CONTENTS

Preface v
Companion Table of Contents ix
Contributors xiii
Color Plates xv

I. DEVELOPMENTAL NEUROTOXICOLOGY

James L. Schardein, Section Editor

1 Developmental Neurotoxicology: *Testing and Interpretation* 3
Judith W. Henck

2 Manifestations of CNS Insult During Development 57
Susan A. Rice

3 Developmental Neurotoxicity: *What Have We Learned from Guideline Studies?* 81
Gregg D. Cappon and Donald G. Stump

4 Risk Assessment of Developmental Neurotoxicants 111
Hugh A. Tilson

II. DRUGS OF ABUSE

Patricia A. Broderick, Section Editor

5 Electrophysiologic Evidence of Neural Injury or Adaptation in Cocaine Dependence 131
Kenneth R. Alper, Leslie S. Prichep, E. Roy John, Sharon C. Kowalik, and Mitchell S. Rosenthal

6 Addictive Basis of Marijuana and Cannabinoids 155
Eliot L. Gardner

7 Dopamine and Its Modulation of Drug-Induced Neuronal Damage 175
Donald M. Kuhn

8 NMDA Antagonist-Induced Neurotoxicity and Psychosis: *The Dissociative Stimulation Hypothesis* 199
Kevin Noguchi

9 Emerging Drugs of Abuse: *Use Patterns and Clinical Toxicity* 223
Katherine R. Bonson and Matthew Baggott

10 Mechanisms of Methamphetamine-Induced Neurotoxicity 259
Jean Lud Cadet and Christie Brannock

11 Neurotoxic Effects of Substituted Amphetamines in Rats and Mice: *Challenges to the Current Dogma* 269
James P. O'Callaghan and Diane B. Miller

12 Studies of Neural Degeneration Indicate that Fasciculus Retroflexus Is a Weak Link in Brain for Many Drugs of Abuse 303
Gaylord Ellison

13 Microsensors Detect Neuroadaptation by Cocaine: *Serotonin Released in Motor Basal Ganglia Is Not Rhythmic with Movement* 323
Patricia A. Broderick

III. Imaging

Thomas E. Schlaepfer, Section Editor

14 Impact of Intoxication: *Structural and Functional Modifications in the Brain Induced by Ethanol Exposure* 371
David J. Lyons, Cory S. Freedland, and Linda J. Porrino

15 Structural and Functional Neuroimaging of the Effects of Opioids 397
David Nutt and Mark Daglish

16 Structural and Functional Neuroimaging of the Effects of Cocaine in Human and Nonhuman Primates 413
Linda J. Porrino, David J. Lyons, Sharon R. Letchworth, Cory S. Freedland, and Michael A. Nader

17 Functional Neuroimaging of Cannabinoid Effects 437
Godfrey D. Pearlson

18 Neuroimaging of MDMA-Induced Neurotoxicity 445
Una D. McCann, Zsolt Szabo, and George A. Ricaurte

IV. Neurobehavioral Assessment Methods

Joel L. Mattsson, Section Editor

19 Tier 1 Neurological Assessment in Regulated Animal Safety Studies 461
Joseph F. Ross

20 Neurological Assessment: *The Role of the Clinician in Clinical Neurotoxicology* 507
James W. Albers

21 Human Neuropsychological Testing and Evaluation 551
Stanley Berent and Christine L. Trask

Index 581

http://www.springer.com/978-0-89603-796-0

Handbook of Neurotoxicology
Volume II
Massaro, E.J. (Ed.)
2002, XVI, 594 p. 32 illus., 11 illus. in color., Hardcover
ISBN: 978-0-89603-796-0
A product of Humana Press