



Volume 481, Number 2, January 15, 2009

CONTENTS

- Relationship between $\beta 4$ hydrogen bond and $\beta 6$ hydrophobic interactions during aggregate, fiber or crystal formation in oversaturated solutions of hemoglobin A and S *Kazuhiko Adachi, Min Ding, Toshio Asakura, Saul Surrey* 137
- 5,10-Methenyltetrahydrofolate synthetase activity is increased in tumors and modifies the efficacy of antipurine LY309887 *Martha S. Field, Montserrat C. Anguera, Rodney Page, Patrick J. Stover* 145
- Amino acid substitutions in the sugar kinase/hsp70/actin superfamily conserved ATPase core of *E. coli* glycerol kinase modulate allosteric ligand affinity but do not alter allosteric coupling *Donald W. Pettigrew* 151
- A tomato ER-type Ca^{2+} -ATPase, LCA1, has a low thapsigargin-sensitivity and can transport manganese *Neil A. Johnson, Fengli Liu, Phillip D. Weeks, Audrey E. Hentzen, Hilary P. Kruse, Jennifer J. Parker, Mette Laursen, Poul Nissen, Charles J. Costa, Craig Gatto* 157
- Comparison of NMR structural and dynamics features of the urea and guanidine-denatured states of GED *Jeetender Chugh, Shilpy Sharma, Ramakrishna V. Hosur* 169
- Effect of a short- and long-term treatment with *Ginkgo biloba* extract on Amyloid Precursor Protein Levels in a transgenic mouse model relevant to Alzheimer's disease *Sabine Augustin, Gerald Rimbach, Kay Augustin, Reinhard Schliebs, Siegfried Wolffram, Rainer Cermak* 177

Continued

Abstracted/indexed in Biological Abstracts - Chemical Abstracts - Current Contents/Life Sciences - EMBASE - EMBiology - Excerpta Medica - Genetics Abstracts - MEDLINE® - Research Alert - SCISEARCH - Science Citation Index. Also covered in the abstract and citation database SCOPUS®. Full text available on ScienceDirect®.

For a full and complete Guide for Authors, please visit the journal homepage at <http://ees.elsevier.com/yabbi>.

Archives of Biochemistry and Biophysics has no page charges.

Cover photo. Mechanical permeabilization and RhoDex entrapment in cultured hepatocytes. Cultured hepatocytes were loaded with green-fluorescing MTG and incubated in ICB (A) RhoDex (400 μM) was then added followed by mechanical perturbation using a micropipette. Afterwards, RhoDex penetrated the cytoplasm and nuclei (B) After 120 s, the medium was replaced with ICB containing both RhoDex and DIDS (30 μM), the latter a VDAC inhibitor to entrap RhoDex in the mitochondrial intermembrane space. After another 60 s, the hepatocytes were washed with ICB containing only DIDS to remove unbound RhoDex. After another 300 s, images of MTG and RhoDex fluorescence were collected to identify RhoDex remaining within mitochondria (C) Higher magnification (lower panels) shows retention of red-fluorescing RhoDex (E) in MTG-labeled mitochondria (D) as evident in the overlay (F) White arrows identify strongly RhoDex-labeled structures that do not co-label with MTG. For more information please see the article by E. Holmuhamedov, J.J. Lemasters in this issue.



- Molecular determinants for the stereospecific reduction of 3-ketosteroids and reactivity towards all-*trans*-retinal of a short-chain dehydrogenase/reductase (DHRS4) *Satoshi Endo, Satoshi Maeda, Toshiyuki Matsunaga, Urmí Dhagat, Ossama El-Kabbani, Nobutada Tanaka, Kazuo T. Nakamura, Kazuo Tajima, Akira Hara* 183
- A kinetic study of gamma-glutamyltransferase (GGT)-mediated S-nitrosoglutathione catabolism *Valeria Angeli, Alessia Tacito, Aldo Paolicchi, Renata Barsacchi, Maria Franzini, Riccardo Baldassini, Cecilia Vecoli, Alfonso Pompella, Emilia Bramanti* 191
- Human sodium/inositol cotransporter 2 (SMIT2) transports inositols but not glucose in L6 cells *Xiaobo Lin, Lina Ma, Robin L. Fitzgerald, Richard E. Ostlund Jr.* 197
- Functional role of the charge at the T538 residue in the control of protein kinase C θ *Mario Passalacqua, Marco Pedrazzi, Bianca Sparatore, Mauro Patrone, Sandro Pontremoli, Edon Melloni* 202
- Sterol 24-C-methyltransferase: An enzymatic target for the disruption of ergosterol biosynthesis and homeostasis in *Cryptococcus neoformans* *W. David Nes, Wenxu Zhou, Kulothungan Ganapathy, JiaLin Liu, Rit Vatsyayan, Swetha Chamala, Keven Hernandez, Mayra Miranda* 210
- Identifying calpain substrates in intact S2 cells of *Drosophila* *Zoltan Bozoky, Anita Alexa, Julia Dancsok, Gergo Gogl, Eva Klement, Katalin F. Medzihradzsky, Peter Friedrich* 219
- Ethanol exposure decreases mitochondrial outer membrane permeability in cultured rat hepatocytes *Ekhsón Holmuamedov, John J. Lemasters* 226