, and fMRI imaging research Covers both normal and abnormal behaviors Covers aggression, sex and sexual differentiation, mating, parenting, social attachments, empathy, cooperation, and altruism

Behavioral Neurobiology provides a novel treatment of the neural basis of behavior. The pedagogical premise of the book is that general insights into the neuronal organization of behavior can be gained by examining neural solutions that have evolved in animals to solve problems encountered in their particular environmental niches. The author presents in-depth case studies of individual animals from which themes clearly emerge, taking on additional meaning by being considered in a real-world behavioral context.

Neuropsychiatry and Behavioral Neuroscience

The Cellular Organization of Natural Behavior

The Behavioral Neuroscience of Adolescence

Neurobiology of Social Behavior

Encyclopedia of Behavioral Neuroscience

What do we mean by "behavioral neuroscience?" This volume aims at providing an overview of behavioral neuroscience and deepening neuronal mechanisms and brain circuits that regulate the fundamental aspects of human behavior, such as cognitive and emotional functions. It is intended to give the reader the most up-to-date vision of how the interaction between biological mechanisms and neurocognitive processes leads to complex and highly organized behaviors. In recent years the strong impulse given to research on behavioral neuroscience has produced a large literature that documents the high level of complexity of the issue, for which it is necessary to provide a reasoned multidimensional analysis able to integrate the expertise of different disciplines. The book offers an excellent synopsis of perspectives, methods, empirical evidences, and international references.

Therefore, it represents an extraordinary opportunity to target neuroscientific hot topics and to outline new horizons in the study of the relationship between brain and behavior.

The intention of this book was to have investigators describe an expert opinion on their field of research and cutting-edge work in their laboratory on the neurobiology and treatment of eating disorders.

Behavioural Neuroscience is a relatively recent discipline which unifies different fields encompassing Cognitive Psychology, Cognitive Science, Clinical Neurology, Neuroanatomy, and Neurophysiology. Encyclopedia of Behavioral Neuroscience is a comprehensive, multidisciplinary work written by the best experts in the field, addressing the relationship between the neurological and biological basis of behavior and models of cognition, spanning from perception to memory and covering phenomena that occur in human and other animals. Published in 2010, it comprised 212 articles and was a unique and essential resource for students and professionals in several fields including neuroscience, psychology, neurology, psychiatry, and cognitive science. It was by far the most comprehensive reference work available addressing the advances in all the field of behavioural neuroscience. It does however, now need revising with the latest science. The new edition will again cover the relationship between brain and behaviour, both in humans and other animals, as well as mental and brain disorders. This new edition spans accross three volumes, 250 chapters and approximately 2000 pages. It will build on the foundations of the first edition by thoroughly updating all current articles with the latest research that has developed in the last decade. In addition, 40 brand new articles on the hottest topics within behavioural neuroscience will be added, covering areas such as advances in behavioral genetics and epigenetics, cognitive ageing, neuroepidemiology, social neuroscience, as well as the upsurge of new technologies like diffusion tensor imaging or transcranial direct current stimulation. The result will be an all-encompassing one-stop interdisciplinary major reference work on how the brain and its disorders influence behavior, perfect for neuroscience students, clinicians and scientists interested in knowing more about behaviour from a biological perspective. Much-loved classic reference work fully revised with all the scientific advances of the last decade Comprehensive and authoritative articles on all aspects of behavioural neuroscience Offers readers a 'one-stop' resource for access to a wealth of information to fully support their research and activities in this area Chapters written by leading experts in neuroscience across the globe, thus ensuring the knowledge within is easily understood by and applicable to a large audience Articles intuitively and meticulously organized into 10 coherent sections on key topics, making it easier for the reader to access relevant information quickly Lists of key references and further reading for each article means that related content will be easier to find, and latest/key research in the field will be highlighted Understanding the role of brain changes in adolescent behavior and development. Linda Spear provides a detailed and illuminating overview of the genetic, hormonal, and neurological developments that take place during adolescence, and shows how these changes, along with influential sociocultural factors, interact to produce distinctly adolescent behaviors and thought processes. The tension between taking risks, impulsivity, and self-control—a struggle evinced by many adolescents, especially those in therapeutic treatment—is also examined for its sources within the brain. The result is a fascinating overview of the adolescent brain, with profound implications for the clinical treatment of adolescents.

