Limbic Brain

The aim of this publication is to demonstrate the effect of the neural networks on cognitive functions and behavioural patterns during the development phase of a child. Taking as a basis the previous publication in this series dedicated to brain lesion localisation and development, this time it is by examining in particular the frontal lobe, limbic system (hippocampus and amygdala) and visuo-cognitive system that this book looks at the close links between the neural networks and the future development of visual, cognitive and functional capacities. The section on the frontal lobe concentrates on anatomy, mirror neurons, memory, executive functions, the neuropsychology of frontal lobe epilepsy and the resolution of social problems which can occur as a result of brain damage. The part on the limbic system looks at neuro-anatomical organisation and the core functions of the hippocampus and amygdala, problems of language, music, emotions or autism. Finally, the section dedicated to the visuo-cognitive system summarises the visual field problems associated with focal lesions, the correlation with neuro-imagery and visual impairment in children born prematurely.
This volume records the proceedings of a Limbic System Sympos ium held at the University of Toronto, November 5-6th, 1976 as a satellite event to the Sixth Annual Meeting of the Society of Neuroscience. The Symposium was designed in part as a tribute to James Papez on the 40th anniversary of the publication of his epochal paper "A Proposed Mechanism of Emotion". Papers by MacLean, Yakovlev, and Angevine provide personal recollections of Papez and an assessment of the significant contri bution he made to breaking down the still formidable barriers that separate our concepts of brain, mind, emotion, and behavior. Against this background subsequent speakers presented new information that further illuminates the anatomical, physiological and biochemical mechanisms underlying limbic system function. Viewed in juxtaposition this new information from "disparate" fields of neuroscience provides an increasingly coherent picture of the neuronal organization subserving a dynamic limbic system that we can now begin to visualize in operational and transactional terms. The final section of the symposium focusses on the recently identified "kindling" phenomenon which is viewed as a general model of neural plasticity and more particularly as a model of experi mentally induced limbic system dysfunction. Using this model it is possible to display, analyse, and experimentally manipulate long lasting changes in limbic system activity, which develop over ex tended periods of time and are expressed in a variety of behavioral end points involving learning and memory, seizure activity, and changes in emotionality and behavior.
107 with treatments that affect the arousal of the animals is also implied on the basis of the behavioral changes induced in the lesioned animals by amphetamine administration and by changes in the motivational circumstances under which the animals are tested. Studies of the effects of cingulate lesions in the rat have involved the production of midline cortical damage. Unfortunately, as reported in the previous chapter, the midline cortex of the rat is not comparable to the midline cortex of other animals as defined on the basis of the fibers it receives from the thalamus. In addition, lesions of the midline cortex, whether in the rat or in other species, are likely to interfere with fibers of the neural systems in or near it. These include the cingulum bundle and the supracallosal fibers of the fornix. Norepi nephrine-containing fibers also pass through this region in or near the cingulum bundle. These fibers ascend through the anterior dor solateral septal area and turn up and back to pass through the midline regions and innervate the entire medial cortex (Morrison, Molliver, & Grzanna, 1979). Lesions in this area reduce the norepinephrine distribution throughout the rostrocaudal extent of the medial cortex. A similar problem results from destruction to the anterior cortical regions. Lesions in that region could reduce the norepinephrine sup plies of the entire dorsolateral cortex.
