

74
B60/p6

卷5号平成25年5月1日発行 昭和55年4月26日 第3種郵便物認可 ISSN 0918-6158

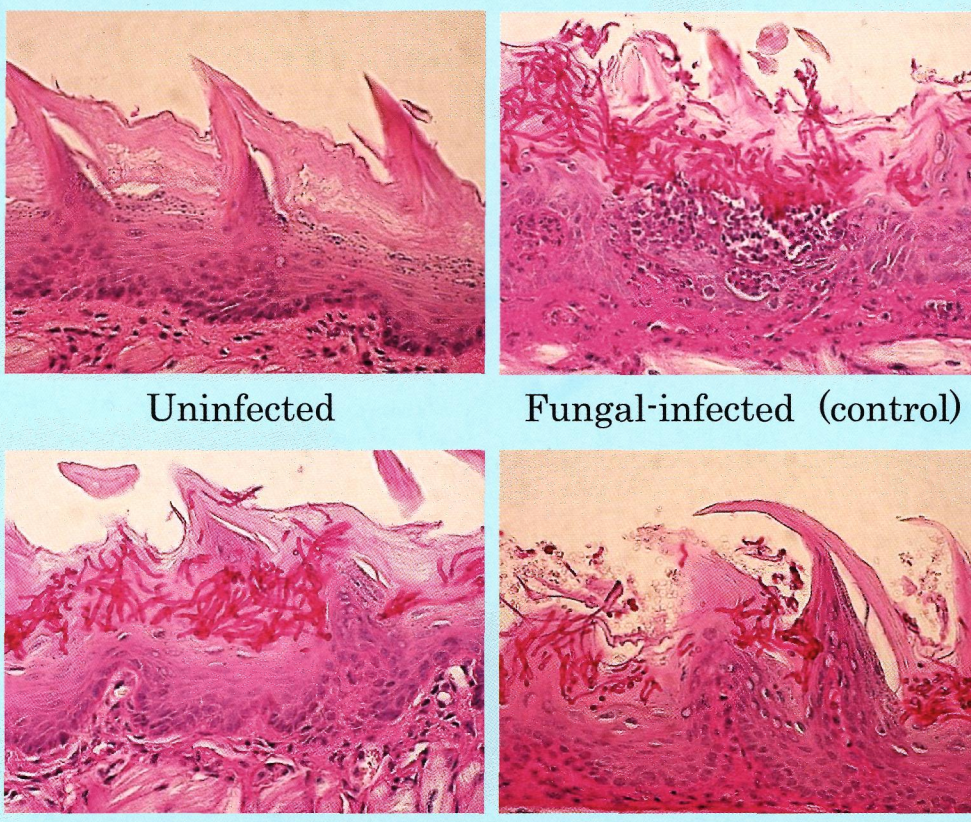
Biological and Pharmaceutical Bulletin

May 2013

BPBLEO 36 (5) 691-876 (2013)

Vol. 36 No. 5

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



Uninfected

Fungal-infected (control)

Treated with terpinen-4-ol

Cover Figure T-4-ol Inhibits Accumulation of Inflammatory Cells

pp. 838-844

Current Topics Challenges of Drug Delivery Systems That Contribute to
Cancer Chemotherapy



THE PHARMACEUTICAL SOCIETY OF JAPAN

<http://bpb-pharm.or.jp>

Biological and Pharmaceutical Bulletin

Vol. 36, No. 5 May 2013

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

Contents

Current Topics

Challenges of Drug Delivery Systems That Contribute to Cancer Chemotherapy Foreword T. Ogihara	691
Alteration of Tumor Microenvironment for Improved Delivery and Intratumor Distribution of Nanocarriers T. Ishida and H. Kiwada	692
Nanoparticle-Based Passive Drug Targeting to Tumors: Considerations and Implications for Optimization K. Ogawara, Y. Yoshizawa, K. Un, T. Araki, T. Kimura, and K. Higaki	698
Development of Liposomal Anticancer Drugs K. Hyodo, E. Yamamoto, T. Suzuki, H. Kikuchi, M. Asano, and H. Ishihara	703
Recent Advances in Claudin-Targeting Technology S. Nagase, R. Doyama, K. Yagi, and M. Kondoh	708
Clinical Application of Drug Delivery Systems in Cancer Chemotherapy: Review of the Efficacy and Side Effects of Approved Drugs T. Iwamoto	715
Application of Hospital Preparations for Cancer Treatment, and an Approach toward Their Commercialization K. Watanabe, N. Goto, T. Nakamura, and M. Masada	719

