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978-0-521-86914-0 - Beyond the Synapse: Cell-Cell Signaling in Synaptic Plasticity

Edited by R. Douglas Fields

Frontmatter

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Beyond the Synapse

Formation of synapses and the changes in their connections during life are the basis for learning and memory and recovery from brain disease or injury. Much interest has been focussed on how synapses function at the molecular level, while the cell–cell interactions controlling their formation and function receive far less attention. This book expands the scope of inquiry beyond the synaptic cleft to provide a comprehensive insight into how intercellular signaling enables neurons to communicate beyond the synapse, and to interact with other cells in the brain to alter synaptic connections appropriately. These are chapters devoted to consideration of glia, brain cells which have thus far been ignored in the majority of studies of learning and memory. Writing for academic researchers and professionals, contributors to this book reveal that there is much to learning and memory that lies beyond the synapse.

R. DOUGLAS FIELDS has worked at the NIH, where he now runs the Nervous System Development and Plasticity section, since 1987. Originally a marine biologist, Dr Fields has always based his primary research interests around the synapse. He is currently Editor-in-Chief of *Neuron Glia Biology*.

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Contributors

AVSHALUMOV, MARAT V.

Department of Physiology, Neuroscience, and
 Neurosurgery
 New York University School of Medicine
 550 First Avenue
 New York, NY 10016

BALICE-GORDON, RITA J.

Department of Neuroscience
 University of Pennsylvania School of Medicine
 Philadelphia, PA 19104-6074

BAO, LI

Department of Physiology, Neuroscience, and
 Neurosurgery
 New York University School of Medicine
 550 First Avenue
 New York, NY 10016

BAUDRY, MICHAEL

Department of Biological Sciences
 University of Southern California
 3641 Watt Way
 Los Angeles, CA 90089-2520

BEATTIE, ERIC C.

Neurosciences Program
 California Pacific Medical Center Research Institute
 475 Brannan Street, Suite 220
 San Francisco, CA 94107

BEATTIE, MICHAEL S.

Brain and Spinal Injury Center
 University of California
 San Francisco, CA 94110

BUKALO, OLENA

National Institutes of Health, NICHD
 Bldg. 35, Room 2A214, MSC 3713
 35 Lincoln Drive
 Bethesda, MD 20892

BOULANGER, LISA M.

Department of Biological Sciences
 University of California, San Diego
 9500 Gilman Drive
 La Jolla, CA 92093

BRAITHWAITE, STEVEN P.

Neurodegeneration Research
 Wyeth Research
 Princeton, NJ 08543

CAIN, CHRISTOPHER

Center for Neural Science
 New York University
 4 Washington Place
 New York, NY 10003

CHANG, JAY H.

Section on Neural Development and Plasticity
 NICHD, NIH
 Building 35, Rm. 1c86914
 35 Convent Dr., MSC 3714
 Bethesda, MD 20892-3714

CURRY, LISA R.

Department of Biology
 University of Texas at San Antonio
 One UTSA Circle
 San Antonio, Texas 78249

DEBIEC, JACEK

Department of Psychiatry
 New York University School of Medicine
 Center for Neural Science
 New York University
 4 Washington Pl., Room 809
 New York, NY 10003

DU, JING

Laboratory of Molecular Pathophysiology
 National Institute of Mental Health
 Bethesda, MD 20892

viii List of contributors

EICHENBAUM, HOWARD

Center for Memory and Brain
 Boston University
 Department of Psychology
 64 Cummington Street
 Boston MA 02215

ELMARIAH, SARINA B.

Department of Neuroscience
 University of Pennsylvania School of Medicine
 215 Stemmler Hall
 Philadelphia, PA 19104-6074

FIELDS, R. DOUGLAS

Nervous System Development and
 Plasticity Section
 National Institutes of Health, NICHD
 Bldg. 35, Room 2A211, MSC 3713
 35 Lincoln Drive
 Bethesda, MD 20892

FOY, MICHAEL R.

Department of Psychology
 Loyola Marymount University
 1 LMU Drive
 Los Angeles, CA 90045

FREY, JULIETTA U.

Leibniz Institute for Neurobiology
 Department of Neurobiology
 Brenneckstrasse 6
 39108
 Magdeburg
 Germany

GREENOUGH, WILLIAM T.

Beckman Institute
 University of Illinois
 405 N. Mathews Ave.
 Urbana, IL 61801

GROSSMAN, AARON W.

Beckman Institute
 University of Illinois at Urbana-Champaign
 405 M. Mathews Ave
 Urbana, IL 61801

HERNANDEZ, RUBEN V.

Department of Psychology
 San Diego State University
 5500 Campanile Drive
 San Diego, CA 92182

HUGHES, ETHAN G.

Department of Neuroscience
 University of Pennsylvania School of Medicine
 215 Stemmler Hall
 Philadelphia, PA 19104-6074

KANG, JIAN

Center for Aging and Developmental Biology
 Dept. of Neurosurgery
 University of Rochester Medical Center
 601 Elmwood Avenue
 Box 645, KMRB1.9915
 Rochester, NY 14642

KIM, PAUL M.