Complex Surgical Cases of the Limbic System
Summary of Faith G. Harper's Unfuck Your Brain
The Temporal Lobe and Limbic System
Limbic System
Limbic System: Amygdala, Hypothalamus, Septal Nuclei, Cingulate, Hippocampus: Emotion, Memory, Language, Development, Evolution, Love
Real-time in the Brain Limbic System
If this were a traditional textbook of neuroanatomy, many pages would be devoted to a description of the ascending and descending pathways of the spinal cord and several chapters to the organization of the sensory and motor systems, and, perhaps, a detailed discussion of the neurological deficits that follow various types of damage to the nervous system would also be included. But in the first draft of this book, the spinal cord was mentioned only once (in a figure caption of Chapter 2) in order to illustrate the meaning of longitudinal and cross sections. Later, it was decided that even this cursory treatment of the spinal cord went beyond the scope of this text, and a carrot was substituted as the model. The organization of the sensory and motor systems and of the peripheral nervous system have received similar coverage. Thus, this is not a traditional text, and as a potential reader, you may be led to ask, "What's in this book for me?" This book is directed primarily toward those students of behavior who are either bored or frightened by the medically oriented texts that are replete with clinical signs, confusing terminology, and prolix descriptions of the human brain, an organ which is never actually seen in their laboratories. I should hasten to add, however, that this text may also serve some purpose for those who read and perhaps even enjoy the traditional texts.
Please note that the content of this book primarily consists of articles available from Wikipedia or other free sources online. Pages: 48. Chapters: Amygdala, Amygdalofugal pathway, Archicortex, Cingulum (brain), EC-hippocampus system, Emotion, Entorhinal cortex, Epithalamus, Evolution of the hippocampus, Hippocampal formation, Hunger, Hunger (motivational state), Hypothalamus, Islands of Calleja, Lateral hypothalamus, Limbic regulation, Limbic resonance, Limbic revision, Mammillary body, Mammillothalamic fasciculus, Mossy fiber (hippocampus), Nucleus accumbens, Olfaction, Olfactory bulb, Olfactory indicators, Orbitofrontal cortex, Papez circuit, Perirhinal cortex, Pleasure center, Septal nuclei, Sexually dimorphic nucleus, Ventral striatum.
Neural alterations have been observed in the frontal-limbic circuitry (including the prefrontal cortex, the anterior cingulate cortex, the hippocampus and the amygdala), densely innervated with serotonin, in the individuals with affective disorders. Relationship between the frontal-limbic processes and emotional well-being is affected by the genetics and the environment as well as by their interaction (GxE). Yet, the specific mechanisms are not known to this day. The aim of the present thesis was to study the environmental effects on and the relevance of DNA methylation (a physiological mechanism underpinning the GxE influences on gene expression) for the frontal-limbic brain processes in healthy individuals. In the first study, association between the daily-life mood (assessed using a daily diary method) and the brain processes was studied. In the second study, association between the peripheral DNA methylation in the serotonin transporter [SLC6A4] gene (linked to emotional functioning), derived from different tissues, and the brain processes was examined. In the third study, we examined whether the association between the peripheral SLC6A4 gene methylation and the brain processes was independent of the genetic variation (using a monozygotic twin sample). Briefly, daily-life negative and positive mood was positively associated with the resting-state functional connectivity between posterior and anterior cingulate cortices. The SLC6A4 gene methylation was positively associated with the prefrontal cortical volume when derived from blood, saliva and buccal cells; buccal-derived SLC6A4 gene methylation was also found to be positively associated with the anterior cingulate cortical volume and the resting-state functional connectivity between parietal areas and the anterior cingulate cortex. The peripheral SLC6A4 gene methylation was also positively associated with the orbitofrontal cortical activity as well as with the functional connectivity between the amygdala, the orbitofrontal and the anterior cingulate cortices in response to negative emotional stimuli, regardless of individuals' DNA sequence. Overall, current findings might indicate that brain function and structure in the frontal-limbic regions, particularly in the anterior cingulate and the prefrontal cortices, are positively associated with the daily-life mood and the peripheral SLC6A4 gene methylation in healthy individuals. Additionally, the relationship between these frontal-limbic processes and peripheral SLC6A4 gene methylation appear to be largely driven by the environmental influences. Also, current results suggest that buccal cells may be a suitable peripheral tissue for studying the SLC6A4 gene methylation and its related neural processes. Future studies are necessary to validate these results in the clinical population as well as in the individuals exposed to differential environmental conditions.
