

Contents

IX Preface

Steiner, M.A. (Allschwil); Yanagisawa, M. (Tsukuba); Clozel, M. (Allschwil)

Section I: The Orexin System and Its Role in Regulating Sleep and Wake

1 Twenty-Three Years of Hypocretins: The “Rosetta Stone” of Sleep/ Arousal Circuits

de Lecea, L. (Stanford, CA)

11 Interaction between Orexin Neurons and Monoaminergic Systems

Sakurai, T.; Saito, Y.C.; Yanagisawa, M. (Tsukuba)

22 Hypocretin/Orexin Receptor Pharmacology and Sleep Phases

Sun, Y.; Tisdale, R.K.; Kilduff, T.S. (Menlo Park, CA)

38 Sleep, Orexin and Cognition

Toor, B.; Ray, L.B.; Pozzobon, A.; Fogel, S.M. (Ottawa, ON)

Section II: Cellular and Molecular Dissection of the Orexin System

52 Subsecond Ensemble Dynamics of Orexin Neurons Link Sensation and Action

Burdakov, D. (Zürich)

61 Heterogeneity of Hypocretin/Orexin Neurons

Sagi, D. (Ramat-Gan); de Lecea, L. (Stanford, CA); Appelbaum, L. (Ramat-Gan)

75 Sleep and Metabolism: Implication of Lateral Hypothalamic Neurons

Oesch, L.T.; Adamantidis, A.R. (Bern)

91 Cellular Signaling Mechanisms of Hypocretin/Orexin

Kukkonen, J.P.; Turunen, P.M. (Helsinki)

Section III: The Orexin System in Sleep Pathology

103 Sleep Problems in Narcolepsy and the Role of Hypocretin/Orexin Deficiency

Mignot, E.; Zeitzer, J. (Palo Alto, CA); Pizza, F. (Bologna); Plazzi, G. (Bologna/Modena)

117 The Insomnia-Addiction Positive Feedback Loop: Role of the Orexin System

Fragale, J.E.; James, M.H.; Avila, J.A. (Piscataway, NJ); Spaeth, A.M.; Aurora, R.N.
(New Brunswick, NJ); Langleben, D. (Philadelphia, PA); Aston-Jones, G. (Piscataway, NJ)

128 Causes and Consequences of Chronic Sleep Deficiency and the Role of Orexin

Mullington, J.M.; Cunningham, T.J.; Haack, M.; Yang, H. (Boston, MA)

139 Hypocretin/Orexin, Sleep and Alzheimer's Disease

Dauvilliers, Y. (Montpellier)

150 Author Index

151 Subject Index