

INDEX TO AUTHORS

A

- Abe, K. See *Taniguchi, Kaya, Mårdh*, 335
 Abe, Sachiko. See *Araki, Yamada, Waki, Kon, Itonori, Sugita, and Ando*, 93
 Abe, Syun-ichi. See *Irie, Koshiba, Koyama, Asakura, Shibata, Kimura, Naito, Yamauchi, Yada, Hanamura, Hanada, and Nakamura*, 717
 Aikawa, J., Park, Y.-N., Sugiyama, M., Nishiyama, M., Horinouchi, S., and Beppu, T. Replacements of Amino Acid Residues at Subsites and Their Effects on the Catalytic Properties in *Rhizomucor pusillus* Pepsin, an Aspartic Proteinase from *Rhizomucor pusillus*, 791
 Akiyama, J. See *Ishisaka, Kanno, Yoshioka, Utsumi, and Utsumi*, 35
 Akutsu, H. See *Yu, Ishida, Ozawa, and Horiike*, 411
 Amano, T., Furuno, T., Hirashima, N., Ohyama, N., and Nakanishi, M. Dynamics of Intracellular Granules with CD63-GFP in Rat Basophilic Leukemia Cells, 739
 Amino, M. See *Yasugi, Suzuki, Oshima, and Yamagishi*, 477
 Ando, S. See *Araki, Yamada, Abe, Waki, Kon, Itonori, and Sugita*, 93
 Aoyagi, Y. See *Odani, Baba, Tsuchida, Wakui, and Takahashi*, 69
 Aoyama, Y. See *Nitahara, Kishimoto, Yabusaki, Gotoh, Yoshida, and Horiuchi*, 761
 Arahata, K. See *Sakaki, Koike, Takahashi, Sasagawa, Tomioka, and Ishiura*, 321
 Arai, S. See *Kobayashi, Waku, and Sugiura*, 665
 Araki, H., Li, Y.-H., Yamamoto, Y., Haneda, M., Nishi, K., Kikkawa, R., and Ohkubo, I. Purification, Molecular Cloning, and Immunohistochemical Localization of Dipeptidyl Peptidase II from the Rat Kidney and Its Identity with Quiescent Cell Proline Dipeptidase, 279
 Araki, S., Yamada, S., Abe, S., Waki, H., Kon, K., Itonori, S., Sugita, M., and Ando, S. Characterization of a Novel Triphosphonoctacycloeramide from the Eggs of the Sea Hare, *Aplysia kurodai*, 93
 Asada, S. See *Kikuchi, Takeda, Tsujimoto, and Nagata*, 237
 Asakura, E. See *Irie, Koshiba, Koyama, Shibata, Kimura, Naito, Yamauchi, Yada, Hanamura, Hanada, Abe, and Nakamura*, 717

B

- Baba, K. See *Odani, Tsuchida, Aoyagi, Wakui, and Takahashi*, 69
 Beppu, T. See *Aikawa, Park, Sugiyama, Nishiyama, and Horinouchi*, 791
 Berengena, M. See *Salvador, Sepúlveda, and Mata*, 621
 —. See *Elmleik, Kumagai, Ueda, and Sugiyama*, 671
 Beyer, S. See *Gaitatzis, Hans, and Müller*, 119
 Brabletz, T. See *Hlubek, Löhberg, Meiler, Jung, and Kirchner*, 635

C

- Chan, W.-H. See *Yu, Chang, and Chen*, 243
 Chang, S.-H. See *Yu, Chan, and Chen*, 243
 Chatani, E., Tanimizu, N., Ueno, H., and Hayashi, R. Structural and Functional Changes in Bovine Pancreatic Ribonuclease A by the Replacement of Phe120 with Other Hydrophobic Residues, 917
 Chen, G. See *Ito, Imanishi, Morooka, Nishida, Okabayashi, and Kasuga*, 733
 Chen, H.-C. See *Yu, Chang, and Chan*, 243
 Chen, J.-W. See *Lu and Hao*, 891
 Cherepanov, A., Yildirim, E., and de Vries, S. Joining of Short DNA Oligonucleotides with Base Pair Mismatches by T4 DNA Ligase, 61
 Choi, I. See *Lee, Kim, Kang, Kim, and Pyun*, 77
 Cozza, E.N. See *Matkovic and Gomez-Sanchez*, 383

D

- de Vries, S. See *Cherepanov and Yildirim*, 61

E

- Elmleik, H., Kumagai, T., Berengena, M., Ueda, K., and Sugiyama, M. Use of Bleomycin- and Heat Shock-Induced Calreticulin Promoter for Construction of a Mammalian Expression Vector, 671
 Endo, Y. See *Ishida, Shigeri, Tatsu, Kame-shita, Okuno, Kitani, Takeuchi, Yumoto, and Fujisawa*, 745
 Enomoto, T. Functions of RecQ Family Helicases: Possible Involvement of Blooms and Werners Syndrome Gene Products in Guarding Genome Integrity during DNA Replication, 501

F

- Frank, C.B. See *Nakamura, Hart, Marchuk, Shrive, Ota, Taira, Yoshikawa, and Kaneda*, 755
 Fujii, H. See *Odani, Nakamura, and Sato*, 213
 Fujii, J. See *Fujiwara, Fujii, and Taniguchi*, 803
 Fujii, Takayoshi. See *Ono, Umezaki, Tojo, Hashimoto, Taniyama, Kaneko, Morita, Shimasaki, Yamazaki, Yoshimura, and Kato*, 783
 Fujii, Tsuneko. See *Fujiwara, Fujii, and Taniguchi*, 803
 Fujimoto, I. See *Otake, Tanaka, Nakagawa, Ikeda, Menon, Hase, Wada, and Ikenaka*, 537
 Fujimoto, Z. See *Suud, Takase, Matsumura, and Mizuno*, 461
 Fujimura, K. See *Hino, Morita, Une, and Kuramoto*, 683
 Fujimura, S. See *Furuya, Kanazawa, Ueno, Kominami, and Kadowaki*, 313
 Fujisawa, Hajime. See *Takahashi, Muramatsu, Takagi, Miyake, and Muramatsu*, 599
 Fujisawa, Hitoshi. Regulation of the Activities of Multifunctional Ca²⁺/Calmodulin-Depen-

dent Protein Kinases, 193

- . See *Ishida, Shigeri, Tatsu, Endo, Kame-shita, Okuno, Kitani, Takeuchi, and Yumoto*, 745
 Fujiwara, K. See *Konishi, Kojima, Katoh, Yazawa, Kato, and Onishi*, 365
 Fujiwara, N., Fujii, T., Fujii, J., and Taniguchi, N. Roles of N-Terminal Active Cysteines and C-Terminal Cysteine-Selenocysteine in the Catalytic Mechanism of Mammalian Thioredoxin Reductase, 803
 Fujiwara, S. See *Yubisui, Takahashi, Takabayashi, and Kawamura*, 709
 Fukada, Y. See *Hirota, Kagiwada, Kasahara, Okano, and Murata*, 51
 —. See *Nakamura, Kojima, Okano, Imai, Terakita, and Shichida*, 329
 Fukumaki, Y. See *Sadamitsu, Nagano, and Iwaki*, 813
 Furuno, T. See *Amano, Hirashima, Ohyama, and Nakanishi*, 739
 Furuya, N., Kanazawa, T., Fujimura, S., Ueno, T., Kominami, E., and Kadowaki, M. Leupeptin-Induced Appearance of Partial Fragment of Betaine Homocysteine Methyltransferase during Autophagic Maturation in Rat Hepatocytes, 313

G

- Gaitatzis, N., Hans, A., Müller, R., and Beyer, S. The *mtaA* Gene of the Myxothiazol Biosynthetic Gene Cluster from *Stigmatella aurantiaca* DW4/3-1 Encodes a Phosphopantetheinyl Transferase that Activates Polyketide Synthases and Polypeptide Synthetases, 119
 Gao, Y. and Mehta, K. Interchain Disulfide Bonds Promote Protein Cross-Linking during Protein Folding, 179
 Gojobori, T. See *Sato, Terabe, Watanabe, Hori-Takemoto, and Miura*, 851
 Gomez-Sanchez, C.E. See *Matkovic and Cozza*, 383
 Goris, J. See *Stevens, Rondelez, and Merlevede*, 551
 Goto, N., Muto, S., Sugimoto, I., Ikawa-Kitayama, K., Igarashi, K., Ito, S., and Hashimoto, E. A Serpin with *M_r* 43,000 Is a Binding Protein of *M_r* 25,000 Protein, a Substrate for Protein Ser/Thr Kinase Detected in *Xenopus laevis* Oocytes, 229
 Goto, R. See *Yang, Nakada-Tsukui, Ohtani, Yoshimura, Kobayashi, and Watanabe*, 561
 Gotoh, O. See *Teramoto, Nakamasu, Noshiro, Matsuda, Shen, Tsutsumi, Kawamoto, Iwamoto, and Kato*, 391
 —. See *Nitahara, Kishimoto, Yabusaki, Yoshida, Horiuchi, and Aoyama*, 761

H

- Hachimori, A. See *Wada, Uchiumi, and Ichiba*, 955
 Haga, K. See *Kanai, Yamane, and Harata*, 593
 Hagino-Yamagishi, K., Matsuoka, M., Ichikawa, M., Wakabayashi, Y., Mori, Y., and Yazaki, K. The Mouse Putative Pheromone

H (cont'd)

- Receptor Was Specifically Activated by Stimulation with Male Mouse Urine, 509
- Han, C.-H., Nisimoto, Y., Lee, S.-H., Kim, E.T., and Lambeth, J.D. Characterization of the Flavoprotein Domain of gp91phox Which Has NADPH Diaphorase Activity, 513
- Hanada, S. See *Irie, Koshihira, Koyama, Asakura, Shibata, Kimura, Naito, Yamauchi, Yada, Hanamura, Abe, and Nakamura*, 717
- Hanamura, T. See *Irie, Koshihira, Koyama, Asakura, Shibata, Kimura, Naito, Yamauchi, Yada, Hanada, Abe, and Nakamura*, 717
- Handa, H. See *Yamaguchi, Narita, Inukai, and Wada*, 185
- Haneda, M. See *Araki, Li, Yamamoto, Nishi, Kikkawa, and Ohkubo*, 279
- Hans, A. See *Gaitatzis, Müller, and Beyer*, 119
- Hao, Y.-H. See *Lu and Chen*, 891
- Hara, H. See *Miyazaki, Yoshida, Sasaki, Kimura, Mak, and Nomoto*, 963
- Harada, K. See *Zako, Mannen, Yamaguchi, Kitayama, Ueda, and Nagamune*, 1
- Harata, K. See *Ura, Matsui, and Kuramitsu*, 173
- See *Kanai, Haga, and Yamane*, 593
- Hart, D.A. See *Nakamura, Frank, Marchuk, Shrive, Ota, Taira, Yoshikawa, and Kaneda*, 755
- Hase, S. See *Otake, Fujimoto, Tanaka, Nakagawa, Ikeda, Menon, Wada, and Ikenaka*, 537
- Hashiguchi, S. See *Kaji, Ikari, Ito, Matsumoto, Yoshimura, Kuratsu, and Sugimura*, 577
- Hashimoto, E. See *Goto, Muto, Sugimoto, Ikawa-Kitayama, Igarashi, and Ito*, 229
- Hashimoto, S. See *Ono, Urmezaki, Tojo, Taniyama, Kaneko, Fujii, Morita, Shimasaki, Yamazaki, Yoshimura, and Kato*, 783
- Hata, S. See *Takabatake, Siddique, Kouchi, and Izui*, 827
- Hatakeyama, D. See *Odai, Sugimoto, Kubo, and Ito*, 909
- Hayashi, R. See *Chatani, Tanimizu, and Ueno*, 917
- Hayashi, T. See *Yoshikawa, Takahashi, Imamura, and Sado*, 929
- Higaki, K., Ninomiya, H., Sugimoto, Y., Suzuki, T., Taniguchi, M., Niwa, H., Pentchev, P.G., Vanier, M.T., and Ohno, K. Isolation of NPC1-Deficient Chinese Hamster Ovary Cell Mutants by Gene Trap Mutagenesis, 875
- Hijikata-Okunomiya, A. See *Tomoo, Satoh, Tsuda, Wanaka, Okamoto, Okada, and Ishida*, 455
- Hino, A., Morita, M., Une, M., Fujimura, K., and Kuramoto, T. Effects of Deoxycholic Acid and Its Epimers on Lipid Peroxidation in Isolated Rat Hepatocytes, 683
- Hirano, K. See *Ishii, Usui, Yamamoto, Sugimura, and Tatematsu*, 253
- Hiraoka, T. See *Nishimura, Horino, Nishiura, Shibuya, Tanase, and Yamamoto*, 445
- Hirashima, N. See *Amano, Furuno, Ohyama, and Nakanishi*, 739
- Hirata, Y. See *Katsuyama*, 585
- Hirota, T., Kagiwada, S., Kasahara, T., Okano, T., Murata, M., and Fukada, Y. Effect of Brefeldin A on Melatonin Secretion of Chick Pineal Cells, 51
- Hlubek, F., Löhberg, C., Meiler, J., Jung, A., Kirchner, T., and Brabletz, T. Tip60 Is a Cell-Type-Specific Transcriptional Regulator, 635
- Hori-Takemoto, C. See *Sato, Terabe, Watanabe, Gojobori, and Miura*, 851
- Horiike, K. See *Yu, Ishida, Ozawa, and Akutsu*, 411
- See *Sawada and Ishida*, 899
- Horino, K. See *Nishimura, Nishiura, Shibuya, Hiraoka, Tanase, and Yamamoto*, 445
- Horinouchi, S. See *Aikawa, Park, Sugiyama, Nishiyama, and Beppu*, 791
- Horiuchi, T. See *Nitahara, Kishimoto, Yabusaki, Gotoh, Yoshida, and Aoyama*, 761
- Huang, H. See *Zoppellaro and Sakurai*, 949