Regular Articles

Anti-diabetic Action of 7- <i>O</i> -Galloyl- <i>D</i> -sedoheptulose, a Polyphenol from Corni Fructus, through Ameliorating Inflammation and Inflammation-Related Oxidative Stress in the Pancreas of Type 2 Diabetics C. H. Park, T. Tanaka, and T. Yokozawa	723
Effects of 3,4-Dihydroxyacetophenone on the Hypercholesterolemia-Induced Atherosclerotic Rabbits D. Zhang, J. Liu, L. Wang, J. Wang, W. Li, B. Zhuang, J. Hou, and T. Liu	733
Macrophage Migration Inhibitory Factor Is a Possible Candidate for the Induction of Microalbuminuria in Diabetic <i>db/db</i> Mice T. Watanabe, N. H. Tomioka, M. Doshi, S. Watanabe, M. Tsuchiya, and M. Hosoyamada	741
Baicalein 6- <i>O</i> - β - <i>D</i> -Glucopyranuronoside Is a Main Metabolite in the Plasma after Oral Administration of Baicalin, a Flavone Glucuronide of Scutellariae Radix, to Rats T. Akao, K. Sato, J.-X. He, C.-M. Ma, and M. Hattori	748
Erxian Decoction, a Traditional Chinese Herbal Formula, Inhibits Angiogenesis in Human Umbilical Vein Endothelial Cells X. Yu, Y. Tong, W. Huang, and W. Ge	754
Effects of Magnolol on Impairment of Learning and Memory Abilities Induced by Scopolamine in Mice Y. Li, Y. Hong, J. He, J. Lin, Y. Shan, D. Fu, Z. Chen, X. Ren, Z. Song, and L. Tao	764
Inhibitory Effects of <i>Saururi chinensis</i> Extracts on Melanin Biosynthesis in B16F10 Melanoma Cells D. H. Lee, D. H. Kim, I. Y. Oh, S. Y. Kim, Y. Y. Lim, H. M. Kim, Y. H. Kim, Y. M. Choi, S. E. Kim, B. J. Kim, and M. N. Kim	772
Method for Individualized Evaluation of Antiemetic Effect Induced by 5-HT ₃ Receptor Antagonist H. Nakamura, H. Yokoyama, K. Yoshimoto, A. Nakajima, K. Okuyama, O. Iwase, and Y. Yamada ...	780
Quercetin But Not Quercitrin Ameliorates Tumor Necrosis Factor- α -Induced Insulin Resistance in C2C12 Skeletal Muscle Cells X. Dai, Y. Ding, Z. Zhang, X. Cai, L. Bao, and Y. Li	788

6,4'-Dihydroxy-7-methoxyflavanone Inhibits Osteoclast Differentiation and Function N.-K. Im, J.-Y. Choi, H. Oh, Y.-C. Kim, and G.-S. Jeong	796
Cytoprotective Effect of Alpha-Lipoic Acid on Paraquat-Exposed Human Bronchial Epithelial Cells <i>via</i> Activation of Nuclear Factor Erythroid Related Factor-2 Pathway Y.-S. Kim, B. Podder, and H.-Y. Song	802
Effects of Ginsenoside Rg ₃ on $\alpha 9\alpha 10$ Nicotinic Acetylcholine Receptor-Mediated Ion Currents B.-H. Lee, S.-H. Choi, S.-H. Hwang, H.-J. Kim, S.-M. Lee, H.-C. Kim, H. Rhim, and S.-Y. Nah	812
Effectiveness and Safety of Antiemetic Aprepitant in Japanese Patients Receiving High-Dose Chemotherapy Prior to Autologous Hematopoietic Stem Cell Transplantation M. Uchida, H. Ikese, T. Miyamoto, K. Kato, K. Suetsugu, K. Ichinose, H. Hiraiwa, A. Sakurai, K. Takenaka, T. Muta, H. Iwasaki, T. Teshima, M. Shiratsuchi, N. Egashira, K. Akashi, and R. Oishi	819
Infiltration of M1 Macrophages into Adipose Tissue of ddY-H Mice Preceding Spontaneous Appearances of Insulin Resistance T. Maeda, I. Noge, and Y. Kagawa	825
Effects of Oakmoss and Its Components on Biofilm Formation of <i>Legionella pneumophila</i> H. Nomura, Y. Isshiki, K. Sakuda, K. Sakuma, and S. Kondo	833
Suppression of Inflammatory Reactions by Terpinen-4-ol, a Main Constituent of Tea Tree Oil, in a Murine Model of Oral Candidiasis and Its Suppressive Activity to Cytokine Production of Macrophages <i>in Vitro</i> K. Ninomiya, K. Hayama, S. A. Ishijima, N. Maruyama, H. Irie, J. Kurihara, and S. Abe	838

Notes

The Protective Effects of Piceatannol from Passion Fruit (<i>Passiflora edulis</i>) Seeds in UVB-Irradiated Keratinocytes H. Maruki-Uchida, I. Kurita, K. Sugiyama, M. Sai, K. Maeda, and T. Ito	845
Effect of a Peroxynitrite Scavenger, a Manganese-Porphyrin Compound on Airway Remodeling in a Murine Asthma Y. Cao, M. Fujii, K. Ishihara, S. Akiba, H. Yasui, and T. Nabe	850
Enhanced Plasmid DNA Transfer into Tumor Cells by Nanoparticle Composed of Cholesteryl Triamine and Diamine Y. Hattori, T. Nakamura, H. Ohno, N. Fujii, and Y. Maitani	856
Therapeutic Effects of Autologous Lymphocytes Activated with Trastuzumab for Xenograft Mouse Models of Human Breast Cancer S. Nakagawa, Y. Matsuoka, H. Ichihara, H. Yoshida, K. Yoshida, and R. Ueoka	861
Identification of Acyl-CoA Thioesterase in Mouse Mesenteric Lymph Nodes T. Ohtomo, C. Nakao, M. Sumiya, O. Kaminuma, A. Abe, A. Mori, N. Inaba, T. Kato, and J. Yamada	866
16S Ribosomal RNA Gene-Based Phylogenetic Analysis of Abundant Bacteria in River, Canal and Potable Water in Bangkok, Thailand N. Yamaguchi, T. Nishiguchi, F. Utrarachkij, O. Suthienkul, and M. Nasu	872

About the cover: PAS-stained sections of typical lesion of *Candida*-infected tongues were observed microscopically. Oral treatment with terpinen-4-ol (T-4-ol), a main constituent of tea tree oil, *Melaleuca alternifolia*, inhibited local accumulation of inflammatory cells 24 h after *Candida* inoculation which seemed clearly different from the control group. This result might correspond to suppression of increase of inflammatory markers by T-4-ol. See the article by Ninomiya *et al.* on page 838 of this issue.