Brain Lesion Localization and Developmental Functions
Structure and Function of the Limbic System
Environmental, Epigenetic and Behavioral Correlates
Evidence of Interdependence in Emotional Processes
The Effect of Limbic Brain Lesions on Rat Pituitary Luteinizing Hormone Release
Frontal Lobes, Limbic System, Visuocognitive System : Remembering Ans Hey
The ancient mystery - solved! Be among the first to discover the true solution to the hard question of science: how matter becomes conscious. This book explains how an image, discrete and finite, restrains an otherwise increasing tendency toward disorder. The inference is mind-boggling: an image becomes the means by which the Second Law of Thermodynamics is contained-thereby proving the existence of God while ruling out evolution as a creative mechanism. Based on established brain science, creationism becomes the more scientific perspective.
How do you help your hypothalamus function more effectively? If you have a basic idea of what the hypothalamus does, you probably know how important it is to keep it healthy and have it function in an optimal way. The hypothalamus is there for the regulation of specific metabolic processes and other activities that relate to the autonomic nervous system. It synthesizes and secretes neurohormones, called releasing hormones or hypothalamic hormones, and these in turn stimulate or inhibit the secretion of pituitary hormones. Not only will this book touch on the most important aspects of that small part in our brain called the hypothalamus, but it will also provide solutions to health, injuries, and other problems connected to the hypothalamus. The book covers topics such as: Its role in motivation, decision-making, and behavioral patterns.. The connection between the hypothalamus and weight loss. What to do with the hypothalamus and pituitary gland after a head injury. Sleep patterns and fevers that get regulated partially by that essential part in your brains. Hypothalamus disorders - what you should know about them. How to get your brain in top shape and have it perform better. In the art of brain science, and for the sake of understanding our own selves better, it is crucial to learn about the hypothalamus and what it does. On top of that, how to stimulate that part of our cerebrum for optimal brain activity and healthy functioning, can make a major difference in your life. Add this book to your cart. I guarantee you that you'll learn something new.
Nearly, 50 years ago, Karl Pribram in a discussion section accompanying MacLean ' s proposal of a limbic system, criticized the visceral or limbic brain concept as theoretically too vague and cumbersome. In a recent review of the limbic system, Swanson points to Brodal ' s criticism that the discovery of connections of limbic structures with virtually all parts of the nervous system render the concept of the limbic system useless, and better abandoned. Additional dissatisfaction surrounding the limbic brain concept stems from the feeling that it is historically inert (an antiquated 19th century construct). In our current age of neural networks, and parallel distributed process it is of little value, merely an historical curio. So why then this int- duction to limbic brain anatomy? We offer several interrelated rationales behind our labors. Recapitulation in the Service of Education: Although concepts had evolved in the second half of this century which effectively overthrew the idea of relatively isolated hemispheric districts (i. e. striatal, cortical, and limbic), parsing the hemisphere into these three districts was an important preliminary step achieved by our forebears in their efforts to understand the large scale structure of the higher mammalian cerebral hemisphere. An examination of how the limbic brain concept came to be provides an opp- tunity to recapitulate the process of exploration, discovery, and und- standing as it relates to one of these principle hemispheric domains.
The Glucocorticoid Receptor in the Limbic System of the Human Brain
Lo spirito de' giornali ecclesiastici per l'anno 1792
Hypothalamus
Workshop Report
Rewire the Limbic System in Your Brain
The Limbic Brain
Advances in Limbic System Research and Application: 2013 Edition is a ScholarlyEditions[] book that delivers timely, authoritative, and comprehensive information about ZZZAdditional Research. The editors have built Advances in Limbic System Research and Application: 2013 Edition on the vast information databases of ScholarlyNews.[] You can expect the information about ZZZAdditional Research 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 Advances in Limbic System 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/.
In seeking a neural basis for human behaviour, several areas of the brain have been examined. It is now agreed that the temporal lobes and their downstream connections, the limbic system, are closely linked with the feeling and expression of emotional behaviour, and that lesions in this region and dysfunction of the system are associated with many severe psychopathological conditions and behavioural problems.