I

- Ichiba, T. See *Wada, Uchiumi, and Hachimori*, 955
- Ichikawa, M. See *Hagino-Yamagishi, Matsuoka, Wakabayashi, Mori, and Yazaki*, 509
- Ichishima, E. See *Maeda, Mizutani, Yamagata, and Nakajima*, 675
- Igarashi, K. See *Goto, Muto, Sugimoto, Ikawa-Kitayama, Ito, and Hashimoto*, 229
- Iijima, S. See *Machida, Murai, and Miyake*, 43
- See *Mizuarai, Ono, You, and Kamihira*, 125
- Ikari, M. See *Kaji, Hashiguchi, Ito, Matsumoto, Yoshimura, Kuratsu, and Sugimura*, 577
- Ikawa, M. See *Miyagawa, Yamada, Matsunami, Koresawa, Okabe, and Shirakura*, 795
- Ikawa-Kitayama, K. See *Goto, Muto, Sugimoto, Igarashi, Ito, and Hashimoto*, 229
- Ikeda, T. See *Otake, Fujimoto, Tanaka, Nakagawa, Menon, Hase, Wada, and Ikenaka*, 537
- Ikehara, Y. See *Kin and Misumi*, 289
- Ikenaka, K. See *Otake, Fujimoto, Tanaka, Nakagawa, Ikeda, Menon, Hase, and Wada*, 537
- Ikuzawa, M., Inokuchi, T., Kobayashi, K., and Yasumasu, S. Amphibian Pepsinogens: Purification and Characterization of *Xenopus* Pepsinogens, and Molecular Cloning of *Xenopus* and Bullfrog Pepsinogens, 147
- Imai, H. See *Nakamura, Kajima, Okano, Terakita, Shichida, and Fukada*, 329
- Imamura, S. See *Kitaura and Suzuki*, 397
- Imamura, Y. See *Yoshikawa, Takahashi, Sado, and Hayashi*, 929
- Imanishi, Y. See *Ito, Chen, Morooka, Nishida, Okabayashi, and Kasuga*, 733
- Inokuchi, T. See *Ikuzawa, Kobayashi, and Yasumasu*, 147
- Inoue, Hideo. See *Kitamura, Nakanishi, Kojima, and Kumagai*, 357
- Inoue, Hiroki, Tsuboi, Y., and Kanazawa, H. Chimeric Na⁺/H⁺ Antiporters Constructed from NhaA of *Helicobacter pylori* and *Escherichia coli*: Implications for Domains of NhaA for pH Sensing, 569
- Inouye, K. See *Oneda*, 429
- Inukai, N. See *Yamaguchi, Narita, Wada, and Handa*, 185
- Irie, H., Koshihira, H., Koyama, M., Asakura, E., Shibata, H., Kimura, K., Naito, K., Yamauchi, T., Yada, K., Hanamura, T., Hanada, S., Abe, S., and Nakamura, N. Effects of Recombinant Human Macrophage Colony-Stimulating Factor on Atherosclerotic Lesions Established in the Aorta of High Cholesterol-Fed Rabbits, 717
- Ishida, A., Shigeri, Y., Tatsu, Y., Endo, Y., Kameshita, I., Okuno, S., Kitani, T., Takeuchi, M., Yumoto, N., and Fujisawa, H. Substrate Specificity of Ca²⁺/Calmodulin-Dependent Protein Kinase Phosphatase: Kinetic Studies Using Synthetic Phosphopeptides as Model Substrates, 745
- Ishida, Tetsuo. See *Yu, Ozawa, Akutsu, and Horiike*, 411
- Ishida, Tetsuo. See *Sawada and Horiike*, 899
- Ishida, Toshimasa. See *Tomoo, Satoh, Tsuda, Wanaka, Okamoto, Hijikata-Okunomiya, and Okada*, 455
- Ishigami, T. See *Nakamura, Makino, and Sakamoto*, 937
- Ishii, K., Usui, S., Yamamoto, H., Sugimura, Y., Tatematsu, M., and Hirano, K. Decreases of Metallothionein and Aminopeptidase N in Renal Cancer Tissues, 253
- Ishikawa, T., Terai, H., and Kitajima, T. Production of a Biologically Active Epidermal Growth Factor Fusion Protein with High Collagen Affinity, 627
- Ishimura, K. See *Nakamura, Watanabe, Nishimiya, Tsumoto, and Kumagai*, 209
- Ishisaka, R., Kanno, T., Akiyama, J., Yoshioka, T., Utsumi, K., and Utsumi, T. Activation of Caspase-3 by Lysosomal Cysteine Proteases and Its Role in 2,2'-Azobis-(2-Amidinopropane) Dihydrochloride (AAPH)-Induced Apoptosis in HL-60 Cells, 35
- Ishiura, S. See *Sakaki, Koike, Takahashi, Sasagawa, Tomioka, and Arachata*, 321
- Ishiwata, S., Katayama, J., Shindo, H., Ozawa, Y., Itoh, K., and Mizugaki, M. Increased Expression of Queuosine Synthesizing Enzyme, tRNA-Guanine Transglycosylase, and Queuosine Levels in tRNA of Leukemic Cells, 13
- Ishizaka, M., Ohshima, Y., and Yanagawa, H. Protein Anatomy: Structure and Function of Peptide Fragments Corresponding to the Secondary Structure Units of Barnase, 971
- Isobe, M. See *Tani, Kamada, Ochiai, Suwan, and Kai*, 221
- Ito, A. See *Kitada*, 155
- Ito, E. See *Kubo, Odai, and Sugimoto*, 869
- See *Odai, Sugimoto, Hatakeyama, and Kubo*, 909
- Ito, S. See *Goto, Muto, Sugimoto, Ikawa-Kitayama, Igarashi, and Hashimoto*, 229
- Ito, Yoshihiro, Chen, G., Imanishi, Y., Morooka, T., Nishida, E., Okabayashi, Y., and Kasuga, M. Differential Control of Cellular Gene Expression by Diffusible and Non-Diffusible EGF, 733
- Ito, Yuji. See *Kaji, Ikari, Hashiguchi, Matsumoto, Yoshimura, Kuratsu, and Sugimura*, 577
- Itoh, K. See *Ishiwata, Katayama, Shindo, Ozawa, and Mizugaki*, 13
- Itonori, S. See *Araki, Yamada, Abe, Waki, Kon, Sugita, and Ando*, 93
- Itou, H. and Tanaka, I. The OmpR-Family of Proteins: Insight into the Tertiary Structure and Functions of Two-Component Regulator Proteins, 343
- Iwaki, A. See *Sadamitsu, Nagano, and Fukumaki*, 813
- Iwamoto, Y. See *Teramoto, Nakamasu, No-*

I (cont'd)

