UC Irvine

UC Irvine Previously Published Works

Title

From Development to Degeneration and Regeneration of the Nervous System

Permalink

https://escholarship.org/uc/item/49v1f96j

ISBN

9780195369007

Authors

Ribak, CE de la Hoz, CA Jones, EG et al.

Publication Date

2009-05-01

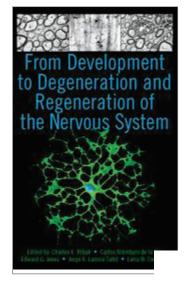
DOI

10.1093/acprof:oso/9780195369007.001.0001

Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at https://creativecommons.org/licenses/by/4.0/

Peer reviewed



From Development to Degeneration and Regeneration of the Nervous System

Charles E. Ribak, Carlos Aramburo de la Hoz, Edward G. Jones, Jorge A. Larriva Sahd, and Larry W. Swanson

ABSTRACT

This book describes current information about the three areas mentioned in the title: neuronal migration and development, degenerative brain diseases, and neural plasticity and regeneration. The chapters in the first section of the book examine the cellular and molecular mechanisms by which neurons are generated from the ventricular zone in the forebrain and migrate to their destinations in the cerebral cortex. This description of cortical development also includes discussions of the Cajal-Retzius cell. Another chapter provides insight about the development of another forebrain region, the hyp ... More

Keywords: ventricular zone, forebrain, Cajal–Retzius cell, hypothalamus, dopaminergic neurons, brain aging, myelinated axons, epilepsy, hippocampal dentate gyrus, neuroplastic changes

BIBLIOGRAPHIC INFORMATION

Print publication date: 2008

Published to Oxford Scholarship Online: May 2009

AUTHORS

Affiliations are at time of print publication.

Charles E. Ribak, editor

Carlos Aramburo de la Hoz, editor

Edward G. Jones, editor

More

Print ISBN-13: 9780195369007

DOI:10.1093/acprof:oso/9780195369007.001.0001

Contents

Front Matter

Part 1 Cajal's load

Chapter One The Legacy of Cajal in Mexico José Luis Díaz

Part 2 Neuronal Migration and Development

Chapter Two Tangential Cell Movements During Early Telencephalic Development Juan A. De Carlos, and Fernando García-Moreno

Chapter Three Genetic Control of Cajal-Retzius Cell Development

Amaya Miquelajáuregui, and Alfredo Varela-Echavarría

Chapter Four Development of the Paraventricular Nucleus of the Hypothalamus

Larry W. Swanson

Chapter Five Neural Tube Defects: New Insights on Risk Factors

Enrique Pedernera, Rodrigo Núñez Vidales, and Carmen Méndez

Chapter Six Quantitative Electroencephalography in the Normal and Abnormal Developing Human Brain
Thalía Harmony, Alfonso Alba, José Luis Marroquín, Antonio Fernández-Bouzas, Gloria Avecilla, Josefina Ricardo-Garcell
Efraín Santiago-Rodríguez, Gloria Otero, Eneida Porras-Kattz, and Thalía Fernández

Part 3 Degenerative Brain Diseases

Chapter Seven The Nigro-Striatal DA Neurons and Mechanisms of Their Degeneration in Parkinson's Disease Kjell Fuxe, Daniel Marcellino, Tiziana Antonelli, Giuseppa Mudó, Paul Manger, Susanna Genedani, Luca Ferraro, Natale Belluardo, Sergio Tanganelli, and Luigi F. Agnati

Chapter Eight Degeneration and Regeneration of Myelin in the Central Nervous System of the Aging Monkey Alan Peters

Chapter Nine Degeneration in Canine Brain Aging

Elizabeth Head

Chapter Ten Alzheimer's Disease–Related Mechanisms of Neuronal Dysfunction and Degeneration: Studies in Human Cortical Neurons

Jorge Busciglio, and Atul Deshpande

Chapter Eleven Aberrant Cells and Synaptic Circuits in Pediatric Epilepsy Surgery Patients
Carlos Cepeda, Véronique M. André, Irene Yamazaki, Max Kleiman-Weiner, Robin S. Fisher, Harry V. Vinters, Michael S. Levine, and Gary W. Mathern

Part 4 Neural Plasticity and Regeneration

Chapter Twelve Developmental Profile of Newly Generated Granule Cells in the Adult Rodent Dentate Gyrus Charles E. Ribak, Zachary D. Perez, and Lee A. Shapiro

Chapter Thirteen Functional Architecture of Directional Tuning in the Primate Motor Cortex During 3D Reaching Hugo Merchant, Thomas Naselaris, Wilbert Zarco, Ramón Bartolo, Luis Prado, Oswaldo Pérez, and Juan Carlos Méndez

Chapter Fourteen Neural Codes for Perceptual Decisions

Ranulfo Romo, Adrián Hernández, Luis Lemus, Rogelio Luna, Antonio Zainos, Verónica Nácher, Manuel Alvarez, Yuriria Vázquez, Silvia Cordero, and Liliana Camarillo

Chapter Fifteen Human Neural Stem Cell-Mediated Repair of the Contused Spinal Cord: Timing the Microenvironment

Brian J. Cummings, Mitra J. Hooshmand, Desirée L. Salazar, and Aileen J. Anderson

Chapter Sixteen Spinal Cord Injury Pathology Differs with Injury Type, Age, and Exercise Monica M. Siegenthaler, and Hans S. Keirstead

End Matter

PRINTED FROM OXFORD SCHOLARSHIP ONLINE (www.oxfordscholarship.com). (c) Copyright Oxford University Press, 2019. All Rights Reserved. An personal use. Subscriber: UC - Irvine; date: 29 August 2019