Behavioral Neurobiology of GABAB Receptor Function

Behavioral Neurobiology of the Endocannabinoid System

Behavioral Neurobiology of Psychedelic Drugs

Handbook of the Behavioral Neurobiology of Serotonin

The Neurobiology of Parental Behavior

An overview of findings in the bird song system that have had a major impact on neuroscience research, and have fundamentally altered our concepts of brain function. The 32 papers constitute the proceedings of a conference on The Behavioural Neurobiology of Bird Song, held in New York in 2002.

Motor dysfunction and cognitive impairment are major symptoms in both Huntington's Disease (HD) and Parkinson's Disease (PD). A breakthrough in HD research was the identification of the gene that causes this devastating monogenetic illness. Similarly, several genes were found to cause familial forms of PD. With their identification, a plethora of genetic animal models has been generated and has revolutionized the understanding of the pathobiology and pathophysiology of these disorders. The models allow us to study the earliest manifestations of the diseases behaviorally and neuropathologically and help us understand how they progress over time. Additionally, neurotoxic animal models are still of high interest to the PD field, as they are being used to study e.g. mitochondrial dysfunction in PD. This book focuses on animal models of both diseases and how they have helped and will continue to help understand the behavioral neurobiology in these disorders.

This book fuses scientific integrity with conversational, humorous presentation of neuroscience knowledge for human services. Knowledge conveyed is essential for practice with mental health, addiction, and developmental challenges, violence, family relationships.

This is the long-awaited new edition of Jeffrey Cummings' classic work, Clinical Neuropsychiatry, originally published in 1985. This new title reflects the authors' effort to link the recent explosion of new information from neurochemistry, neuroanatomy, genetics, neuropharmacology, neuropathology, and neuroimaging to the clinical descriptions. Each chapter has a consistent approach and the book as whole provides a practical, easy-to-use synthesis of clinical advice and basic science. The volume is enhanced by 4-colour images throughout.

Behavioral Neurobiology of Stress-related Disorders

Behavioral Neurobiology of Anxiety and Its Treatment

Essentials and Beyond

Behavioral Neurobiology of Depression and Its Treatment

The Behavioral Neuroscience of Tinnitus

Stress is such an over-used word that it is at time difficult to define its core features. When is an environment stressful?

What does a stressful environment do to the brain and to the body? What are the biological mechanisms by which a stressor affects us? How does stress contribute to the onset and the progression of mental disorders? How do the effects of stress change over the life-time of an individual? These are just some of the overarching questions addressed by this book, thanks to the contribution of some of the world leading experts on the neurobiology of stress at the pre-clinical and clinical levels. Topics include current advances on the neurobiology of stress on various neurobiological systems such as immune, hypothalamic-pituitary-adrenal (HPA) axis, neurogenesis and neuroplasticity, neurotransmitter (glutamate, noradrenaline, dopamine, serotonin and endocannabinoid), neuropeptides, cognition and emotional processing as well as in utero and early postnatal effects. The clinical chapters deal with the relationship of stress and mental disorders such as depression, posttraumatic stress disorder (PTSD), anxiety disorders, schizophrenia, bipolar disorder, substance abuse and addiction, dementia and age-related cognitive decline as well as resilience to stress. Thus, this book brings together some of the most updated and authoritative views on the effects of stress of brain and behavior.

