

**Japanese Journal of Neuropsychopharmacology**

**Vol. 35, No. 4 August, 2015**

**CONTENTS**

Review

Glutamic Acid as a Universal Extracellular Signal ..... Yukio  
YONEDA··· 81

Mini-Reviews

Pain and Emotional Dysregulation: Cellular Memory due to Pain  
..... Minoru NARITA, Moe WATANABE, Yusuke HAMADA,  
Hideki TAMURA, Daigo IKEGAMI, Naoko KUZUMAKI and Katsuhide IGARASHI···  
89

Controlling Sleep/Wakefulness Using Optogenetics ..... Akihiro  
YAMANAKA··· 97

Animals' Clever Adaptation Strategy for Seasonal Changes in Environment  
..... Keisuke IKEGAMI and Takashi YOSHIMURA··· 103