- shiro, Matsuda, Gotoh, Shen, Tsutsumi, Kawamoto, and Kato, 391
- Iwata, A. See Nakanishi, Yatome, and Kitade, 101
- Izui, K. See Takabatake, Siddique, Kouchi, and Hata, 827
- J
- Jahan, I. See Thornalley and Ng, 543
- Jung, A. See Hlubek, Löhberg, Meiler, Kirchner, and Brabletz, 635
- K
- Kadowaki, M. See Furuya, Kanazawa, Fujimura, Ueno, and Kominami, 313
- Kagamiyama, H. See Shimotohno, Oue, Yano, and Kuramitsu, 943
- Kagawa, N. See Kusano, Sakaguchi, Waterman, and Omura, 259
- See Kusano, Sakaguchi, Omura, and Waterman, 271
- Kagiwada, S. See Hirota, Kasahara, Okano, Murata, and Fukada, 51
- Kai, H. See Tani, Kamada, Ochiai, Isobe, and Suwan, 221
- Kaji, M., Ikari, M., Hashiguchi, S., Ito, Y., Matsumoto, R., Yoshimura, T., Kuratsu, J., and Sugimura, K. Peptide Mimics of Monocyte Chemoattractant Protein-1 (MCP-1) with an Antagonistic Activity, 577
- Kajihara, M., Kawauchi, S., Kobayashi, M., Ogino, H., Takahashi, S., and Yasuda, K. Isolation, Characterization, and Expression Analysis of Zebrafish Large Maf β , 139
- Kamada, G. See Tani, Ochiai, Isobe, Suwan, and Kai, 221
- Kameshita, I. See Ishida, Shigeri, Tatsu, Endo, Okuno, Kitani, Takeuchi, Yumoto, and Fujisawa, 745
- Kamihira, M. See Mizuarai, Ono, You, and Iijima, 125
- Kamisaka, Y. and Noda, N. Intracellular Transport of Phosphatidic Acid and Phosphatidylcholine into Lipid Bodies in an Oleaginous Fungus, *Mortierella ramanniana* var. *angulispora*, 19
- Kamitori, S. See Kondo, Ohtaki, Tonozuka, and Sakano, 423
- Kanai, R., Haga, K., Yamane, K., and Harata, K. Crystal Structure of Cyclodextrin Glucanotransferase from Alkalophilic *Bacillus* sp. 1011 Complexed with 1-Deoxynojirimycin at 2.0 Å Resolution, 593
- Kanazawa, H. See Inoue and Tsuboi, 569
- Kanazawa, T. See Furuya, Fujimura, Ueno, Kominami, and Kadowaki, 313
- Kaneda, Y. See Nakamura, Hart, Frank, Marchuk, Shrive, Ota, Taira, and Yoshikawa, 755
- Kaneko, Takahiro. See Takahashi, Takahashi, Ogasawara, Shinda, Saito, and Kawamura, 529
- Kaneko, Takako. See Ono, Umezaki, Tojo, Hashimoto, Taniyama, Fujii, Morita, Shimasaki, Yamazaki, Yoshimura, and Kato, 783
- Kang, H.-S. See Lee, Kim, Kim, Pyun, and Choi, 77
- Kanno, T. See Ishisaka, Akiyama, Yoshioka, Utsumi, and Utsumi, 35
- Karaya, K., Shimizu, T., and Taketo, A. New Gene Cluster for Lantibiotic Streptin Possibly Involved in Streptolysin S Formation, 769
- Kasahara, T. See Hirota, Kagiwada, Okano, Murata, and Fukada, 51
- Kasuga, M. See Ito, Chen, Imanishi, Morooka, Nishida, and Okabayashi, 733
- Katayama, J. See Ishiwata, Shindo, Ozawa, Itoh, and Mizugaki, 13
- Kato, K. See Konishi, Kojima, Katoh, Yazawa, Fujiwara, and Onishi, 365
- Kato, T. See Ono, Umezaki, Tojo, Hashimoto, Taniyama, Kaneko, Fujii, Morita, Shimasaki, Yamazaki, and Yoshimura, 783
- Kato, Y. See Teramoto, Nakamasu, Noshiro, Matsuda, Gotoh, Shen, Tsutsumi, Kawamoto, and Iwamoto, 391
- Katoh, T. See Konishi, Kojima, Yazawa, Kato, Fujiwara, and Onishi, 365
- See Numata and Yazawa, 437
- Katsuyama, K. and Hirata, Y. A Pyrrolidinone Derivative Inhibits Cytokine-Induced iNOS Expression and NK- κ B Activation by Preventing Phosphorylation and Degradation of I κ B- α , 585
- Kawabata, M., Onda, M., and Mita, T. Effect of Aggregation of Amphotericin B on Lyso-phosphatidylcholine Micelles as Related to Its Complex Formation with Cholesterol or Ergosterol, 725
- Kawakami, H. See Shimamoto, Shimamoto, Xu, Okazaki, and Tsuchiya, 607
- Kawamoto, T. See Teramoto, Nakamasu, Noshiro, Matsuda, Gotoh, Shen, Tsutsumi, Iwamoto, and Kato, 391
- Kawamura, K. See Yubisui, Takahashi, Takabayashi, and Fujiwara, 709
- Kawamura, Y. See Takahashi, Takahashi, Kaneko, Ogasawara, Shinda, and Saito, 529
- Kawasaki, T. See Yamaji, Nakamura, Takematsu, and Kozutsumi, 521
- Kawauchi, S. See Kajihara, Kobayashi, Ogino, Takahashi, and Yasuda, 139
- Kaya, S. See Taniguchi, Abe, Mårdh, 335
- Kikkawa, R. See Araki, Li, Yamamoto, Haneda, Nishi, and Ohkubo, 279
- Kikuchi, M., Takeda, C., Tsujimoto, Y., Asada, S., and Nagata, K. A Single-Chain Fv Fragment 2A3 Specific for Native Lysozyme: Isolation from a Human Synthetic Phage Display Antibody Library and Characterization, 237
- Kim, E.T. See Han, Nisimoto, Lee, and Lambeth, 513
- Kim, H.M. See Lee, Kim, Kang, Pyun, and Choi, 77
- Kim, J.-M., Maraboeuf, F., Kim, S.K., Shinohara, A., and Takahashi, M. Effect of Ions and Nucleotides on the Interactions of Yeast Rad51 Protein with Single-Stranded Oligonucleotides, 469
- Kim, S.K. See Kim, Maraboeuf, Shinohara, and Takahashi, 469
- Kim, Y.-M. See Lee, Kang, Kim, Pyun, and Choi, 77
- Kimura, G. See Miyazaki, Yoshida, Sasaki, Hara, Mak, and Nomoto, 963
- Kimura, K. See Irie, Koshiba, Koyama, Asakura, Shibata, Naito, Yamauchi, Yada, Hanamura, Hanada, Abe, and Nakamura, 717
- Kimura, Y., Yamanishi, Y., Tokumasu, Y., Terasaka, H., and Yoshinobu, J. Characterization of the *mac-1* Gene Encoding a Putative ABC Transporter from *Myxococcus xanthus*, 351
- Kin, Y., Misumi, Y., and Ikehara, Y. Biosynthesis and Characterization of the Brain-Specific Membrane Protein DPPX, a Dipeptidyl Peptidase IV-Related Protein, 289
- Kirchner, T. See Hlubek, Löhberg, Meiler, Jung, and Brabletz, 635
- Kishimoto, K. See Nitahara, Yabusaki, Gotoh, Yoshida, Horiuchi, and Aoyama, 761
- Kitada, S. and Ito, A. Electrostatic Recognition of Matrix Targeting Signal by Mitochondrial Processing Peptidase, 155
- Kitade, Y. See Nakanishi, Iwata, and Yatome, 101
- Kitajima, T. See Ishikawa and Terai, 627
- Kitamura, M., Nakanishi, T., Kojima, S., Kumagai, I., and Inoue, H. Cloning and Expression of the Catalase Gene from the Anaerobic Bacterium *Desulfovibrio vulgaris* (Miyazaki F), 357
- Kitani, T. See Ishida, Shigeri, Tatsu, Endo, Kameshita, Okuno, Takeuchi, Yumoto, and Fujisawa, 745
- Kitaura, S., Suzuki, K., and Imamura, S. Monoacylglycerol Lipase from Moderately Thermophilic *Bacillus* sp. Strain H-257: Molecular Cloning, Sequencing, and Expression in *Escherichia coli* of the Gene, 397
- Kitayama, A. See Zako, Harada, Mannen, Yamaguchi, Ueda, and Nagamune, 1
- Kobayashi, A. See Nishikawa and Natori, 485
- Kobayashi, K. See Ikuzaawa, Inokuchi, and Yasumasu, 147
- Kobayashi, Makoto. See Kajihara, Kawauchi, Ogino, Takahashi, and Yasuda, 139
- Kobayashi, Masahiro. See Mahmood, Takita, Ojima, Kohgo, and Kuboki, 163
- Kobayashi, Yoshiro. See Yang, Nakada-Tsukui, Ohtani, Goto, Yoshimura, and Watanabe, 561
- Kobayashi, Yuriko, Arai, S., Waku, K., and Sugiura, T. Activation by 2-Arachidonoylglycerol, an Endogenous Cannabinoid Receptor Ligand, of p42/44 Mitogen-Activated Protein Kinase in HL-60 Cells, 665
- Kohgo, T. See Mahmood, Takita, Ojima, Kobayashi, and Kuboki, 163
- Koike, H. See Sakaki, Takahashi, Sasagawa, Tomioka, Arahata, and Ishiura, 321
- Kojima, D. See Nakamura, Okano, Imai, Terakita, Shichida, and Fukada, 329
- Kojima, Shin-ichiro. See Konishi, Katoh, Yazawa, Kato, Fujiwara, and Onishi, 365
- Kojima, Shuichi. See Kitamura, Nakanishi, Kumagai, and Inoue, 357
- Kominami, E. See Furuya, Kanazawa, Fujimura, Ueno, and Kadowaki, 313
- Kon, K. See Araki, Yamada, Abe, Waki, Itonori, Sugita, and Ando, 93
- Kondo, S., Ohtaki, A., Tonozuka, T., Sakano, Y., and Kamitori, S. Studies on the Hydrolyzing Mechanism for Cyclodextrins of *Thermoactinomyces vulgaris* R-47 α -Amylase 2 (TVII). X-Ray Structure of the Mutant E354A Complexed with β -Cyclodextrin, and Kinetic Analyses on Cyclodextrins, 423
- Konishi, K., Kojima, S., Katoh, T., Yazawa, M., Kato, K., Fujiwara, K., and Onishi, H. Two

K (cont'd)

- New Modes of Smooth Muscle Myosin Regulation by the Interaction between the Two Regulatory Light Chains, and by the S2 Domain, 365
- Koresawa, Y. See *Miyagawa, Yamada, Matsunami, Ikawa, Okabe, and Shirakura*, 795
- Koshihara, H. See *Irie, Koyama, Asakura, Shibata, Kimura, Naito, Yamauchi, Yada, Hanamura, Hanada, Abe, and Nakamura*, 717
- Kosuge, S., Maekawa, T., Saito, C., Tanaka, T., Kouno, I., and Ohtsuki, K. Biochemical Characterization of Galloyl Pedunculagin (Ellagitannin) as a Selective Inhibitor of the β -Regulatory Subunit of A-Kinase *In Vitro*, 403
- Kouchi, H. See *Takabatake, Siddique, Izui, and Hata*, 827
- Kouno, I. See *Kosuge, Maekawa, Saito, Tanaka, and Ohtsuki*, 403
- Koyama, M. See *Irie, Koshihara, Asakura, Shibata, Kimura, Naito, Yamauchi, Yada, Hanamura, Hanada, Abe, and Nakamura*, 717
- Kozutsumi, Y. See *Yamaji, Nakamura, Takematsu, and Kawasaki*, 521
- Kubo, M., Odai, K., Sugimoto, T., and Ito, E. Quantum Chemical Study of Agonist-Receptor Vibrational Interactions for Activation of the Glutamate Receptor, 869
- See *Odai, Sugimoto, Hatakeyama, and Ito*, 909
- Kubo, Y. See *Nada, Murakami, Okamoto, and Yamaguchi*, 87
- Kuboki, Y. See *Mizuno*, 133
- See *Mahmood, Takita, Ojima, Kobayashi, and Kohgo*, 163
- Kudo, T. See *Otagiri, Kurisu, Ui, Takusagawa, Ohkuma, and Kusunoki*, 205
- Kumagai, I. See *Nakamura, Watanabe, Nishimiya, Tsumoto, and Ishimura*, 209
- See *Kitamura, Nakanishi, Kajima, and Inoue*, 357
- Kumagai, T. See *Elmleik, Berengena, Ueda, and Sugiyama*, 671
- Kumanogoh, H. See *Maekawa, Morii, Sano, Naruse, Sokawa, and Mori*, 691
- Kuramitsu, S. See *Ura, Harata, and Matsui*, 173
- See *Shimotohno, Oue, Yano, and Kagamiyama*, 943
- Kuramoto, T. See *Hino, Morita, Une, and Fujimura*, 683
- Kuratsu, J. See *Kaji, Ikari, Hashiguchi, Ito, Matsumoto, Yoshimura, and Sugimura*, 577
- Kurisu, G. See *Otagiri, Ui, Takusagawa, Ohkuma, Kudo, and Kusunoki*, 205
- See *Yamamoto, Kusunoki, Tabata, Urabe, and Osaki*, 303
- Kusano, K., Sakaguchi, M., Kagawa, N., Waterman, M.R., and Omura, T. Microsomal P450s Use Specific Proline-Rich Sequences for Efficient Folding, but Not for Maintenance of the Folded Structure, 259
- , Kagawa, N., Sakaguchi, M., Omura, T., and Waterman, M.R. Importance of a Proline-Rich Sequence in the Amino-Terminal Region for Correct Folding of Mitochondrial and Soluble Microbial P450s, 271
- Kusunoki, M. See *Otagiri, Kurisu, Ui, Takusagawa, Ohkuma, and Kudo*, 205
- See *Yamamoto, Kurisu, Tabata, Urabe, and*

Osaki, 303

L

- Lambeth, J.D. See *Han, Nisimoto, Lee, and Kim*, 513
- Lanyi, J.K. See *Yamaguchi, Tuzi, Yonebayashi, Naito, Needleman, and Saito*, 373
- Lee, B.-S., Kim, Y.-M., Kang, H.-S., Kim, H.M., Pyun, K.-H., and Choi, I. Octamer Binding Protein-1 Is Involved in Inhibition of Inducible Nitric Oxide Synthase Expression by Exogenous Nitric Oxide in Murine Liver Cells, 77
- Lee, S.-H. See *Han, Nisimoto, Kim, and Lambeth*, 513
- Li, J., Zhang, S., and Wang, C. Only the Reduced Conformer of α -Lactalbumin Is Inducible to Aggregation by Protein Aggregates, 821
- Li, Y.-H. See *Araki, Yamamoto, Haneda, Nishi, Kikkawa, and Ohkubo*, 279
- Löhberg, C. See *Hlubek, Meiler, Jung, Kirchner, and Brabletz*, 635
- Lu, J.-Z., Hao, Y.-H., and Chen, J.-W. Effect of Cholesterol on the Formation of an Interdigitated Gel Phase in Lysophosphatidylcholine and Phosphatidylcholine Binary Mixtures, 891

