

MOLECULAR BIOLOGY**Molecular Biology General**

- Structure of the Pig Sterol 14 α -Demethylase (CYP51) Gene and Its Expression in the Testis and Other Tissues M. Kojima, T. Morozumi, A. Onishi, and T. Mitsuhashi 805

Structure and Function of Genes and Other Genetic Materials

- Polyketide Synthase Gene Coupled to the Peptide Synthetase Module Involved in the Biosynthesis of the Cyclic Heptapeptide Microcystin T. Nishizawa, A. Ueda, M. Asayama, K. Fujii, K. Harada, K. Ochi, and M. Shirai 779

Regulation of Gene Expression

- IL-1 Induces Expression of p21^{WAF1} Independently of p53 in High-Passage Human Embryonic Fibroblasts WI38 Y. Osawa, M. Hachiya, S. Araki, T. Kusama, K. Matsushima, Y. Aoki, and M. Akashi 883

Recombinant DNA Technology

- Characterization of Ribonuclease HIII from *Escherichia coli* Overproduced in a Soluble Form N. Ohtani, M. Haruki, A. Muroya, M. Morikawa, and S. Kanaya 895

Genome Analysis

- Random Expression of Main and Vomeronasal Olfactory Receptor Genes in Immature and Mature Olfactory Epithelia of *Fugu rubripes* M. Asano-Miyoshi, T. Suda, A. Yasuoka, S. Osima, S. Yamashita, K. Abe, and Y. Emori 915

Molecular Genetics

- Characterization of Three Putative Sub-Domains in the Signal-Input Domain of the ArcB Hybrid Sensor in *Escherichia coli* A. Matsushika and T. Mizuno 855

CELL**Differentiation, Development, and Aging**

- Identification and Characterization of an Anterior Fat Body Protein in an Insect Y. Nakajima and S. Natori 901

Protein Targeting and Sorting

- Evidence for Recycling of Cytochrome P450 Sterol 14-Demethylase from the *cis*-Golgi Compartment to the Endoplasmic Reticulum (ER) upon Saturation of the ER-Retention Mechanism K. Homma, Y. Yoshida, and A. Nakano 747

Receptors and Signal Transduction

- Distinctive Functions of Syk N-Terminal and C-Terminal SH2 Domains in the Signaling Cascade Elicited by Oxidative Stress in B Cells J. Ding, T. Takano, P. Hermann, S. Gao, W. Han, C. Noda, S. Yanagi, and H. Yamamura 791
- Rho-Mediated Phosphorylation of Focal Adhesion Kinase and Myosin Light Chain in Human Endothelial Cells Stimulated with Sphingosine 1-Phosphate, a Bioactive Lysophospholipid Released from Activated Platelets Y. Miura, Y. Yatomi, G. Rile, T. Ohmori, K. Satoh, and Y. Ozaki 909
- NTAK α and β Isoforms Stimulate Breast Tumor Cell Growth by Means of Different Receptor Combinations N. Nakano, S. Higashiyama, K. Kajihara, T. Endo, H. Ishiguro, K. Yamada, T. Nagatsu, and N. Taniguchi 925

BIOTECHNOLOGY**Biotechnology General**

- Sequence Motif-Specific Assignment of Two [2Fe-2S] Clusters in Rat Xanthine Oxidoreductase Studied by Site-Directed Mutagenesis T. Iwasaki, K. Okamoto, T. Nishino, J. Mizushima, H. Hori, and T. Nishino 771

Gene and Protein Engineering

- Divalent Forms of CC49 Single-Chain Antibody Constructs in *Pichia pastoris* Expression, Purification, and Characterization A. Goel, G.W. Beresford, D. Colcher, G. Pavlinkova, B.J.M. Booth, J. Baranowska-Kortylewicz, and S.K. Batra 829

CORRECTIONS AND ADDITIONS

939

CONTENTS Rearranged According to Subject Categories, Vol. 127, No. 5

JB REVIEWS

- Mechanisms of *Igf2/H19* Imprinting: DNA Methylation, Chromatin and Long-Distance Gene Regulation H. Sasaki, K. Ishihara, and R. Kato 711
- The Function of Vitamin D Receptor in Vitamin D Action S Kato 717