Please note: This is a companion version & not the original book. Sample Book Insights: #1 We tend to separate mental health from physical health. But what we actually know about the brain is that it resides in our gut. It takes in tons of information and makes decisions before we are even aware that a decision needs to be made. #2 The prefrontal cortex, the front part of your brain, is in charge of executive functioning, which includes problem-solving, goal-oriented behaviors, and managing social interactions according to expectations of what is appropriate. #3 The prefrontal cortex is the part of the brain that is responsible for thinking and making decisions. It is highly connected to the rest of the brain, and it receives feedback from the brainstem arousal systems. #4 The limbic system, which is the middle part of the brain, stores memories related to emotions. The amygdala, which is part of the limbic system, stores event-based memories. The brainstem is the final part of the brain, and it controls basic functions like breathing and heart rate.
Amygdala
Brain Mechanisms and Behaviour
How the Anatomy of the Brain Explains Consciousness and Rules Out Evolution
The Science of Adolescent Risk-Taking
a study of the visceral brain in primates and man
Basic Limbic System Anatomy of the Rat
The limbic system (also known as the paleomammalian brain) is a collection of brain structures located in the middle of the brain. It is not a discrete system itself but rather a collection of structures—anatomically related but varying greatly in function. The limbic system is the centre for emotional responsiveness, motivation, memory formation and integration, olfaction, and the mechanisms to keep ourselves safe (Neuropsychotherapist.com). This book is a guide to surgical procedures for the limbic system. Beginning with an overview of brain embryology and anatomy, each of the following sections covers surgical approaches for disorders in different parts of the limbic system. Procedures are explained in a step by step approach, with emphasis on anatomical markers and avoidance of complications. The final chapters discuss brain mapping during surgery, giant and unusual tumours, and vascular lesions. Authored by a team of highly experienced, Illinois and Wisconsin-based neurosurgeons, the book is enhanced by anatomical dissections, operative photographs and illustrations, and includes a DVD ROM demonstrating surgical procedures. Key points Guide to surgical procedures for the limbic system Step by step approach with emphasis on anatomical markers and avoidance of complications Highly experienced, Illinois and Wisconsin-based author team Includes DVD ROM demonstrating surgical procedures
The Neuroscience of Feelings, Emotions, and Our Darkest Impulses. This introductory text provides a detailed overview of those brains structures which control or mediate all aspects of emotion, memory, rage, violence, and sexuality: the hippocampus, amygdala, hypothalamus, and septal nuclei.
The primary cortical areas that we include under the umbrella of limbic system include the olfactory cortex, amygdala and hippocampal formation, and nearly all parahippocampal cortex and cingulate cortex, but also caudal orbital and medial prefrontal cortex and part of the temporal polar cortex, and the ventral part of the agranular and dysgranular part of the insular cortex. It should be noted that researchers still disagree on how many and which areas exactly comprise the limbic system, however, most agree that it includes the hippocampus, subicular cortex, parahippocampal cortex, cingulate cortex, septal nuclei, basolateral amygdala, mammillary bodies, the anterior thalamic nuclei and their interconnections and connections. Subcortical areas, such as the cortical and central amygdala, the septal nuclei, and diencephalic regions, including the mammillary bodies and the anterior thalamic nuclei, make up the rest of the limbic system. The limbic system is highly interconnected, both by direct connections and by indirect projections through diencephalic regions such as the mammillary bodies and the anterior thalamic nuclei. This book discusses the areas of the limbic system which play a role in epilepsy; chronic musculoskeletal pain; the effects altered gravity may have on the limbic system; and finally, the affects opioid addiction has on the limbic system.
Limbic system of brain
The Continuing Evolution of the Limbic System Concept
Translated from Russian by Inna Shragina-Mytnik
Amygdala, Amygdalofugal Pathway, Archicortex, Cingulum (Brain), Ec-Hippocampus System, Emotion, Entorhinal Cortex, Epithalamus, Evoluti
Computational Modeling of the Brain Limbic System and Its Application in Control Engineering
Anatomy of Neuropsychiatry
One of the major challenges of modern neuroscience is to define the complex pattern of neural connections that underlie cognition and behaviour. This atlas capitalises on novel diffusion MRI tractography methods to provide a comprehensive overview of connections derived from virtual in vivo tractography dissections of the human brain.