M

- Machida, Y., Murai, K., Miyake, K., and Iijima, S. Expression of Chromatin Remodeling Factors during Neural Differentiation, 43
- Maeda, H., Mizutani, O., Yamagata, Y., Ichishima, E., and Nakajima, T. Alkaline-Resistance Model of Subtilisin ALP I, a Novel Alkaline Subtilisin, 675
- Maekawa, S., Morii, H., Kumanogoh, H., Sano, M., Naruse, Y., Sokawa, Y., and Mori, N. Localization of Neuronal Growth-Associated, Microtubule-Destabilizing Factor SCG10 in Brain-Derived Raft Membrane Microdomains, 691
- Maekawa, T. See *Kosuge, Saito, Tanaka, Kouno, and Ohtsuki*, 403
- Mahmood, J., Takita, H., Ojima, Y., Kobayashi, M., Kohgo, T., and Kuboki, Y. Geometric Effect of Matrix upon Cell Differentiation: BMP-Induced Osteogenesis Using a New Bioglass with a Feasible Structure, 163
- Mak, T.W. See *Miyazaki, Yoshida, Sasaki, Hara, Kimura, and Nomoto*, 963
- Makino, N. See *Nakamura, Ishigami, and Sakamoto*, 937
- Mannen, T. See *Zako, Harada, Yamaguchi, Kitayama, Ueda, and Nagamune*, 1
- Maraboeuf, F. See *Kim, Kim, Shinohara, and Takahashi*, 469
- Marchuk, L.L. See *Nakamura, Hart, Frank, Shrive, Ota, Taira, Yoshikawa, and Kaneda*, 755
- Mårdh, S. See *Tuniguchi, Kaya, Abe*, 335
- Martin, B.A. See *Perrino*, 835
- , Oxhorn, B.C., Rossow, C.R., and Perrino, B.A. A Cluster of Basic Amino Acid Residues in Calcineurin B Participates in the Binding of Calcineurin to Phosphatidylserine Vesicles, 843
- Mata, A.M. See *Salvador, Berengena, and Sepúlveda*, 621
- Matsuda, Y. See *Teramoto, Nakamasu, No-shiro, Gotoh, Shen, Tsutsumi, Kawamoto, Iwamoto, and Kato*, 391
- Matsui, I. See *Ura, Harata, and Kuramitsu*, 173
- Matsumoto, R. See *Kaji, Ikari, Hashiguchi, Ito, Yoshimura, Kuratsu, and Sugimura*, 577
- Matsumura, M. See *Suwa, Fujimoto, Takase, and Mizuno*, 461
- Matsunami, K. See *Miyagawa, Yamada, Koresawa, Ikawa, Okabe, and Shirakura*, 795
- Matsuoka, M. See *Hagino-Yamagishi, Ichikawa, Wakabayashi, Mori, and Yazaki*, 509
- Mehta, K. See *Gao*, 179
- Meiler, J. See *Hlubek, Löhberg, Jung, Kirchner, and Brabletz*, 635
- Menon, K.K. See *Otake, Fujimoto, Tanaka, Nakagawa, Ikeda, Hase, Wada, and Ike-naka*, 537
- Merlevede, W. See *Stevens, Rondelez, and Goris*, 551
- Misumi, Y. See *Kin and Ikehara*, 289
- Mita, T. See *Kawabata and Onda*, 725
- Miura, K. See *Sato, Terabe, Watanabe, Gojobori, and Hori-Takemoto*, 851
- Miyagawa, S., Yamada, M., Matsunami, K., Koresawa, Y., Ikawa, M., Okabe, M., and Shirakura, R. A Synthetic DAF (CD55) Gene Based on Optimal Codon Usage for Transgenic Animals, 795
- Miyake, K. See *Machida, Murai, and Iijima*, 43
- Miyake, Y. See *Takahashi, Muramatsu, Takagi, Fujisawa, and Muramatsu*, 599
- Miyatani, S. See *Yoneya, Tahara, Nagao, Yamada, Yamamoto, Osawa, and Nishikawa*, 27
- Miyazaki, J., Nakaya, S., Suzuki, T., Tamakoshi, M., Oshima, T., and Yamagishi, A. Ancestral Residues Stabilizing 3-Isopropylmalate Dehydrogenase of an Extreme Thermophile: Experimental Evidence Supporting the Thermophilic Common Ancestor Hypothesis, 777
- Miyazaki, K., Yoshida, H., Sasaki, M., Hara, H., Kimura, G., Mak, T.W., and Nomoto, K. Caspase-Independent Cell Death and Mitochondrial Disruptions Observed in the Apaf1-Deficient Cells, 963
- Mizuarai, S., Ono, K., You, J., Kamihira, M., and Iijima, S. Protamine-Modified DDAB Lipid Vesicles Promote Gene Transfer in the Presence of Serum, 125
- Mizugaki, M. See *Ishiwata, Katayama, Shindo, Ozawa, and Itoh*, 13
- Mizuno, H. See *Suwa, Fujimoto, Takase, and Matsumura*, 461
- Mizuno, M. and Kuboki, Y. Osteoblast-Related Gene Expression of Bone Marrow Cells during the Osteoblastic Differentiation Induced by Type I Collagen, 133
- Mizutani, O. See *Maeda, Yamagata, Ichishima, and Nakajima*, 675
- Mori, N. See *Maekawa, Morii, Kumanogoh, Sano, Naruse, and Sokawa*, 691
- Mori, Y. See *Hagino-Yamagishi, Matsuoka, Ichikawa, Wakabayashi, and Yazaki*, 509
- Morii, H. See *Maekawa, Kumanogoh, Sano, Naruse, Sokawa, and Mori*, 691
- Morita, H. See *Ono, Umezaki, Tojo, Hashimoto, Taniyama, Kaneko, Fujii, Shimasaki, Yamazaki, Yoshimura, and Kato*, 783
- Morita, M. See *Hino, Une, Fujimura, and Kuramoto*, 683

M (cont'd)

- Morita, T. See *Okuda, Nozaki, and Sekiya*, 615
 Morooka, T. See *Ito, Chen, Imanishi, Nishida, Okabayashi, and Kasuga*, 733
 Müller, R. See *Gaitatzis, Hans, and Beyer*, 119
 Murai, K. See *Machida, Miyake, and Iijima*, 43
 Murakami, K. See *Yamashita, Yamaguchi, and Nagasawa*, 861
 Murakami, S. See *Nada, Okamoto, Kubo, and Yamaguchi*, 87
 Muramatsu, H. See *Takahashi, Takagi, Fujisawa, Miyake, and Muramatsu*, 599
 —, Tachikui, H., Ushida, H., Song, X., Qiu, Y., Yamamoto, S., and Muramatsu, T. Molecular Cloning and Expression of Endo- β -N-Acetylglucosaminidase D, Which Acts on the Core Structure of Complex Type Asparagine-Linked Oligosaccharides, 923
 Muramatsu, T. See *Takahashi, Muramatsu, Takagi, Fujisawa, and Miyake*, 599
 —. See *Muramatsu, Tachikui, Ushida, Song, Qiu, and Yamamoto*, 923
 Murata, M. See *Hirota, Kagiwada, Kasahara, Okano, and Fukada*, 51
 Muto, S. See *Goto, Sugimoto, Ikawa-Kitayama, Igarashi, Ito, and Hashimoto*, 229
- N
- Nada, S., Murakami, S., Okamoto, S., Kubo, Y., and Yamaguchi, A. Monoclonal Antibody That Binds to the Central Loop of the Tn10-Encoded Metal Tetracycline/H⁺ Antiporter of *Escherichia coli*, 87
 Nagamune, T. See *Zako, Harada, Mannen, Yamaguchi, Kitayama, and Ueda*, 1
 Nagano, T. See *Sadamitsu, Fukumaki, and Iwaki*, 813
 Nagao, K. See *Yoneya, Tahara, Yamada, Yamamoto, Osawa, Miyatani, and Nishikawa*, 27
 Nagasawa, S. See *Yamashita, Yamaguchi, and Murakami*, 861
 Nagata, K. See *Kikuchi, Takeda, Tsujimoto, and Asada*, 237
 Naito, A. See *Yamaguchi, Tuzi, Yonebayashi, Needleman, Lanyi, and Saitô*, 373
 Naito, K. See *Irie, Koshiba, Koyama, Asakura, Shibata, Kimura, Yamauchi, Yada, Hanamura, Hanada, Abe, and Nakamura*, 717
 Nakada-Tsukui, K. See *Yang, Ohtani, Goto, Yoshimura, Kobayashi, and Watanabe*, 561
 Nakagawa, T. See *Otake, Fujimoto, Tanaka, Ikeda, Menon, Hase, Wada, and Ikenaka*, 537
 Nakajima, T. See *Maeda, Mizutani, Yamagata, and Ichishima*, 675
 Nakamasu, K. See *Teramoto, Noshiro, Matsuda, Gotoh, Shen, Tsutsumi, Kawamoto, Iwamoto, and Kato*, 391
 Nakamori, S. See *Tsujimoto, Takagi, Takahashi, and Yamada*, 979
 Nakamura, A., Kojima, D., Okano, T., Imai, H., Terakita, A., Shichida, Y., and Fukada, Y. Regulatory Mechanism for the Stability of the Meta II Intermediate of Pinopsin, 329
 Nakamura, J. See *Odani, Sato, and Fujii*, 213
 Nakamura, M., Watanabe, H., Nishimiya, Y., Tsumoto, K., Ishimura, K., and Kumagai, I. Planning of a Phage VH Library Using Nitrocellulose Membranes: Application to Selection of a Human VH Library, 209
 Nakamura, Norifumi. See *Irie, Koshiba, Koyama, Asakura, Shibata, Kimura, Naito, Yamauchi, Yada, Hanamura, Hanada, and Abe*, 717
 Nakamura, Norimasa, Hart, D.A., Frank, C.B., Marchuk, L.L., Shrive, N.G., Ota, N., Taira, K., Yoshikawa, H., and Kaneda, Y. Efficient Transfer of Intact Oligonucleotides into the Nucleus of Ligament Scar Fibroblasts by HVJ-Cationic Liposomes Is Correlated with Effective Antisense Gene Inhibition, 755
 Nakamura, S. See *Yamaji, Takematsu, Kawasaki, and Kozutsumi*, 521
 Nakamura, T., Ishigami, T., Makino, N., and Sakamoto, K. The Down-Regulation of Glutathione Peroxidase Causes Bovine Luteal Cell Apoptosis during Structural Luteolysis, 937
 Nakamura, Y., Yoshioka, K., Shirakawa, H., and Yoshida, M. HMG Box A in HMG2 Protein Functions as a Mediator of DNA Structural Alteration Together with Box B, 643
 Nakanishi, Mamoru. See *Amano, Furuno, Hirashima, and Ohyama*, 739
 Nakanishi, Masayuki, Iwata, A., Yatome, C., and Kitade, Y. Purification and Properties of Recombinant *Plasmodium falciparum* S-Adenosyl-L-Homocysteine Hydrolase, 101
 Nakanishi, T. See *Kitamura, Kojima, Kumagai, and Inoue*, 357
 Nakaya, S. See *Miyazaki, Suzuki, Tamakoshi, Oshima, and Yamagishi*, 777
 Nakayama, T. and Takami, Y. Participation of Histones and Histone-Modifying Enzymes in Cell Functions through Alterations in Chromatin Structure, 491
 Narita, T. See *Yamaguchi, Inukai, Wada, and Handa*, 185
 Naruse, Y. See *Maekawa, Mori, Kumanogoh, Sano, Sokawa, and Mori*, 691
 Natori, S. See *Nishikawa and Kobayashi*, 485
 Needleman, R. See *Yamaguchi, Tuzi, Yonebayashi, Naito, Lanyi, and Saitô*, 373
 Ng, R. See *Thornalley and Jahan*, 543
 Ninomiya, H. See *Higaki, Sugimoto, Suzuki, Taniguchi, Niwa, Pentchev, Vanier, and Ohno*, 875
 Nishi, K. See *Araki, Li, Yamamoto, Haneda, Kikkawa, and Ohkubo*, 279
 Nishida, E. See *Ito, Chen, Imanishi, Morooka, Okabayashi, and Kasuga*, 733
 Nishikawa, M. See *Yoneya, Tahara, Nagao, Yamada, Yamamoto, Osawa, and Miyatani*, 27
 Nishikawa, T., Kobayashi, A., and Natori, S. Cloning of cDNA for Cathepsin B mRNA 3'-Untranslated-Region-Binding Protein (CBBP), and Characterization of Recombinant CBBP, 485
 Nishimiya, Y. See *Nakamura, Watanabe, Tsumoto, Ishimura, and Kumagai*, 209
 Nishimura, T., Horino, K., Nishiura, H., Shibuya, Y., Hiraoka, T., Tanase, S., and Yamamoto, T. Apoptotic Cells of an Epithelial Cell Line, AsPC-1, Release Monocyte Chemotactic S19 Ribosomal Protein Dimer, 445
 Nishiura, H. See *Nishimura, Horino, Shibuya, Hiraoka, Tanase, and Yamamoto*, 445
 Nishiyama, M. See *Aikawa, Park, Sugiyama, Horinouchi, and Beppu*, 791
 Nisimoto, Y. See *Han, Lee, Kim, and Lambeth*, 513
 Nitahara, Y., Kishimoto, K., Yabusaki, Y., Gotoh, O., Yoshida, Y., Horiuchi, T., and Aoyama, Y. The Amino Acid Residues Affecting the Activity and Azole Susceptibility of Rat CYP51 (Sterol 14-Demethylase P450), 761
 Niwa, H. See *Higaki, Ninomiya, Sugimoto, Suzuki, Taniguchi, Pentchev, Vanier, and Ohno*, 875
 Noda, N. See *Kamisaka*, 19
 Nomoto, K. See *Miyazaki, Yoshida, Sasaki, Hara, Kimura, and Mak*, 963
 Noshiro, M. See *Teramoto, Nakamasu, Matsuda, Gotoh, Shen, Tsutsumi, Kawamoto, Iwamoto, and Kato*, 391
 Nozaki, C. See *Okuda, Sekiya, and Morita*, 615
 Numata, T., Katoh, T., and Yazawa, M. Functional Role of the C-Terminal Domain of Smooth Muscle Myosin Light Chain Kinase on the Phosphorylation of Smooth Muscle Myosin, 437
- O
- Obuse, C. See *Shukata, Ohta, Yamada, Yoshikawa, and Tsurimoto*, 699
 Ochiai, K. See *Tani, Kamada, Isobe, Suwan, and Kai*, 221
 Odai, K. See *Kubo, Sugimoto, and Ito*, 869
 —, Sugimoto, T., Hatakeyama, D., Kubo, M., and Ito, E. A Theoretical Study of Electronic and Structural States of Neurotransmitters: γ -Aminobutyric Acid and Glutamic Acid, 909
 Odani, S., Baba, K., Tsuchida, Y., Aoyagi, Y., Wakui, S., and Takahashi, Y. Hepatic Fatty Acid-Binding Proteins of a Teleost, *Lateolabrax japonicus*. The Primary Structures and Location of a Disulfide Bond, 69
 —, Nakamura, J., Sato, T., and Fujii, H. Identification of a Rat 30-kDa Protein Recognized by the Antibodies to a Recombinant Rat Cutaneous Fatty Acid-Binding Protein as a 14-3-3 Protein, 213
 Ogasawara, H. See *Takahashi, Takahashi, Kaneko, Shindo, Saito, and Kawamura*, 529
 Ogawa, Y. See *Sato*, 881
 Ogino, H. See *Kajihara, Kawachi, Kobayashi, Takahashi, and Yasuda*, 139
 Ohkubo, I. See *Araki, Li, Yamamoto, Haneda, Nishi, and Kikkawa*, 279
 Ohkuma, M. See *Otagiri, Kurisu, Ui, Takusagawa, Kudo, and Kusunoki*, 205
 Ohno, K. See *Higaki, Ninomiya, Sugimoto, Suzuki, Taniguchi, Niwa, Pentchev, and Vanier*, 875
 Ohshima, Y. See *Ishizaka and Yanagawa*, 971
 Ohta, S. See *Shikata, Yamada, Obuse, Yoshikawa, and Tsurimoto*, 699
 Ohtaki, A. See *Kondo, Tonozuka, Sakano, and Kamitori*, 423
 Ohtani, M. See *Yang, Nakada-Tsukui, Goto, Yoshimura, Kobayashi, and Watanabe*, 561
 Ohtsuki, K. See *Kosuge, Maekawa, Saito, Tanaka, and Kouno*, 403
 Ohyama, N. See *Amano, Furuno, Hirashima, and Nakanishi*, 739
 Ojima, Y. See *Mahmood, Takita, Kobayashi, Kohga, and Kuboki*, 163
 Okabayashi, Y. See *Ito, Chen, Imanishi, Morooka, Nishida, and Kasuga*, 733
 Okabe, M. See *Miyagawa, Yamada, Matsu-*

