Record Nr. UNINA9910784657603321 Neurobiology of learning and memory [[electronic resource] /] / edited **Titolo** by Raymond P. Kesner, Joe L. Martinez, Jr Pubbl/distr/stampa Amsterdam;; Boston,: Academic Press, c2007 **ISBN** 1-281-05063-6 9786611050634 0-08-047967-7 Edizione [2nd ed.] Descrizione fisica 1 online resource (621 p.) Altri autori (Persone) KesnerRaymond P MartinezJoe L Disciplina 612.8/2 Soggetti Learning - Physiological aspects Memory - Physiological aspects Neurobiology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Errata slip inserted. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Front cover; Neurobiology of Learning and Memory; Copyright page; Table of contents; Contributors; Preface; Part I: Approches to Understanding the Neurobiological Basis of Learning and Memory;

Table of contents; Contributors; Preface; Part I: Approches to Understanding the Neurobiological Basis of Learning and Memory; CHAPTER 1: Historical Perspective; I. INTRODUCTION; II. METAPHORS OF MEMORY; III. ADVANCES IN THE LAST QUARTER OF THE NINETEENTH CENTURY; IV. PESSIMISM IN MIDCENTURY, THEN RAPID GAINS; V. NEUROCHEMICAL AND NEUROANATOMICAL EFFECTS OF TRAINING AND EXPERIENCE; VI. GENETIC STUDIES OF LEARNING ABILITY: FROM SELECTION TO MOLECULAR BIOLOGY; VII. CHANGING CONCEPTS OF LEARNING AND MEMORY FORMATION VIII. NEUROCHEMICAL MECHANISMS OF LEARNING AND MEMORY IX. ELECTROPHYSIOLOGICAL STUDIES OF LEARNING AND MEMORY; X. MEMORY DURING AGING; XI. HOW TO IMPROVE MEMORY; XII. CONCLUSIONS; REFERENCES; CHAPTER 2: Developmental Approaches to the Memory Process; I. INTRODUCTION; II. EXPERIENCE-EXPECTANT AND EXPERIENCE-DEPENDENT NEURAL PLASTICITY; III. QUANTITATIVE METHODS IN DEVELOPMENTAL NEUROBIOLOGY; IV. NEUROBIOLOGICAL CORRELATES OF THE LEARNING PROCESS; V. IMPLICATIONS FOR THE

NEUROBIOLOGICAL STUDY OF MEMORY; ACKNOWLEDGMENTS; REFERENCES; CHAPTER 3: Genetics in Learning and Memory; I. INTRODUCTION

II. GENETIC SCREENING OF LEARNING AND MEMORY MUTANTS III. GENETIC MANIPULATION OF CANDIDATE LEARNING AND MEMORY GENES; IV. GENETIC DISSECTION OF LEARNING AND MEMORY; V. SUMMARY; ACKNOWLEDGMENTS; REFERENCES; CHAPTER 4: Gene Expression in Learning and Memory; I. INTRODUCTION; II. GENE EXPRESSION AND LEARNING AND MEMORY; III. LTP AND GENE EXPRESSION; IV. SUMMARY; REFERENCES; CHAPTER 5: Mnemonic Contributions of Hippocampal Place Cells; I. INTRODUCTION; II. PLACE FIELDS: SENSORY AND MOVEMENT CORRELATES; III. PLACE FIELDS: RELATIONSHIP TO LEARNING AND MEMORY; IV. FUTURE ISSUES TO CONSIDER

V. CONCLUSIONS ACKNOWLEDGMENTS: REFERENCES: CHAPTER 6: Computations in Memory Systems in the Brain; I. INTRODUCTION; II. FUNCTIONS OF THE HIPPOCAMPUS IN LONG-TERM MEMORY; III. SHORT-TERM MEMORY SYSTEMS: IV. INVARIANT VISUAL-OBJECT RECOGNITION; V. VISUAL STIMULUS-REWARD ASSOCIATION, EMOTION, AND MOTIVATION; VI. EFFECTS OF MOOD ON MEMORY AND VISUAL PROCESSING: VII. CONCLUSION: ACKNOWLEDGMENTS: REFERENCES; CHAPTER 7: Modulation of Learning and Memory by Adrenal and Ovarian Hormones; I. INTRODUCTION; II. STRESS HORMONES AND MEMORY: III. GONADAL STEROIDS AND COGNITION: IV. MAJOR POINTS ACKNOWLEDGMENTS REFERENCES; Part II: The Contribution of Neural Systems in Mediating Learning and Memory; CHAPTER 8: Neurobiological Views of Memory; I. INTRODUCTION; II. SPATIAL ATTRIBUTE: EVENT-BASED MEMORY; III. SPATIAL ATTRIBUTE: KNOWLEDGE-BASED MEMORY: IV. SPATIAL ATTRIBUTE: RULE-BASED MEMORY: V. SUMMARY: REFERENCES: CHAPTER 9: The Medial Temporal Lobe and Memory; I. INTRODUCTION; II. MTL ANATOMY; III. MEMORY IMPAIRMENTS RESULTING FROM MTL DAMAGE; IV. FUNCTIONAL SEGREGATION WITHIN MTL; V. CONSEQUENCES OF SELECTIVE HIPPOCAMPAL LESIONS; VI. NEUROIMAGING OF ITEM AND CONJUNCTIVE MEMORY

VII. HIPPOCAMPAL SUBFIELD FUNCTION

Sommario/riassunto

The first edition of Neurobiology of Learning and Memory was published in 1998 to rave reviews. As before, this second edition will discuss anatomy, development, systems, and models though the organization and content is substantially changed reflecting advances in the field. Including information from both animal and human studies, this book represents an up-to-date review of the most important concepts associated with the basic mechanism that support learning and memory, theoretical developments, use of computational models, and application to real world problems. The empha