This study mainly deals with the various aspects of modeling the learning processes within the brain limbic system and studying the various aspects of using it for different applications in control engineering. The current study is a multi-aspect research effort which not only requires a background of control engineering, but also a basic knowledge of some biomorphic systems. The main focus of this study is on biological systems which are involved in emotional processes. In mammalians, a part of the brain called the limbic system is mainly responsible for emotional processes. Therefore, general brain emotional processes and specific aspects of the limbic system are reviewed in the early parts of this study. Next, we describe developing a computational model of the limbic system based on these concepts. Since the focus of this study is on the application of the model in engineering systems and not on the biological concepts, the model established is not a very complicated model and does not include all the components of the limbic system. In fact, we are trying to develop a model which captures the minimal and basic properties of the limbic system which are mainly known as the Amygdala-Orbitofrontal Cortex system. The main chapter of this thesis, Chapter IV, shows the utilization of the Brain Emotional Learning (BEL) model in different applications of control and signal fusion systems. The main effort is focused on applying the model to control systems where the model acts as the controller block. Furthermore, the application of the model in signal fusion is also considered where simulation results support the applicability of the model. Finally, we studied different analytical aspects of the model including the behavior of the system during the adaptation phase and the stability of the system. For the first issue, we simplify the model, e.g. remove the nonlinearities, to develop mathematical formulations for behavior of the system. To study the stability of the system, we use the cell-to-cell mapping algorithm which reveals the stability conditions of the system in different representations. This thesis finishes with some concluding remarks and some topics for future research on this field.
Adolescence is a time when youth make decisions, both good and bad, that have consequences for the rest of their lives. Some of these decisions put them at risk of lifelong health problems, injury, or death. The Institute of Medicine held three public workshops between 2008 and 2009 to provide a venue for researchers, health care providers, and community leaders to discuss strategies to improve adolescent health.
The Limbic System ("visceral Brain") in Relation to Central Gray and Reticulum of the Brain Stem
Psychopharmacology of the Limbic System
The Limbic System ("visceral Brain") and Emotional Behavior
Anatomy, Functions and Disorders
Structure and Function
Guide to Hormones, the Limbic System, and the Brain
Structure and Function of the Limbic System
The brain ... There is no other part of the human anatomy that is so intriguing. How does it develop and function and why does it sometimes, tragically, degenerate? The answers are complex. In Discovering the Brain, science writer Sandra Ackerman cuts through the complexity to bring this vital topic to the public. The 1990s were declared the "Decade of the Brain" by former President Bush, and the neuroscience community responded with a host of new investigations and conferences. Discovering the Brain is based on the Institute of Medicine conference, Decade of the Brain: Frontiers in Neuroscience and Brain Research. Discovering the Brain is a "field guide" to the brain--an easy-to-read discussion of the brain's physical structure and where functions such as language and music appreciation lie. Ackerman examines How electrical and chemical signals are conveyed in the brain. The mechanisms by which we see, hear, think, and pay attention--and how a "gut feeling" actually originates in the brain. Learning and memory retention, including parallels to computer memory and what they might tell us about our own mental capacity. Development of the brain throughout the life span, with a look at the aging brain. Ackerman provides an enlightening chapter on the connection between the brain's physical condition and various mental disorders and notes what progress can realistically be made toward the prevention and treatment of stroke and other ailments. Finally, she explores the potential for major advances during the "Decade of the Brain," with a look at medical imaging techniques--what various technologies can and cannot tell us--and how the public and private sectors can contribute to continued advances in neuroscience. This highly readable volume will provide the public and policymakers--and many scientists as well--with a helpful guide to understanding the many discoveries that are sure to be announced throughout the "Decade of the Brain."