O (cont'd)

- namii*, Koresawa, Ikawa, and Shirakura, 795
 Okada, Y. See Tomoo, Satoh, Tsuda, Wanaka, Okamoto, Hijikata-Okunomiya, and Ishida, 455
 Okamoto, Shizuka. See Nada, Murakami, Kubo, and Yamaguchi, 87
 Okamoto, Shosuke. See Tomoo, Satoh, Tsuda, Wanaka, Hijikata-Okunomiya, Okada, and Ishida, 455
 Okano, T. See Hirota, Kagiwada, Kasahara, Murata, and Fukada, 51
 —. See Nakamura, Kojima, Imai, Terakita, Shichida, and Fukada, 329
 Okazaki, N. See Shimamoto, Shimamoto, Xu, Kawakami, and Tsuchiya, 607
 Okuda, D., Nozaki, C., Sekiya, F., and Morita, T. Comparative Biochemistry of Disintegrins Isolated from Snake Venom: Consideration of the Taxonomy and Geographical Distribution of Snakes in the Genus *Echis*, 615
 Okumura, K. See Takai, Ra, Yokota, and Okumura, 5
 Okumura, Y. See Takai, Okumura, Ra, and Yokota, 5
 Okuno, S. See Ishida, Shigeri, Tatsu, Endo, Kameshita, Kitani, Takeuchi, Yumoto, and Fujisawa, 745
 Omura, T. See Kusano, Sakaguchi, Kagawa, and Waterman, 259
 —. See Kusano, Kagawa, Sakaguchi, and Waterman, 271
 Onda, M. See Kawabata and Mita, 725
 Oneda, H. and Inouye, K. Interactions of Human Matrix Metalloproteinase 7 (Matrilysin) with the Inhibitors Thiorphan and R-94138, 429
 Onishi, H. See Konishi, Kojima, Katoh, Yazawa, Kato, and Fujiwara, 365
 Ono, K. See Mizuarai, You, Kamihira, and Iijima, 125
 Ono, S., Umezaki, M., Tojo, N., Hashimoto, S., Taniyama, H., Kaneko, T., Fujii, T., Morita, H., Shimasaki, C., Yamazaki, I., Yoshimura, T., and Kato, T. Cyclic and Linear Peptides Derived from α -Amylase Inhibitory Protein Tendamistat, 783
 Osaki, S. See Yamamoto, Kurisu, Kusunoki, Tabata, and Urabe, 303
 Osawa, M. See Yoneya, Tahara, Nagao, Yamada, Yamamoto, Miyatani, and Nishikawa, 27
 Oshima, T. See Yasugi, Amino, Suzuki, and Yamagishi, 477
 —. See Miyazaki, Nakaya, Suzuki, Tamakoshi, and Yamagishi, 777
 Ota, N. See Nakamura, Hart, Frank, Marchuk, Shrive, Taura, Yoshikawa, and Kaneda, 755
 Otogiri, M., Kurisu, G., Ui, S., Takusagawa, Y., Ohkuma, M., Kudo, T., and Kusunoki, M. Crystal Structure of meso-2,3-Butanediol Dehydrogenase in a Complex with NAD⁺ and Inhibitor Mercaptoethanol at 1.7 Å Resolution for Understanding of Chiral Substrate Recognition Mechanisms, 205
 Otake, Y., Fujimoto, I., Tanaka, F., Nakagawa, T., Ikeda, T., Menon, K.K., Hase, S., Wada, H., and Ikenaka, K. Isolation and Characterization of an N-Linked Oligosaccharide That Is Significantly Increased in Sera from Patients with Non-Small Cell Lung Cancer, 537
 Oue, S. See Shimotohno, Yano, Kuramitsu, and Kagamiyama, 943
 Oxhorn, B.C. See Martin, Rossow, and Perrino, 843
 Ozawa, K. See Yu, Ishida, Akutsu, and Horiike, 411
 Ozawa, Y. See Ishiwata, Katayama, Shinda, Itoh, and Mizugaki, 13
- P
- Park, Y.-N. See Aikawa, Sugiyama, Nishiyama, Horinouchi, and Beppu, 791
 Pentchev, P.G. See Higaki, Ninomiya, Sugimoto, Suzuki, Taniguchi, Niwa, Vanier, and Ohno, 875
 Perrino, B.A. and Martin, B.A. Ca²⁺- and Myristoylation-Dependent Association of Calcineurin with Phosphatidylserine, 835
 —. See Martin, Oxhorn, and Rossow, 843
 Pyun, K.-H. See Lee, Kim, Kang, Kim, and Choi, 77
- Q
- Qiu, Y. See Muramatsu, Tachikui, Ushida, Song, Yamamoto, and Muramatsu, 923
- R
- Ra, C. See Takai, Okumura, Yokota, and Okumura, 5
 Rondelez, E. See Stevens, Merlevede, and Goris, 551
 Rossow, C.R. See Martin, Oxhorn, and Perrino, 843
- S
- Sadamitsu, C., Nagano, T., Fukumaki, Y., and Iwaki, A. Heat Shock Factor 2 Is Involved in the Upregulation of α B-Crystallin by High Extracellular Potassium, 813
 Sado, Y. See Yoshikawa, Takahashi, Imamura, and Hayashi, 929
 Sagami, H. See Tateyama, 297
 Saito, C. See Kosuge, Maekawa, Tanaka, Kouno, and Ohtsuki, 403
 Saitō, H. See Yamaguchi, Tuzi, Yonebayashi, Naito, Needleman, and Lanyi, 373
 Saito, K. See Takahashi, Takahashi, Kaneka, Ogasawara, Shindo, and Kawamura, 529
 Sakaguchi, H., Watanabe, M., Ueoka, C., Sugiyama, E., Taketomi, T., Yamada, S., and Sugahara, K. Isolation of Reducing Oligosaccharide Chains from the Chondroitin/Dermatan Sulfate-Protein Linkage Region and Preparation of Analytical Probes by Fluorescent Labeling with 2-Aminobenzamide, 107
 Sakaguchi, M. See Kusano, Kagawa, Waterman, and Omura, 259
 —. See Kusano, Kagawa, Omura, and Waterman, 271
 Sakaki, M., Koike, H., Takahashi, N., Sasagawa, N., Tomioka, S., Arahata, K., and Ishiura, S. Interaction between Emerin and Nuclear Lamins, 321
 Sakamoto, K. See Nakamura, Ishigami, and Makino, 937
 Sakano, Y. See Kondo, Ohtaki, Tonozuka, and Kamitori, 423
 Sakurai, T. See Zoppellaro and Huang, 949
 Salvador, J.M., Berengena, M., Sepúlveda, M.R., and Mata, A.M. Distribution of the Intracellular Ca²⁺-ATPase Isoform 2b in Pig Brain Subcellular Fractions and Cross-Reaction with a Monoclonal Antibody Raised against the Enzyme Isoform 1, 621
 Sano, M. See Maekawa, Morii, Kumanogoh, Naruse, Sokawa, and Mori, 691
 Sasagawa, N. See Sakaki, Koike, Takahashi, Tomioka, Arahata, and Ishiura, 321
 Sasaki, M. See Miyazaki, Yoshida, Hara, Kimura, Mak, and Nomoto, 963
 Sato, O. and Ogawa, Y. Myosin Assembly Critical for the Enzyme Activity of Smooth Muscle Myosin Phosphatase: Effects of MgATP, Ionic Strength, and Mg²⁺, 881
 Sato, Tetsuro. See Odani, Nakamura, and Fujii, 213
 Sato, Toru, Terabe, M., Watanabe, H., Gojobori, T., Hori-Takemoto, C., and Miura, K. Codon and Base Biases after the Initiation Codon of the Open Reading Frames in the *Escherichia coli* Genome and Their Influence on the Translation Efficiency, 851
 Satoh, K. See Tomoo, Tsuda, Wanaka, Okamoto, Hijikata-Okunomiya, Okada, and Ishida, 455
 Sawada, O., Ishida, T., and Horiike, K. Frontal Gel Chromatographic Analysis of the Interaction of a Protein with Self-Associating Ligands: Aberrant Saturation in the Binding of Flavins to Bovine Serum Albumin, 899
 Sekiya, F. See Okuda, Nozaki, and Morita, 615
 Sepúlveda, M.R. See Salvador, Berengena, and Mata, 621
 Shen, M. See Teramoto, Nakamasu, Noshiro, Matsuda, Gotoh, Tsutsumi, Kawamoto, Iwamoto, and Kato, 391
 Shibata, H. See Irie, Koshiba, Koyama, Asakura, Kimura, Naito, Yamauchi, Yada, Hanamura, Hanada, Abe, and Nakamura, 717
 Shibuya, Y. See Nishimura, Horino, Nishiura, Hiraoka, Tanase, and Yamamoto, 445
 Shichida, Y. See Nakamura, Kojima, Okano, Imai, Terakita, and Fukada, 329
 Shigeri, Y. See Ishida, Tatsu, Endo, Kameshita, Okuno, Kitani, Takeuchi, Yumoto, and Fujisawa, 745
 Shikata, K., Ohta, S., Yamada, K., Obuse, C., Yoshikawa, H., and Tsurimoto, T. The Human Homologue of Fission Yeast *cdc27*, p66, Is a Component of Active Human DNA Polymerase δ , 699
 Shimamoto, Tadashi, Shimamoto, T., Xu, X.-J., Okazaki, N., Kawakami, H., and Tsuchiya, T. A Cryptic Melibiose Transporter Gene Possessing a Frameshift from *Citrobacter freundii*, 607
 Shimamoto, Toshi. See Shimamoto, Xu, Okazaki, Kawakami, and Tsuchiya, 607
 Shimasaki, C. See Ono, Umezaki, Tojo, Hashimoto, Taniyama, Kaneko, Fujii, Morita, Yamazaki, Yoshimura, and Kato, 783
 Shimizu, T. See Karaya and Taketo, 769
 Shimotohno, A., Oue, S., Yano, T., Kuramitsu, S., and Kagamiyama, H. Demonstration of the Importance and Usefulness of Manipulating Non-Active-Site Residues in Protein Design, 943
 Shindo, H. See Ishiwata, Katayama, Ozawa, Itoh, and Mizugaki, 13
 Shindo, S. See Takahashi, Takahashi, Kaneko,

