

Contents

Special Issue: Combinatorial Bioengineering-Development of Molecular Evolution
Guest Editors: Mitsuyoshi Ueda and Akihiko Kondo

Editorial	137
Reviews	
Future direction of molecular display by yeast-cell surface engineering M. Ueda (Kyoto, Japan)	139
MolCraft : a hierarchical approach to the synthesis of artificial proteins K. Shiba (Tokyo, Japan)	145
DNA as a 'Nanomaterial' Y. Ito (Kawasaki, Japan) and E. Fukusaki (Suita, Japan)	155
The plant vesicular transport engineering for production of useful recombinant proteins K. Yoshida, T. Matsui and A. Shinmyo (Nara, Japan)	167
Articles	
Stabilization of antibody V _H -domains by proteolytic selection H. Ueda, P. Kristensen and G. Winter (Cambridge, UK)	173
A chitin-oligomer binding peptide obtained by screening of a phage display random peptide library and its affinity modulation corresponding to oxidation–reduction state E.-i. Fukusaki, K. Ogawa, A. Okazawa, S.-i. Kajiyama and A. Kobayashi (Suita, Japan)	181
A screening of phage displayed peptides for the recognition of fullerene (C60) Y. Morita, T. Ohsugi (Ishikawa, Japan), Y. Iwasa (Sendai, Japan) and E. Tamiya (Ishikawa, Japan)	185
A practical kinetic model for efficient isolation of useful antibodies from phage display libraries Y. Katakura, G. Zhuang, T. Nakatani, T. Furuta, T. Omasa, M. Kishimoto, K.-i. Suga and S. Shioya (Osaka, Japan)	191
Surface display of a glucose binding protein K. Ye, S. Jin, K. Bratic and J.S. Schultz (Pittsburgh, PA, USA)	201
Use of a novel affinity tag selected with a bacterial random peptide library for improving activity retention of glutathione S-transferase adsorbed on a polystyrene surface T. Sakiyama, S. Ueno, K. Imamura and K. Nakanishi (Okayama, Japan)	207
Combinatorics of peptide sextets encoded by a single microgene K. Kashiwagi and K. Shiba (Tokyo, Japan)	215
Rapid screening for affinity-improved scFvs by means of single-molecule-PCR-linked in vitro expression S. Rungpragayphan, M. Haba, H. Nakano and T. Yamane (Nagoya, Japan)	223
Construction of combinatorial library of starch-binding domain of <i>Rhizopus oryzae</i> glucoamylase and screening of clones with enhanced activity by yeast display method S. Shiraga (Kyoto, Japan), M. Kawakami (Kanagawa, Japan) and M. Ueda (Kyoto, Japan)	229
Molecular engineering of <i>Rhizopus oryzae</i> lipase using a combinatorial protein library constructed on the yeast cell surface H. Shibamoto, T. Matsumoto, H. Fukuda and A. Kondo (Kobe, Japan)	235
Comparison of two forms of catalytic antibody displayed on yeast-cell surface Y. Lin (Kyoto, Japan and Guangzhou, China), S. Shiraga (Kyoto, Japan), T. Tsumuraya (Osaka, Japan), T. Matsumoto, A. Kondo (Kobe, Japan), I. Fujii (Osaka, Japan) and M. Ueda (Kyoto, Japan)	241
Isolation of novel catalytic antibody clones from combinatorial library displayed on yeast-cell surface Y. Lin (Kyoto, Japan and Guangzhou, China), S. Shiraga (Kyoto, Japan), T. Tsumuraya, I. Fujii (Osaka, Japan), T. Matsumoto, A. Kondo (Kobe, Japan) and M. Ueda (Kyoto, Japan)	247
Construction of ethanol-tolerant yeast strains with combinatorial library-selected peptides T. Matsumoto, S. Ishikawa, H. Fukuda and A. Kondo (Kobe, Japan)	253
Construction of system for localization of target protein in yeast periplasm using invertase T. Tanino, T. Matsumoto, H. Fukuda and A. Kondo (Kobe, Japan)	259
Development of a herbicide biosensor using a peptide receptor screened from a combinatorial library I. Obataya, C. Nakamura (Hyogo, Japan), H. Enomoto, T. Hoshino (Ibaraki, Japan), N. Nakamura and J. Miyake (Hyogo, Japan)	265
Author Index	I
Subject Index	V
Volume contents	XI