BIOCHEMISTRY

Biochemistry General

- Molecular Cloning of cDNA Encoding Two Subunits of Calcineurin from Scallop Testis: Demonstration of Stage-Specific Expression during Maturation of the Testis M Uryu, A. Nakatomi, M Watanabe, R. Hatsuse, and M. Yazawa 739

Glycobiology and Carbohydrate Biochemistry

- High Resistance to Oxygen Radicals and Heat Is Caused by a Galactoglycerolipid in *Microbacterium* sp. M874 K. Nakata 731
- Enhanced Ability of Heparin-Carrying Polystyrene (HCPS) to Bind to Heparin-Binding Growth Factors and to Inhibit Growth Factor-Induced Endothelial Cell Growth M Ishihara, K. Ono, K. Ishikawa, H. Hattori, Y. Saito, H. Yura, T Akaike, Y Ozeki, S. Tanaka, H. Mochizuki, and A. Kurita 797
- Rescuing Activity of Galactoglycerolipids from Cellular Lesions Induced by 5-Aminolevulinic Acid K. Nakata 813
- Molecular Cloning and Genomic Analysis of Mouse GalNAc α 2,6-Sialyltransferase (ST6GalNAc I) N Kurosawa, S. Takashima, M. Kono, Y. Ikehara, M. Inoue, Y. Tachida, H. Narimatsu, and S. Tsuji 845

Protein and Peptide Chemistry

- Rapid Determination of Parvalbumin Amino Acid Sequence from *Rana catesbeiana* (pI 4.78) by Combination of ESI Mass Spectrometry, Protein Sequencing, and Amino Acid Analysis H Taka, N. Kaga, T. Fujimura, R. Mineki, M. Imaizumi, Y. Suzuki, R. Suzuki, M Tanokura, N Shindo, and K. Murayama 723
- Irreversible Conformational Change of Bacterio-opsin Induced by Binding of Retinal during Its Reconstitution to Bacteriorhodopsin, as Studied by ^{13}C NMR S. Yamaguchi, S. Tuzi, M. Tania, A. Naito, J.K. Lanyi, R. Needleman, and H. Saitō 861
- Effect of Mutagenic Replacement of the Carboxyl Terminal Amino Acid, Val124, on the Properties and Regeneration of Bovine Pancreatic Ribonuclease A T. Fujii, Y. Doi, H. Ueno, and R. Hayashi 877

Enzymology

- Activation of Phospholipase A_2 by Long Chain Fatty Acyl Groups Involves a Novel Unstable Linkage T Ahmed, S.M. Kelly, N.C. Price, and A.J. Lawrence 871

Biochemistry of Proteolysis

- Isolation and Characterization of Pepsinogen from *Trimeresurus flavoviridis* (Habu Snake) H. Yonezawa, T. Nonaka, T. Uchikoba, S. Hattori, M. Ohno, and M. Kaneda 755
- New World Monkey Pepsinogens A and C, and Prochymosins. Purification, Characterization of Enzymatic Properties, cDNA Cloning, and Molecular Evolution T. Kageyama 761
- Regulatory Role of C-Terminal Residues of SufA in Its Degradation by Lon Protease in *Escherichia coli* Y. Ishii, S. Sonezaki, Y. Iwasaki, Y. Miyata, K. Akita, Y. Kato, and F. Amano 837
- FtsH Recognizes Proteins with Unfolded Structure and Hydrolyzes the Carboxyl Side of Hydrophobic Residues Y Asahara, K. Atsuta, K. Motohashi, H. Taguchi, M. Yohda, and M. Yoshida 931

Biochemistry in Cell Membranes

- Membrane Enzyme Systems Responsible for the Ca^{2+} -Dependent Phosphorylation of Ser²⁷, the Independent Phosphorylation of Tyr¹⁰ and Tyr⁷, and the Dephosphorylation of These Phosphorylated Residues in the α -Chain of H/K-ATPase M. Kanagawa, S. Watanabe, S. Kaya, K. Togawa, T. Imagawa, A. Shimada, K. Kikuchi, and K. Taniguchi 821