S (cont'd)

- Ogasawara, Saito, and Kawamura, 529
 Shinohara, A. See Kim, Maraboeuf, Kim, and Takahashi, 469
 Shirakawa, H. See Nakamura, Yoshioka, and Yoshida, 643
 Shirakura, R. See Miyagawa, Yamada, Matsunami, Koresawa, Ikawa, and Okabe, 795
 Shrive, N.G. See Nakamura, Hart, Frank, Marchuk, Ota, Taira, Yoshikawa, and Kaneda, 755
 Siddique, A.-B.M. See Takabatake, Kouchi, Izui, and Hata, 827
 Sokawa, Y. See Maekawa, Morii, Kumanogoh, Sano, Naruse, and Mori, 691
 Song, X. See Muramatsu, Tachikui, Ushida, Qiu, Yamamoto, and Muramatsu, 923
 Sorimachi, H. and Suzuki, K. The Structure of Calpain, 653
 Stevens, I., Rondelez, E., Merlevede, W., and Goris, J. Cloning and Differential Expression of New Calcium, Calmodulin-Dependent Protein Kinase II Isoforms in *Xenopus laevis* Oocytes and Several Adult Tissues, 551
 Sugahara, K. See Sakaguchi, Watanabe, Ueoka, Sugiyama, Taketomi, and Yamada, 107
 Sugimoto, I. See Goto, Muto, Ikawa-Kitayama, Igarashi, Ito, and Hashimoto, 229
 Sugimoto, T. See Kubo, Odai, and Ito, 869
 —. See Odai, Hatakeyama, Kubo, and Ito, 909
 Sugimoto, Y. See Higaki, Ninomiya, Suzuki, Taniguchi, Niwa, Pentchev, Vanier, and Ohno, 875
 Sugimura, K. See Kaji, Ikari, Hashiguchi, Ito, Matsumoto, Yoshimura, and Kuratsu, 577
 Sugimura, Y. See Ishii, Usui, Yamamoto, Tate-matsu, and Hirano, 253
 Sugita, M. See Araki, Yamada, Abe, Waki, Kon, Itonori, and Ando, 93
 Sugiura, T. See Kobayashi, Arai, and Waku, 665
 Sugiyama, E. See Sakaguchi, Watanabe, Ueoka, Taketomi, Yamada, and Sugahara, 107
 Sugiyama, Masakazu. See Aikawa, Park, Nishiyama, Horinouchi, and Beppu, 791
 Sugiyama, Masanori. See Elmileik, Kumagai, Berengena, and Ueda, 671
 Suvd, D., Fujimoto, Z., Takase, K., Matsumura, M., and Mizuno, H. Crystal Structure of *Bacillus stearothermophilus* α -Amylase: Possible Factors Determining the Thermostability, 461
 Suwan, S. See Tani, Kamada, Ochiai, Isobe, and Kai, 221
 Suzuki, Koichi. See Sorimachi, 653
 Suzuki, Koji. See Kitaura and Imamura, 397
 Suzuki, Tatsuya. See Higaki, Ninomiya, Sugimoto, Taniguchi, Niwa, Pentchev, Vanier, and Ohno, 875
 Suzuki, Toshiharu. See Yasugi, Amino, Oshima, and Yamagishi, 477
 —. See Miyazaki, Nakaya, Tamakoshi, Oshima, and Yamagishi, 777
- T
- Tabata, S. See Yamamoto, Kurisu, Kusunoki, Urabe, and Osaki, 303
 Tachikui, H. See Muramatsu, Ushida, Song, Qiu, Yamamoto, and Muramatsu, 923
 Tahara, T. See Yoneya, Nagao, Yamada, Yamamoto, Otsuwa, Miyatani, and Nishikawa, 27
 Taira, K. See Nakamura, Hart, Frank, Marchuk, Shrive, Ota, Yoshikawa, and Kaneda, 755
 Takabatake, R., Siddique, A.-B.M., Kouchi, H., Izui, K., and Hata, S. Characterization of a *Saccharomyces cerevisiae* Gene That Encodes a Mitochondrial Phosphate Transporter-Like Protein, 827
 Takabayashi, T. See Yubisui, Takahashi, Fujiwara, and Kawamura, 709
 Takagi, H. See Tsujimoto, Takahashi, Yamada, and Nakamori, 979
 Takagi, S. See Takahashi, Muramatsu, Fujisawa, Miyake, and Muramatsu, 599
 Takahashi, A., Muramatsu, H., Takagi, S., Fujisawa, H., Miyake, Y., and Muramatsu, T. A Splicing Factor, Prp8: Preferential Localization in the Testis and Ovary in Adult Mice, 599
 Takahashi, F. See Yubisui, Takabayashi, Fujiwara, and Kawamura, 709
 Takahashi, K. See Takahashi, Kaneko, Ogasawara, Shindo, Saito, and Kawamura, 529
 Takahashi, Masakazu. See Tsujimoto, Takagi, Yamada, and Nakamori, 979
 Takahashi, Masayuki. See Kim, Maraboeuf, Kim, and Shinohara, 469
 Takahashi, N. See Sakaki, Koike, Sasagawa, Tomioka, Arahata, and Ishiura, 321
 Takahashi, Saori, Takahashi, K., Kaneko, T., Ogasawara, H., Shindo, S., Saito, K., and Kawamura, Y. Identification of Functionally Important Cysteine Residues of the Human Renin-Binding Protein as the Enzyme *N*-Acetyl-D-Glucosamine 2-Epimerase, 529
 Takahashi, Satoru. See Kajihara, Kawachi, Kobayashi, Ogino, and Yasuda, 139
 Takahashi, Seiichiro. See Yoshikawa, Imamura, Sado, and Hayashi, 929
 Takahashi, Y. See Odani, Baba, Tsuchida, Aoyagi, and Waku, 69
 Takai, T., Okumura, K., Ra, C., Yokota, T., and Okumura, Y. Expression of Humanized Fab Fragments That Recognize the IgE-Binding Domain of Human Fc ϵ R1 α in COS and CHO Cells, 5
 Takami, Y. See Nakayama, 491
 Takase, K. See Suwd, Fujimoto, Matsumura, and Mizuno, 461
 Takeda, C. See Kikuchi, Tsujimoto, Asada, and Nagata, 237
 Takematsu, H. See Yamaji, Nakamura, Kawasaki, and Kozutsumi, 521
 Taketo, A. See Karaya and Shimizu, 769
 Taketomi, T. See Sakaguchi, Watanabe, Ueoka, Sugiyama, Yamada, and Sugahara, 107
 Takeuchi, M. See Ishida, Shigeri, Tatsu, Endo, Kamehita, Okuno, Kitani, Yumoto, and Fujisawa, 745
 Takita, H. See Mahmood, Ojima, Kobayashi, Kohgo, and Kuboki, 163
 Takusagawa, Y. See Otagiri, Kurisu, Ui, Ohkuma, Kudo, and Kusunoki, 205
 Tamakoshi, M. See Miyazaki, Nakaya, Suzuki, Oshima, and Yamagishi, 777
 Tanaka, F. See Otake, Fujimoto, Nakagawa, Ikeda, Menon, Hase, Wada, and Ikenaka, 537
 Tanaka, I. See Itou, 343
 Tanaka, T. See Kosuge, Maekawa, Saito, Kou-no, and Ohtsuki, 403
 Tanase, S. See Nishimura, Horino, Nishiura, Shibuya, Hiraoka, and Yamamoto, 445
 Tani, N., Kamada, G., Ochiai, K., Isobe, M., Suwan, S., and Kai, H. Carbohydrate Moiety of Time-Interval Measuring Enzyme Regulates Time Measurement through Its Interaction with Time-Holding Peptide PIN, 221
 Taniguchi, K., Kaya, S., Abe, K., and Mårdh, S. The Oligomeric Nature of Na/K-Transport ATPase, 335
 Taniguchi, M. See Higaki, Ninomiya, Sugimoto, Suzuki, Niwa, Pentchev, Vanier, and Ohno, 875
 Taniguchi, N. See Fujiwara, Fujii, and Fujii, 803
 Tanimizu, N. See Chatani, Ueno, and Hayashi, 917
 Taniyama, H. See Ono, Umezaki, Tojo, Hashimoto, Kaneko, Fujii, Morita, Shimasaki, Yamazaki, Yoshimura, and Kato, 783
 Tatematsu, M. See Ishii, Usui, Yamamoto, Sugimura, and Hirano, 253
 Tateyama, S. and Sagami, H. Study on the Biosynthesis of Dolichol in Yeast: Recognition of the Prenyl Chain Length in Polyprenol Reduction, 297
 Tatsu, Y. See Ishida, Shigeri, Endo, Kamehita, Okuno, Kitani, Takeuchi, Yumoto, and Fujisawa, 745
 Terabe, M. See Sato, Watanabe, Gojobori, Hori-Takemoto, and Miura, 851
 Terai, H. See Ishikawa and Kitajima, 627
 Terakita, A. See Nakamura, Kojima, Okano, Imai, Shichida, and Fukada, 329
 Teramoto, M., Nakamasu, K., Noshiro, M., Matsuda, Y., Gotoh, O., Shen, M., Tsutsumi, S., Kawamoto, T., Iwamoto, Y., and Kato, Y. Gene Structure and Chromosomal Location of a Human bHLH Transcriptional Factor DEC1-Str13-SHARP-2/BHLHB2, 391
 Terasaka, H. See Kimura, Yamanushi, Tokumasu, and Yoshinobu, 351
 Thornalley, P.J., Jahan, I., and Ng, R. Suppression of the Accumulation of Triosephosphates and Increased Formation of Methylglyoxal in Human Red Blood Cells during Hyperglycaemia by Thiamine *In Vitro*, 543
 Tojo, N. See Ono, Umezaki, Hashimoto, Taniyama, Kaneko, Fujii, Morita, Shimasaki, Yamazaki, Yoshimura, and Kato, 783
 Tokumasu, Y. See Kimura, Yamanushi, Terasaka, and Yoshinobu, 351
 Tomioka, S. See Sakaki, Koike, Takahashi, Sasagawa, Arahata, and Ishiura, 321
 Tomoo, K., Satoh, K., Tsuda, Y., Wanaka, K., Okamoto, S., Hijikata-Okunomiya, A., Okada, Y., and Ishida, T. Binding Diversity of a Noncovalent-Type Low-Molecular-Weight Serine Protease Inhibitor and Function of a Catalytic Water Molecule: X-Ray Crystal Structure of PKSI-527-Inhibited Trypsin, 455
 Tonozuka, T. See Kondo, Ohtaki, Sakano, and Kamitori, 423
 Tsuboi, Y. See Inoue and Kanazawa, 569
 Tsuchida, Y. See Odani, Baba, Aoyagi, Waku, and Takahashi, 69
 Tsuchiya, T. See Shimamoto, Shimamoto, Xu, Okazaki, and Kawakami, 607
 Tsuda, Y. See Tomoo, Satoh, Wanaka, Oka-

T (cont'd)

