

B60/p6

KX

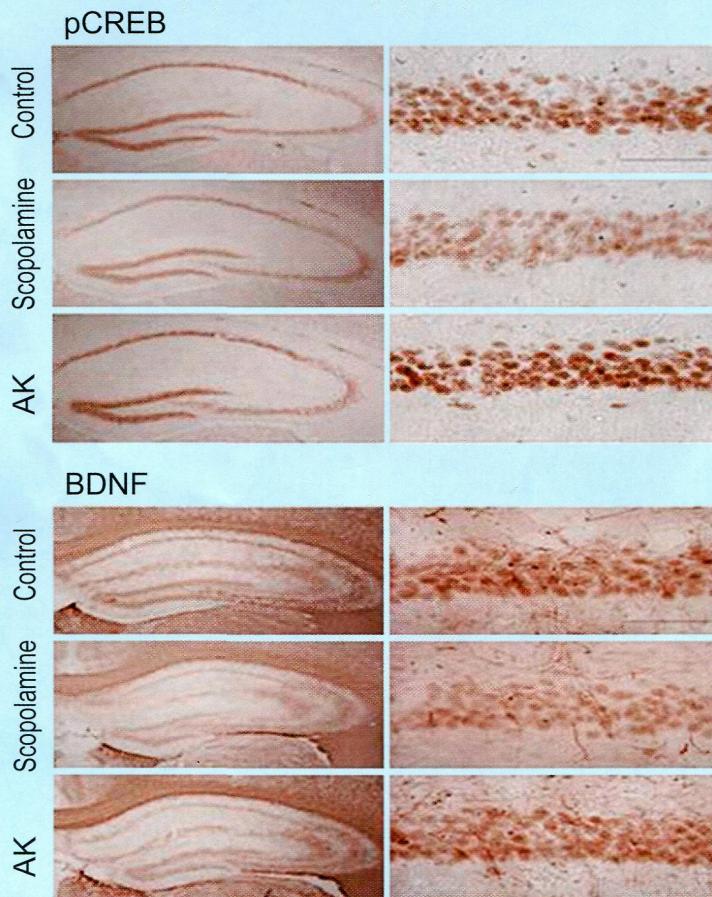
Biological and Pharmaceutical Bulletin

January 2013

BPBLEO 36 (1) 1-164 (2013)

Vol. 36 No. 1

Biological and Pharmaceutical Bulletin succeeds to Journal of Health Science from 2012.



Cover Figure The Beneficial Effect of *Angelica keiskei* on Memory Impairments

pp. 82-88

Current Topics Pathophysiological and Pharmacological Research in Cardiology



THE PHARMACEUTICAL SOCIETY OF JAPAN

<http://bpbj.pharm.or.jp>

Biological and Pharmaceutical Bulletin

Vol. 36, No. 1 January 2013

© Copyright, 2013, by the Pharmaceutical Society of Japan.

Contents

Current Topics

Pathophysiological and Pharmacological Research in Cardiology

Foreword	
K. Tanonaka	1
Electrophysiological and Pharmacological Properties of the Pulmonary Vein Myocardium I. Namekata, Y. Tsuneoka, and H. Tanaka	2
Non-genomic Action of Sex Steroid Hormones and Cardiac Repolarization J. Kurokawa and T. Furukawa	8
Application of Curcumin to Heart Failure Therapy by Targeting Transcriptional Pathway in Cardiomyocytes Y. Katanasaka, Y. Sunagawa, K. Hasegawa, and T. Morimoto	13
Dilated Cardiomyopathy: A Disease of the Myocardium A. Sanbe	18

Regular Articles

Anticonvulsant Activity of Acute and Chronic Treatment with a-Asarone from *Acorus gramineus* in Seizure Models

Q.-X. Chen, J.-K. Miao, C. Li, X.-W. Li, X.-M. Wu, and X. Zhang	23
The Mechanisms of Insulin Secretion and Calcium Signaling in Pancreatic β -Cells Exposed to Fluoroquinolones M. Bito, T. Tomita, M. Komori, T. Taogoshi, Y. Kimura, and K. Kihira	31
Enhancement of Diosgenin Distribution in the Skin by Cyclodextrin Complexation Following Oral Administration M. Okawara, Y. Tokudome, H. Todo, K. Sugibayashi, and F. Hashimoto	36
Protective Effects of Shichimotsu-koka-To on Irreversible Thy-1 Nephritis T. Ono, K. Kamikado, and T. Morimoto	41
MicroRNA 210 as a Biomarker for Congestive Heart Failure K. Endo, Y. Naito, X. Ji, M. Nakanishi, T. Noguchi, Y. Goto, H. Nonogi, X. Ma, H. Weng, G. Hirokawa, T. Asada, S. Kakinoki, T. Yamaoka, Y. Fukushima, and N. Iwai	48
Molecular Docking Studies of (1E,3E,5E)-1,6-Bis(substituted phenyl)hexa-1,3,5-triene and 1,4-Bis(substituted trans-styryl)benzene Analogs as Novel Tyrosinase Inhibitors Y. M. Ha, H. J. Lee, D. Park, H. O. Jeong, J. Y. Park, Y. J. Park, K. J. Lee, J. Y. Lee, H. R. Moon, and H. Y. Chung	55
Small RNA Transcriptomes of Two Types of Exosomes in Human Whole Saliva Determined by Next Generation Sequencing Y. Ogawa, Y. Taketomi, M. Murakami, M. Tsujimoto, and R. Yanoshita	66
Pharmacological Properties of FK886, a New, Centrally Active Neurokinin-1 Receptor Antagonist T. Yoshino-Furukawa, Y. Maeda, A. Kikuchi, H. Sakuma, K. Imazumi, H. Yamakuni, H. Sogabe, M. Matsuo, T. Manda, and W. Uchida	76
<i>Angelica keiskei</i> Ameliorates Scopolamine-Induced Memory Impairments in Mice S. R. Oh, S.-J. Kim, D. H. Kim, J. H. Ryu, E.-M. Ahn, and J. W. Jung	82
Investigation of the Safety of Topical Metronidazole from a Pharmacokinetic Perspective J. Iida, T. Kudo, K. Shimada, Y. Yatsuno, S. Yamagishi, S. Hasegawa, H. Ike, T. Sato, H. Kagaya, and K. Ito	89