Department of Pharmacology
 Johns Hopkins University School of Medicine
 725 North Wolfe Street
 Baltimore, MD 21205

KORZ, VOLKER

Department of Neurophysiology,
 Leibniz-Institute for Neurobiology
 Brenneckestr. 6,
 D-39118 Magdeburg
 Germany

LEBARON, RICHARD G.

Department of Biology
 University of Texas at San Antonio
 One UTSA Circle
 San Antonio, Texas 78249

LEDoux, JOSEPH E.

New York University
 Center for Neural Science
 6 Washington Place
 New York, NY 10003

LEONOUKAKIS, DMITRI

Neurosciences Program
 California Pacific Medical Center Research Institute
 475 Brannan St, Suite 220
 San Francisco, CA 94107

LIU, WING-SONG

Center for Aging and Developmental Biology
 Dept. of Neurosurgery
 University of Rochester Medical Center
 601 Elmwood Avenue
 Box 645, KMRB1.9915
 Rochester, NY 14642

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List of contributors

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LU, BAI

Section on Neural Development and Plasticity

NICHD, NIH

Building 35, Rm. 1c86914

35 Convent Dr., MSC 3714

Bethesda, MD 20892-3714

MANJI, HUSSEINI K.

Laboratory of Molecular Pathophysiology

Mood and Anxiety Disorders Program

National Institute of Mental Health

Building 35, Room 1C-912

Bethesda, MD 20892

MACGREGOR, DUNCAN G.

Division of Neuroscience and Biomedical Systems

Institute of Biological and Life Sciences

University of Glasgow

University Avenue

Glasgow G12 8QQ, UK

MARKHAM, JULIE A.

Maryland Psychiatric Research Center

University of Maryland School of Medicine

P.O. Box 21247

Baltimore, MD 21228

MARTINEZ, JOE L. JR

Department of Biology

University of Texas at San Antonio

One UTSA Circle

San Antonio, Texas 78249

MCEWEN, BRUCE S.

The Rockefeller University

1230 York Avenue

New York, NY 10021

MUSTAFA, ASIF K.

The Solomon H. Snyder Department of Neuroscience

Johns Hopkins University School of Medicine

725 North Wolfe Street

Baltimore, MD 21205

NAVARRO, MARY M.

Department of Biology

University of Texas at San Antonio

One UTSA Circle

San Antonio, Texas 78249

NEDERGAARD, MAIKEN

Center for Aging and Developmental Biology

Dept. of Neurosurgery

University of Rochester Medical Center

601 Elmwood Avenue

Box 645, KMRB1.9915

Rochester, NY 14642

NEWMAN, ERIC A.

Department of Neuroscience

University of Minnesota

6-145 Jackson Hall

321 Church Street SE

Minneapolis, MN 55455

OH, EUN JOO

Department of Neuroscience

University of Pennsylvania School of Medicine

215 Stemmler Hall

Philadelphia, PA 19104-6074

ORFILA, JAMES E.

Department of Biology

University of Texas at San Antonio

One UTSA Circle

San Antonio, Texas 78249

PATEL, JYOTI C.

Department of Physiology, Neuroscience, and
Neurosurgery

New York University School of Medicine

550 First Avenue

New York, NY 10016

QUIROZ, JORGE

CNS and Pain Therapeutic Area

Johnson and Johnson Pharmaceutical

Research and Development

1125 Trenton-Harbourton Road

Titusville, NJ 08560

RICE, MARGARET E.

Departments of Physiology & Neuroscience and
Neurosurgery

New York University School of Medicine

550 First Avenue

New York, NY 10016 USA

ROMEO, RUSSELL D.

Laboratory of Neuroendocrinology

The Rockefeller University

Box 165

New York, NY 10021

ROSE, STEVEN P. R.

Dept of Biological Sciences

The Open University

Milton Keynes MK7 6AA, UK

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x List of contributors

SIDLÓ, ZSUZSANNA

Department of Physiology, Neuroscience, and
Neurosurgery

New York University School of Medicine

550 First Avenue

New York, NY 10016

SNYDER, SOLOMON H.

Department of Psychiatry and Behavioral Sciences

Johns Hopkins University School of Medicine

725 North Wolfe Street

Baltimore, MD 21205

STICKGOLD, ROBERT

Harvard Medical School

Department of Psychiatry

BIDMC/E-FD 861

330 Brookline Ave

Boston, MA 02139

THOMPSON, RICHARD F.

University of Southern California

3641 Watt Way, HNB 522

Los Angeles, CA 90089, USA

XU, QIWU

Center for Aging and Developmental Biology

Dept. of Neurosurgery

University of Rochester Medical Center

601 Elmwood Avenue

Box 645, KMRB1.9915

Rochester, NY 14642

WALKER, MATTHEW P.

Sleep and Neuroimaging Laboratory

Department of Psychology and Helen Wills

Neuroscience Institute

Tolman Hall, Room 333

University of California

Berkeley, CA 94720

WATERS, ELIZABETH M.

The Rockefeller University

1230 York Avenue

New York, NY 10021

YUAN, PEIXIONG

Laboratory of Molecular Pathophysiology

National Institute of Mental Health

Bethesda, MD 20892

ZARATE, CARLOS, JR.

Laboratory of Molecular Pathophysiology

Mood and Anxiety Disorders Program

National Institute of Mental Health

Building 35, Room 1C-912

Bethesda, MD 20892