First published in 1943, Vitamins and Hormones is the longest-running serial published by Academic Press. The Editorial Board now reflects expertise in the field of hormone action, vitamin action, X-ray crystal structure, physiology, and enzyme mechanisms. Under the capable and qualified editorial leadership of Dr. Gerald Litwack, Vitamins and Hormones continues to publish cutting-edge reviews of interest to endocrinologists, biochemists, nutritionists, pharmacologists, cell biologists, and molecular biologists. Others interested in the structure and function of biologically active molecules like hormones and vitamins will, as always, turn to this series for comprehensive reviews by leading contributors to this and related disciplines. This volume focuses on hormones of the limbic system. Longest running series published by Academic Press Contributions by leading international authorities
The Limbic System
Limbic Mechanisms
God and the Limbic Brain
An Outline of the Mechanisms of Emotion, Memory, Learning, and the Organization of Behaviour, with Particular Regard to the Limbic System
Discovering the Brain
The Temporal Lobes and the Limbic System
Anatomy of Neuropsychiatry presents the anatomical systems that take part in the scientific and clinical study of emotional functions and neuropsychiatric disorders. It discusses the limbic system—the cortical and subcortical structures in the human brain involved in emotion, motivation, and emotional association with memory—at length and how this is no longer a useful guide to the study of psychiatric disorders. The book provides an understanding of brain anatomy, with an emphasis on the new anatomical framework which has emerged during the last quarter century. The goal is to help the reader develop an understanding of the gross anatomical organization of the human forebrain. A re-evaluation of brain anatomy, with an emphasis on the new anatomical framework which has emerged during the last quarter century A compellingly expanded conceptualization of Broca's famous limbic lobe Clinical and basic science boxes highlighting specific concepts, structures, or neuronal circuits from a clinical perspective
While this book is intended to be an introduction to the neuroanatomy of the limbic system and to studies of the behavior of animals in which the limbic system is stimulated or damaged, it is primarily intended for advanced students of brain-behavior relationships. I have assumed the reader to have some under standing of the structure of the brain, of basic neurophysiology, and of modern behavioral techniques. It has been written for students in graduate programs in psychobiology, physiological psychology, and the neurosciences, but it also should be of interest to some medical students and to others with catholic interests in the biology of behavior. In the first chapter, I review the structure of the limbic system and in subsequent chapters consider the behavioral effects of lesions and stimulation of components of the limbic system. Supplement information derived from recording the electrical signals of the brain is included where it seems appropriate. The final chapter presents a perspective of the limbic system related to brain stem mechanisms and the neocortex. Understanding the behavioral contributions of the limbic system presupposes under standing how the limbic system interacts with other systems of the brain. v Preface vi Even though there is only one chapter overtly devoted to theoretical issues. various biases of mine influence all chapters. Anyone reading the book with a critical attitude will soon be aware of them. I would like to alert the reader to some of them ahead of time.
How do your primitive reflexes respond to danger, threats, and anxiety? The amygdala is that little part of your brain that affects emotions and primal instincts. Would your self-awareness increase if you knew more about that important region? Yes, it would. Since most of us experience an emotional rollercoaster each day, understanding what to blame for those sudden urges, fluctuating moods, and altering emotional responses, is crucial to controlling your thoughts and actions. Panic attacks, anxiety, and all kinds of other symptoms are triggered by the amygdala. The natural responses of human beings have are deeply rooted in the furthermost depths of the limbic system, a small speck of mass that has an essential function in the entire nervous system. In this book, you will learn new things about: How hormones and the amygdala are strongly connected. Sex differences in the human amygdala. How anxiety can be cured by changes in or reconditioning of the amygdala. Why a healthy amygdala should be your first priority. How to master your emotional responses after primitive signals enter the brain. How to access the super brain genius. region all of us have. We all have primitive instincts, and our emotions are based on our hormones, bodily changes, and our direct environment. To be mindful of these things and master our inner monologue, our responses, and our behavior, it takes a certain level of comprehension as to what causes these thing. After that, issues can be addressed, changed, handled, and taken care of. If this is something you seek, then this book is the right stepping stone for you. Add this book to your cart now. I promise you that you'll learn something new.