Serotonin (5-hydroxytryptamine, often cited as 5-HT) is one of the major excitatory neurotransmitter, and the serotonergic system is one of the best studied and understood transmitter systems. It is crucially involved in the organization of virtually all behaviours and in the regulation of emotion and mood. Alterations in the serotonergic system, induced by e.g. learning or pathological processes, underlie behavioural plasticity and changes in mood, which can finally result in abnormal behaviour and psychiatric conditions. Not surprisingly, the serotonergic system and its functional components appear to be targets for a multitude of pharmacological treatments - examples of very successful drugs targeting the serotonergic system include Prozac and Zoloft. The last decades of research have not only fundamentally expanded our view on serotonin but also revealed in much more detail an astonishing complexity of this system, which comprises a multitude of receptors and signalling pathways. A detailed view on its role in basal, but also complex, behaviours emerged, and, was presented in a number of single review articles. Although much is known now, the serotonergic system is still a fast growing field of research contributing to our present understanding of the brain's function during normal and disturbed behaviour. This handbook aims towards a detailed and comprehensive overview over the many facets of behavioural serotonin research. As such, it will provide the most up to date and thorough reading concerning the serotonergic systems control of behaviour and mood in animals and humans. The goal is to create a systematic overview and first hand reference that can be used by students and scholars alike in the fields of genetics, anatomy, pharmacology, physiology, behavioural neuroscience, pathology, and psychiatry. The chapters in this book will be written by leading scientists in this field. Most of them have already written excellent reviews in their field of expertise. The book is divided in 4 sections. After an historical introduction, illustrating the growth of ideas about serotonin function in behaviour of the last forty years, section A will focus on the functional anatomy of the serotonergic system. Section B provides a review of the neurophysiology of the serotonergic system and its single components. In section C the involvement of serotonin in behavioural organization will be discussed in great detail, while section D deals with the role of serotonin in behavioural pathologies and psychiatric disorders. The first handbook broadly discussing the behavioral neurobiology of the serotonergic transmitter system Co-edited by one of the pioneers and opinion leaders of the past decades, Barry Jacobs (Princeton), with an international list (10 countries) of highly regarded contributors providing over 50 chapters, and including the leaders in the field in number of articles and citations: K. P. Lesch, T. Sharp, A. Caspi, P. Blier, G.K. Aghajanian, E. C. Azmitia, and others The only integrated and complete resource on the market containing the best information integrating international research, providing a global perspective to an international community Of great value not only for researchers and experts, but also for students and clinicians as a background reference

Shaun D. Cain, *The Journal of Experimental Biology* --Book Jacket.

This volume discusses the current state of research findings related to healthy brain aging by integrating human clinical studies and translational research in animal models. Several chapters offer a unique overview of successful aging, age-related cognitive decline and its associated structural and functional brain changes, as well as how these changes are influenced by reproductive aging. Insights provided by preclinical studies in mouse models and advanced neuroimaging techniques in humans are also presented.

An Introduction to Behavioral Neurobiology

In addition to filling a need within the field of parental behavior, this book contributes importantly to the growing area of emotional and motivational neuroscience. A major part of neuroscience research at the whole organism level has been focused on cognitive and behavioral neuroscience with an emphasis on the neurobiology of learning and memory, but there has been a recent upsurge in research which is attempting to define the neural basis of basic motivational and emotional systems which regulate such behaviors as food intake, aggression, reward-seeking behaviors, and anxiety-related behaviors. In this book the emphasis is on the research findings obtained from studies in rodents and primates. The authors' goal, of course, was to provide a foundation that may help us understand the neurobiology of human behavior. Indeed, the last chapter attempts to integrate the non-human research data with some human data in order to move toward an understanding of postpartum depression, child abuse, and child neglect. Clearly, motivational and emotional neuroscience has close ties to psychiatry, and this connection will be very evident in the final chapter. By understanding the neurobiology of parental behavior we are also delving into neurobiological factors which may have an impact on core human characteristics involved in social attachment, nurturing behavior, and love. In this very violent world, it is hard to conceive of a group of characteristics worthy of study.

Behavioral Neurobiology The Cellular Organization of Natural Behavior Sinauer Associates Incorporated

Handbook of the Behavioral Neurobiology of Serotonin, Second Edition, builds on the success of the first edition by continuing to provide a detailed and comprehensive overview of the many facets of behavioral serotonin research. The text expands on the two key areas of behavioral control (sensory processing, ultrasonic vocalization, and melatonin and sleep control) and psychiatric disorders, including the role on psychostimulant abuse and addiction. The new edition includes two new sections on the serotonin systems interactions and the involvement of serotonin in neurological disorders and associated treatment. Serotonin is a major neurotransmitter in the serotonergic system which is one of the best studied and understood transmitter systems. Both are critically involved in the organization of behavior and in the regulation of emotion and mood. Features two new sections on serotonin systems interactions and serotonin in r

disorders Focuses on ionotropic and metabotropic 5-HT receptor involvement in behavior Maps receptors and receptor signals to neurochemical and behavioral outcomes Covers the interactions between serotonin, melatonin and kynurenine pathways