Ocular Gene Delivery Systems Using Ternary Complexes of Plasmid DNA, Polyethylenimine, and Anionic Polymers

T. Kurosaki, M. Uematsu, K. Shimoda, K. Suzuma, M. Nakai, T. Nakamura, T. Kitahara, T. Kitaoka, and H. Sasaki

96

Notes

Ginsenoside Rhl Ameliorates High Fat Diet-Induced Obesity in Mice by Inhibiting Adipocyte Differentiation W. Gu, K.-A. Kim, and D.-H. Kim	102
Triglyceride-Induced Macrophage Cell Death Is Triggered by Caspase-1 S. J. Son, K.-J. Rhee, J. Lim, T. U. Kim, T.-J. Kim, and Y. S. Kim	108
Agonist-Induced Receptor Internalization in Chinese Hamster Ovary Cells Stably Co-expressing β_1 - and β_2 -Adrenergic Receptors T. Yoshihara, Y. Yonoki, M. Saito, T. Nakahara, K. Sakamoto, and K. Ishii	114
Ferulic Acid Induces Mammalian Target of Rapamycin Inactivation in Cultured Mammalian Cells Z. Bian, N. Furuya, D.-M. Zheng, J. A. O. Trejo, N. Tada, J. Ezaki, and T. Ueno	120
Intrathecal Ketamine and Pregabalin at Sub-effective Doses Synergistically Reduces Neuropathic Pain without Motor Dysfunction in Mice H. S. Lim, J.-M. Kim, J.-G. Choi, Y. K. Ko, Y. S. Shin, B. H. Jeon, J. B. Park, J.-H. Lee, and H.-W. Kim	125
Development and Interlaboratory Validation of Quantitative Polymerase Chain Reaction Method for Screening Analysis of Genetically Modified Soybeans R. Takabatake, M. Onishi, T. Koiwa, S. Futo, Y. Minegishi, H. Akiyama, R. Teshima, T. Kurashima, J. Mano, S. Furui, and K. Kitta	131
Cytotoxic and Apoptosis-Inducing Activities of 12-O-Acetylazedarachin B from the Fruits of <i>Melia azedarach</i> in Human Cancer Cell Lines T. Kikuchi, X. Pan, K. Ishii, Y. Nakamura, E. Ogihara, K. Koike, R. Tanaka, and T. Akihisa	135
Protective Effects of Ferulic Acid in Amyloid Precursor Protein Plus Presenilin-1 Transgenic Mouse Model of Alzheimer Disease J.-J. Yan, J.-S. Jung, T.-K. Kim, M. A. Hasan, C.-W. Hong, J.-S. Nam, and D.-K. Song	140
Impact of Solute Carrier Family 29 Member 1 (SLC29A1) Single Nucleotide Polymorphisms on mRNA Expression in Peripheral Blood Mononuclear Cells Y. Suzuki, M. Homma, M. Abei, I. Hyodo, and Y. Kohda	144
Absorption, Storage and Distribution of β -Cryptoxanthin in Rat after Chronic Administration of Satsuma Mandarin (<i>Citrus unshiu</i> MARC.) Juice M. Sugiura, K. Ogawa, and M. Yano	147
Studies on Lymphangiogenesis Inhibitors from Korean and Japanese Crude Drugs D. Jeong, K. Watari, T. Shirouzu, M. Ono, K. Koizumi, I. Saiki, Y.-C. Kim, C. Tanaka, R. Higuchi, and T. Miyamoto	152
An ent-Kaurane Diterpenoid from <i>Croton tonkinensis</i> Induces Apoptosis by Regulating AMP-Activated Protein Kinase in SK-HEP1 Human Hepatocellular Carcinoma Cells Y. H. Sul, M. S. Lee, E. Y. Cha, P. T. Thuong, N. M. Khoi, and I. S. Song	158

About the cover: To investigate the effects of *Angelica keiskei* on the expression of pCREB and BDNF which are crucial molecules in memory formation, we conducted immunohistochemical using the brain tissues. *Angelica keiskei* administration increased the expression of pCREB and BDNF in the hippocampal CA1 and dentate gyrus regions. See the article by Oh *et al.* on page 82 of this issue.