The limbic system
Limbic System Mechanisms and Autonomic Function
Atlas of Human Brain Connections
Dynamic Interaction of Olfactory and Limbic Brain Regions During Olfactory Perception
Advances in Limbic System Research and Application: 2013 Edition
Hormones of the Limbic System
"Glucocorticoid hormones (GCs) are important mediators of the stress response in mammals including humans. GCs are released from the adrenal in response to stress and affect numerous processes in the body and brain. Their levels are controlled via negative feedback exerted by GC binding to brain glucocorticoid receptors (GR). In particular the hypothalamus, hippocampus and amygdala are important brain regions involved in this feedback regulation of the stress response. Whereas the anatomical distribution of brain GR was well known for various animal species, very little was known about GR presence and (subregional) distribution in human brain, nor about possible alterations in stress-related brain disorders. We here describe the first anatomical distribution of GR protein in key areas of the human brain involved in stress regulation. We next studied changes in GR protein in relation to aging and disorders like major/bipolar depression and Alzheimer's disease (AD). We found abundant GR-immunoreactivity (GR-ir) to be present in almost all neuronal nuclei of the human hypothalamus, hippocampus and amygdala and in +/-50% of the astrocytes. In major depression, hippocampal GR-ir correlated positively with age, and increased GR-ir was found in depressed women relative to depressed men. In the human amygdala, GR-ir was significantly increased in major, but not bipolar, depression. In AD, higher GR levels were found in female relative to male AD patients, a difference absent in age-matched controls. These first studies on the human GR may help better understand the molecular mechanisms underlying stress-related disorders and can possibly improve future therapeutic development."--Samenvatting auteur.
The results of the suggested research were obtained in the course of the analysis of the descriptions of the brain limbic system's (BLS) structures. The model of the neuron was synthesized as the basic building material for the BLS and it fits the functions the BLS performs. The model of a neuron was created with the following features: the ability to get adapted to various changes of input signals, to get synchronized; the ability for spatio-time accumulating of a set of excitations; the possession of the mechanism of excitation and inhibition; the ability to process input information in time slots according to the phase of the corresponding sensor modality. The comparison the results of known electrophysiological experiments with the results of computer experiments confirmed the adequacy of the model and its living prototype. It was introduced the concept of cyclic and discrete micro interval time (time slots) for processing of sensor information of one modality. To justify the existence of these time slots, the following conceptions were used: the holographic nature of the neural network and the informational exchange between living cells realized by coherent bio photons.
The Limbic BrainSpringer Science & Business Media
Frontal-limbic Brain Processes in Healthy Individuals
The Effects of Mild Traumatic Brain Injury on Limbic System Brain-derived Neurotrophic Factor Expression

The New Anatomy of the Basal Forebrain and Its Implications for Neuropsychiatric Illness
Covering the detailed anatomy, physiology, and clinical aspects of the temporal lobe and the limbic system, this monograph makes a timely appearance because of the widespread interest in this subject in relation to epilepsy, Alzheimer's disease, and schizophrenia. The structural and functional information serves as an important foundation for the detailed anatomical knowledge necessary for the interpretation of imaging. The components of the temporal lobe are characterized. The temporal isocortex is considered from the point of view of its principal cellular constituents, connectivity, columnar organization, and how the cortex embodies experience. The cortical association areas for vision, audition, degustation, visceral sensory function, and olfaction are treated in detail, and the cortical area of the temporal lobe relating to speech is discussed. The structure of the insula, the temporal cortex, and its connectivity to the thalamus, pulvinar, striatum, and claustrum are described thoroughly. A chapter reviews the structure, connections and functions of the olfactory system, as well as its social aspects and pathological conditions. The largest chapter deals with the hippocampus--its anatomy and connections, its cellular architectonics, its relation to memory, and its varied functions. The final chapter details the amygdala, its connections, and its significant role in temporal lobe seizures.