- moto, *Hijikata-Okunomiya, Okada, and Ishida*, 455
- Tsujimoto, K., Takagi, H., Takahashi, M., Yamada, H., and Nakamori, S. Cryoprotective Effect of the Serine-Rich Repetitive Sequence in Silk Protein Sericin, 979
- Tsujimoto, Y. See *Kikuchi, Takeda, Asada, and Nagata*, 237
- Tsumoto, K. See *Nakamura, Watanabe, Nishimiya, Ishimura, and Kumagai*, 209
- Tsurimoto, T. See *Shikata, Ohta, Yamada, Obuse, and Yoshikawa*, 699
- Tsutsumi, S. See *Teramoto, Nakamasu, Noshiro, Matsuda, Gotoh, Shen, Kawamoto, Iwamoto, and Kato*, 391
- Tuzi, S. See *Yamaguchi, Yonebayashi, Naito, Needleman, Lanyi, and Saitô*, 373
- U
- Uchiumi, T. See *Wada, Ichiba, and Hachimori*, 955
- Ueda, H. See *Zako, Harada, Mannen, Yamaguchi, Kitayama, and Nagamune*, 1
- Ueda, K. See *Elmleik, Kumagai, Berengena, and Sugiyama*, 671
- Ueno, H. See *Chatani, Tanimizu, and Hayashi*, 917
- Ueno, T. See *Furuya, Kanazawa, Fujimura, Kominami, and Kadowaki*, 313
- Ueoka, C. See *Sakaguchi, Watanabe, Sugiyama, Taketomi, Yamada, and Sugahara*, 107
- Ui, S. See *Otagiri, Kurisu, Takusagawa, Ohkuma, Kudo, and Kusunoki*, 205
- Umezaki, M. See *Ono, Tojo, Hashimoto, Taniyama, Kaneko, Fujii, Morita, Shimasaki, Yamazaki, Yoshimura, and Kato*, 783
- Une, M. See *Hino, Morita, Fujimura, and Kuramoto*, 683
- Ura, H., Harata, K., Matsui, I., and Kuramitsu, S. Temperature Dependence of the Enzyme-Substrate Recognition Mechanism, 173
- Urabe, I. See *Yamamoto, Kurisu, Kusunoki, Tabata, and Osaki*, 303
- Ushida, H. See *Muramatsu, Tachikui, Song, Qiu, Yamamoto, and Muramatsu*, 923
- Usui, S. See *Ishii, Yamamoto, Sugimura, Tatematsu, and Hirano*, 263
- Utsumi, K. See *Ishisaka, Kanno, Akiyama, Yoshioka, and Utsumi*, 35
- Utsumi, T. See *Ishisaka, Kanno, Akiyama, Yoshioka, and Utsumi*, 35
- V
- Vanier, M.T. See *Higaki, Ninomiya, Sugimoto, Suzuki, Taniguchi, Niwa, Pentchev, and Ohno*, 875
- W
- Wada, H. See *Otake, Fujimoto, Tanaka, Nakagawa, Ikeda, Menon, Hase, and Ikenaka*, 537
- Wada, M., Uchiumi, T., Ichiba, T., and Hachimori, A. Enhancement of the Thermostability of Thermophilic Bacterium PS-3 Ppase on Substitution of Ser-89 with Carboxylic Amino Acids, 955
- Wada, T. See *Yamaguchi, Narita, Inukai, and Handa*, 185
- Wakabayashi, T. See *Yasunaga*, 201
- Wakabayashi, Y. See *Hagino-Yamagishi, Matsuoka, Ichikawa, Mori, and Yazaki*, 509
- Waki, H. See *Araki, Yamada, Abe, Kon, Itonori, Sugita, and Ando*, 93
- Waku, K. See *Kobayashi, Arai, and Sugiura*, 665
- Wakui, S. See *Odani, Baba, Tsuchida, Aoyagi, and Takahashi*, 69
- Wanaka, K. See *Tomoa, Satoh, Tsuda, Okamoto, Hijikata-Okunomiya, Okada, and Ishida*, 455
- Wang, C. See *Li and Zhang*, 821
- Watanabe, Hideki. See *Nakamura, Nishimiya, Tsumoto, Ishimura, and Kumagai*, 209
- Watanabe, Hidemi. See *Sato, Terabe, Gojoberi, Hori-Takemoto, and Miura*, 851
- Watanabe, M. See *Sakaguchi, Ueoka, Sugiyama, Taketomi, Yamada, and Sugahara*, 107
- Watanabe, N. See *Yang, Nakada-Tsukui, Ohtani, Goto, Yoshimura, and Kobayashi*, 561
- Waterman, M.R. See *Kusano, Sakaguchi, Kagawa, and Omura*, 259
- See *Kusano, Kagawa, Sakaguchi, and Omura*, 271
- X
- Xu, X.-J. See *Shimamoto, Shimamoto, Okazaki, Kawakami, and Tsuchiya*, 607
- Y
- Yabusaki, Y. See *Nitahara, Kishimoto, Gotoh, Yoshida, Horiuchi, and Aoyama*, 761
- Yada, K. See *Irie, Koshihara, Koyama, Asakura, Shibata, Kimura, Naito, Yamauchi, Hanamura, Hanada, Abe, and Nakamura*, 717
- Yamada, H. See *Tsujimoto, Takagi, Takahashi, and Nakamori*, 979
- Yamada, K. See *Shikata, Ohta, Obuse, Yoshikawa, and Tsurimoto*, 699
- Yamada, M. See *Miyagawa, Matsunami, Koresawa, Ikawa, Okabe, and Shirakura*, 795
- Yamada, Shoji. See *Araki, Abe, Waki, Kon, Itonori, Sugita, and Ando*, 93
- Yamada, Shuhei. See *Sakaguchi, Watanabe, Ueoka, Sugiyama, Taketomi, and Sugahara*, 107
- Yamada, Y. See *Yoneya, Tahara, Nagao, Yamamoto, Osawa, Miyatani, and Nishikawa*, 27
- Yamagata, Y. See *Maeda, Mizutani, Ichishima, and Nakajima*, 675
- Yamagishi, A. See *Yasugi, Amino, Suzuki, and Oshima*, 477
- See *Miyazaki, Nakaya, Suzuki, Tamakoshi, and Oshima*, 777
- Yamaguchi, A. See *Nada, Murakami, Okamoto, and Kubo*, 87
- Yamaguchi, Satoru, Tuzi, S., Yonebayashi, K., Naito, A., Needleman, R., Lanyi, J.K., and Saitô, H. Surface Dynamics of Bacteriorhodopsin as Revealed by ¹³C NMR Studies on [¹⁴C]Ala-Labeled Proteins: Detection of Millisecond or Microsecond Motions in Interhelical Loops and C-Terminal α -Helix, 373
- Yamaguchi, Satoshi. See *Zako, Harada, Mannen, Kitayama, Ueda, and Nagamune*, 1
- Yamaguchi, T. See *Yamashita, Murakami, and Nagasawa*, 861
- Yamaguchi, Y., Narita, T., Inukai, N., Wada, T., and Handa, H. *SPT Genes: Key Players in the Regulation of Transcription, Chromatin Structure and Other Cellular Processes*, 185
- Yamaji, T., Nakamura, S., Takematsu, H., Kawasaki, T., and Kozutsumi, Y. Apoptosis of CTLL-2 Cells Induced by an Immunosuppressant, ISP-I, Is Caspase-3-Like Protease-Independent, 521
- Yamamoto, H. See *Ishii, Usui, Sugimura, Tatematsu, and Hirano*, 263
- Yamamoto, K., Kurisu, G., Kusunoki, M., Tabata, S., Urabe, I., and Osaki, S. Crystal Structure of Glucose Dehydrogenase from *Bacillus megaterium* IWG3 at 1.7 Å Resolution, 303
- Yamamoto, S. See *Muramatsu, Tachikui, Ushida, Song, Qiu, and Muramatsu*, 923
- Yamamoto, Terumi. See *Yoneya, Tahara, Nagao, Yamada, Osawa, Miyatani, and Nishikawa*, 27
- Yamamoto, Tetsuro. See *Nishimura, Horino, Nishiura, Shibuya, Hiraoka, and Tanase*, 445
- Yamamoto, Y. See *Araki, Li, Haneda, Nishi, Kikkawa, and Ohkubo*, 279
- Yamane, K. See *Kanai, Haga, and Harata*, 593
- Yamanishi, Y. See *Kimura, Tokumasu, Terasaka, and Yoshinobu*, 351
- Yamashita, T., Yamaguchi, T., Murakami, K., and Nagasawa, S. Detergent-Resistant Membrane Domains Are Required for Mast Cell Activation but Dispensable for Tyrosine Phosphorylation upon Aggregation of the High Affinity Receptor for IgE, 861
- Yamauchi, T. See *Irie, Koshihara, Koyama, Asakura, Shibata, Kimura, Naito, Yada, Hanamura, Hanada, Abe, and Nakamura*, 717
- Yamazaki, I. See *Ono, Umezaki, Tojo, Hashimoto, Taniyama, Kaneko, Fujii, Morita, Shimasaki, Yoshimura, and Kato*, 783
- Yanagawa, H. See *Ishizaka and Ohshima*, 971
- Yang, D., Nakada-Tsukui, K., Ohtani, M., Goto, R., Yoshimura, T., Kobayashi, Y., and Watanabe, N. Identification and Cloning of Genes Associated with the Guinea Pig Skin Delayed-Type Hypersensitivity Reaction, 561
- Yano, T. See *Shimotohno, Oue, Kuramitsu, and Kagamiyama*, 943
- Yasuda, K. See *Kajihara, Kawachi, Kobayashi, Ogino, and Takahashi*, 139
- Yasugi, M., Amino, M., Suzuki, T., Oshima, T., and Yamagishi, A. Cold Adaptation of the Thermophilic Enzyme 3-Isopropylmalate Dehydrogenase, 477
- Yasumasu, S. See *Ikuzawa, Inokuchi, and Kobayashi*, 147
- Yasunaga, T. and Wakabayashi, T. Relocation of Cys374 of Actin Induced by Labeling with Fluorescent Dyes, 201
- Yatome, C. See *Nakanishi, Iwata, and Kitade*, 101
- Yazaki, K. See *Hagino-Yamagishi, Matsuoka, Ichikawa, Wakabayashi, and Mori*, 509
- Yazawa, M. See *Konishi, Kojima, Katoh, Kato, Fujiwara, and Onishi*, 365
- See *Numata and Katoh*, 437
- Yildirim, E. See *Cherepanov and de Vries*, 61
- Yokota, T. See *Takai, Okumura, Ra, and Okumura*, 5
- Yonebayashi, K. See *Yamaguchi, Tuzi, Naito, Needleman, Lanyi, and Saitô*, 373

Y (cont'd)

- Yoneya, T., Tahara, T., Nagao, K., Yamada, Y., Yamamoto, T., Osawa, M., Miyatani, S., and Nishikawa, M. Molecular Cloning of Delta-4, a New Mouse and Human Notch Ligand, 27
- Yoshida, H. See *Miyazaki, Sasaki, Hara, Kimura, Mak, and Nomoto*, 963
- Yoshida, M. See *Nakamura, Yoshioka, and Shirakawa*, 643
- Yoshida, Y. See *Nitahara, Kishimoto, Yabusaki, Gotoh, Horiuchi, and Aoyama*, 761
- Yoshikawa, Hideki. See *Nakamura, Hart, Frank, Marchuk, Shrive, Ota, Taira, and Kaneda*, 755
- Yoshikawa, Hiroshi. See *Shikata, Ohta, Yamada, Obuse, and Tsurimoto*, 699
- Yoshikawa, K., Takahashi, S., Imamura, Y., Sado, Y., and Hayashi, T. Secretion of Non-Helical Collagenous Polypeptides of $\alpha 1(\text{IV})$ and $\alpha 2(\text{IV})$ Chains upon Depletion of Ascorbate by Cultured Human Cells, 929
- Yoshimura, Teizo. See *Yang, Nakada-Tsukui, Ohtani, Goto, Kobayashi, and Watanabe*, 561
- See *Kaji, Ikari, Hashiguchi, Ito, Matsumoto, Kuratsu, and Sugimura*, 577
- Yoshimura, Toshiaki. See *Ono, Umezaki, Tojo, Hashimoto, Taniyama, Kaneko, Fujii, Morita, Shimasaki, Yamazaki, and Kato*, 783
- Yoshinobu, J. See *Kimura, Yamanishi, Tokumasu, and Terasaka*, 351
- Yoshioka, K. See *Nakamura, Shirakawa, and Yoshida*, 643
- Yoshioka, T. See *Ishisaka, Kanno, Akiyama, Utsumi, and Utsumi*, 35
- You, J. See *Mizuurai, Ono, Kamihira, and Iijima*, 125
- Yu, J.-S., Chang, S.-H., Chan, W.-H., and Chen, H.-C. Enzyme-Linked Immunosorbent Assay for the Determination of p21-Activated Kinase Activity, 243
- Yu, L., Ishida, T., Ozawa, K., Akutsu, H., and Horiike, K. Purification and Characterization of Homo- and Hetero-Dimeric Acetate Kinases from the Sulfate-Reducing Bacterium *Desulfovibrio vulgaris*, 411
- Yubisui, T., Takahashi, F., Takabayashi, T., Fujiwara, S., and Kawamura, K. Characterization of Cytochrome b_5 in the Ascidian *Polyandrocarpa misakiensis* and Budding-Specific Expression, 709
- Yumoto, N. See *Ishida, Shigeri, Tatsu, Endo, Kameshita, Okuno, Kitani, Takeuchi, and Fujisawa*, 745

Z

- Zako, T., Harada, K., Mannen, T., Yamaguchi, S., Kitayama, A., Ueda, H., and Nagamune, T. Monitoring of the Refolding Process for Immobilized Firefly Luciferase with a Biosensor Based on Surface Plasmon Resonance, 1
- Zhang, S. See *Li and Wang*, 821
- Zoppellaro, G., Sakurai, T., and Huang, H. A Novel Mixed Valence Form of *Rhus vernicifera* Laccase and Its Reaction with Dioxygen to Give a Peroxide Intermediate Bound to the Trinuclear Center, 949

INDEX TO KEY WORDS

A

- α -amylase, cyclodextrin, crystal structure, enzymatic glucoside hydrolysis, site-directed mutagenesis, *Kondo, Ohtaki, Tonozuka, Sakano, Kamitori*, 423
- , *Bacillus stearothermophilus*, Ca²⁺-binding, crystal structure, thermostability, *Suwa, Fujimoto, Takase, Matsumura, Mizuno*, 461
- α -amylase inhibitory activity, circular dichroism, cyclic and linear peptides, protease resistance, tendamistat, *Ono, Umezaki, Tojo, Hashimoto, Taniyama, Kaneko, Fujii, Morita, Shimasaki, Yamazaki, Yoshimura, Kato*, 783
- AAPH, apoptosis, caspase-3, cathepsin, cytochrome *c*, *Ishisaka, Kanno, Akiyama, Yoshio, Utsumi, Utsumi*, 35
- α B-crystallin, glioma cells, heat shock factor (HSF), potassium ion (K⁺), stress response, *Sadamitsu, Nagano, Fukumaki, Iwaki*, 813
- ABC transporter, antibiotic, development, *Myxococcus xanthus*, sporulation, *Kimura, Yamanishi, Tokumasu, Terasaka, Yoshinobu*, 351
- acetate kinase, HPLC analyses of ADP and ATP, kinetics, post-translational modification, sulfate-reducing bacterium, *Yu, Ishida, Ozawa, Akutsu, Horike*, 411
- actin, Cys374, fluorescence resonance energy transfer, *Yasunaga, Wakabayashi*, 201
- active site, binding protein, GlcNAc 2-epimerase, renin, site-directed mutagenesis, *Takahashi, Takahashi, Kaneko, Ogasawara, Shindo, Saito, Kawamura*, 529
- adenovirus expression system, G proteins, mammalian pheromone receptor, urine, vomeronasal organ, *Hagino-Yamagishi, Matsuo, Ichikawa, Wakabayashi, Mori, Yazaki*, 509
- adrenal gland, aldosterone, 18-ethynyl-11-deoxycorticosterone, mechanism-based inhibitors, suicide inhibitors, *Matkovic, Gomez-Sanchez, Cozza*, 383
- 2-AEPn, *Aplysia kurodai*, egg mass, phosphoglycosphingolipid, SIMS, *Araki, Yamada, Abe, Waki, Kon, Itonori, Sugita, Ando*, 93
- agonist-receptor vibrational interaction, glutamate receptor, kainate, normal vibrational mode analysis, PM3 method, *Kubo, Odai, Sugimoto, Ito*, 869
- aldosterone, adrenal gland, 18-ethynyl-11-deoxycorticosterone, mechanism-based inhibitors, suicide inhibitors, *Matkovic, Gomez-Sanchez, Cozza*, 383
- alkaline phosphatase, antibody, nitrocellulose membrane, phage display library, selection efficiency, variable region, *Nakamura, Watanabe, Nishimiya, Tsumoto, Ishimura, Kumagai*, 209
- alkaline-stability, autolysis, conformational restoration, serine protease, surface region, *Maeda, Mizutani, Yamagata, Ichishima, Nakajima*, 675
- amino acid sequence, disulfide bond, fatty acid-binding protein, fish, *Lateolabrax japonicus*, *Odani, Baba, Tsuchida, Aoyagi, Wakui, Takahashi*, 69
- , DNA sequencing, molecular cloning, monoacylglycerol lipase, thermostable enzyme, *Kitaura, Suzuki, Imamura*, 397
- 2-aminobenzamide, chondroitin sulfate, MALDI-TOF mass, ¹H NMR, glycosaminoglycan, *Sakaguchi, Watanabe, Ueoka, Sugiyama, Taketomi, Yamada, Sugahara*, 107
- aminopeptidase N, metallothionein, renal cancer, zinc, *Ishii, Usui, Yamamoto, Sugimura, Tatematsu, Hirano*, 253
- aminotransferase, domain movement, hyperthermophilic enzyme, *Pyrococcus horikoshii*, substrate recognition, *Ura, Harata, Matsui, Kuramitsu*, 173
- amphotericin B, complex formation, ergosterol, lysophosphatidylcholine, micelle, *Kawabata, Onda, Mita*, 725
- anandamide, 2-arachidonoylglycerol, cannabinoid, CB2 receptor, MAP kinase, *Kobayashi, Arai, Waku, Sugiura*, 665
- antibiotic, ABC transporter, development, *Myxococcus xanthus*, sporulation, *Kimura, Yamanishi, Tokumasu, Terasaka, Yoshinobu*, 351
- antibody, alkaline phosphatase, nitrocellulose membrane, phage display library, selection efficiency, variable region, *Nakamura, Watanabe, Nishimiya, Tsumoto, Ishimura, Kumagai*, 209
- , ELISA, PAK, peptide, phosphorylation, *Yu, Chang, Chan, Chen*, 243
- antisense oligonucleotides, fluorescence resonance energy transfer, liposome, Sendai virus, *Nakamura, Hart, Frank, Marchuk, Shrive, Ota, Taira, Yoshikawa, Kaneda*, 755
- Apafl, apoptosis, electron microscopy, mitochondria, necrosis, *Miyazaki, Yoshida, Sasaki, Hara, Kimura, Mak, Nomoto*, 963
- Aplysia kurodai*, 2-AEPn, egg mass, phosphoglycosphingolipid, SIMS, *Araki, Yamada, Abe, Waki, Kon, Itonori, Sugita, Ando*, 93
- apoptosis, AAPH, caspase-3, cathepsin, cytochrome *c*, *Ishisaka, Kanno, Akiyama, Yoshio, Utsumi, Utsumi*, 35
- , chemotactic factor, isopeptide bond, monocytes, S19 ribosomal protein, transglutaminase, *Nishimura, Horino, Nishiura, Shibuya, Hiraoka, Tanase, Yamamoto*, 445
- , estrous cycle, glutathione peroxidase, hydrogen peroxide, prostaglandin, *Nakamura, Ishigami, Makino, Sakamoto*, 937
- , Apafl, electron microscopy, mitochondria, necrosis, *Miyazaki, Yoshida, Sasaki, Hara, Kimura, Mak, Nomoto*, 963
- 2-arachidonoylglycerol, anandamide, cannabinoid, CB2 receptor, MAP kinase, *Kobayashi, Arai, Waku, Sugiura*, 665
- archaeon (archaeobacterium), common ancestor, 3-isopropylmalate dehydrogenase, protein stability, *Sulfolobus*, *Miyazaki, Nakaya, Suzuki, Tamakoshi, Oshima, Yamagishi*, 777
- ascidian, budding-specific expression, cDNA,

cytochrome *b₆*, recombinant protein, *Yubisui, Takahashi, Takabayashi, Fujiwara, Kawamura*, 709

ascorbic acid, ascorbic acid 2-phosphate, type IV collagen, triple-helix, *Yoshikawa, Takahashi, Imamura, Sado, Hayashi*, 929

ascorbic acid 2-phosphate, ascorbic acid, type IV collagen, triple-helix, *Yoshikawa, Takahashi, Imamura, Sado, Hayashi*, 929

asparagine-linked oligosaccharides, endo- β -N-acetylglucosaminidase, endoglycosidase, *Streptococcus pneumoniae*, virulence, *Muramatsu, Tachiku, Ushida, Song, Qu, Yamamoto, Muramatsu*, 923

aspartic proteinase, milk-clotting enzyme, *Rhizomucor pusillus* pepsin, site-directed mutagenesis, subsites, *Aikawa, Park, Sugiyama, Nishiyama, Horinouchi, Beppu*, 791

atherosclerosis, cholesterol, HDL, M-CSF, reverse cholesterol transport, *Irie, Koshiba, Koyama, Asakura, Shibata, Kimura, Naito, Yamauchi, Yada, Hanamura, Hanada, Abe, Nakamura*, 717

ATPase, *Bombyx mori*, glycoprotein, TIME-EA4, timer protein, *Tani, Kamada, Ochiai, Isobe, Suwan, Kai*, 221

autolysis, alkaline-stability, conformational restoration, serine protease, surface region, *Maeda, Mizutani, Yamagata, Ichishima, Nakajima*, 675

autophagic maturation, autophagosome-lysosome fusion, betaine homocysteine methyltransferase, leupeptin, macroautophagy, *Furuya, Kanazawa, Fujimura, Ueno, Komnami, Kadowaki*, 313

autophagosome-lysosome fusion, autophagic maturation, betaine homocysteine methyltransferase, leupeptin, macroautophagy, *Furuya, Kanazawa, Fujimura, Ueno, Komnami, Kadowaki*, 313

azole-antifungal agents, CYP51, molecular modeling, point mutation, sterol 14-demethylase P450, *Nitahara, Kishimoto, Yabusaki, Gotoh, Yoshida, Horiuchi, Aoyama*, 161

B

Bacillus stearothermophilus, α -amylase, Ca²⁺-binding, crystal structure, thermostability, *Suwa, Fujimoto, Takase, Matsumura, Mizuno*, 461

bacterial signal transduction, DNA-binding domain, OmpR-family of proteins, transcriptional regulator, two-component system, *Ito, Tanaka*, 343

bacteriorhodopsin, C-terminal α -helix, interhelical loops, membrane proteins, surface dynamics, *Yamaguchi, Tuzi, Yonebayashi, Naito, Needleman, Lanyi, Saito*, 373

base pair mismatch, DNA ligase, DNA sequencing, mutagenesis, nick-ligation, *Cherpanov, Yildirim, de Vries*, 61

basic-leucine zipper (b-Zip), large Mafs, Maf recognition elements (MARE), somite, transcription factor, *Kajihara, Kawauchi, Kobayashi, Ogino, Takahashi, Yasuda*, 139

Bcl-2, caspase-3, CTLL-2, ISP-1, sphingosine,

B (cont'd)

- Yamaji, Nakamura, Takematsu, Kawasaki, Kozutsumi*, 521
- betaine homocysteine methyltransferase, autophagic maturation, autophagosome-lysosome fusion, leupeptin, macroautophagy, *Furuya, Kanazawa, Fujimura, Ueno, Kominami, Kadowaki*, 313
- bHLH, cAMP, chondrocyte, DEC1, gene structure, *Teramoto, Nakamasu, Noshiro, Matsuda, Gotoh, Shen, Tsutsumi, Kawamoto, Iwamoto, Kato*, 391
- bile acid, hepatotoxicity, hepatotoxicity, hydrophilicity, lipid peroxidation, *Hino, Morita, Une, Fujimura, Kuramoto*, 683
- binding diversity, crystal structure, noncovalent inhibitor, trypsin, *Tomo, Satoh, Tsuda, Wanaka, Okamoto, Hijikata-Okunomiya, Okada, Ishida*, 455
- binding protein, overlay assay, protein Ser/Thr phosphorylation, serine protease inhibitor (serpin), *Xenopus laevis* oocytes, *Goto, Muto, Sugimoto, Ikawa-Kitayama, Igarashi, Ito, Hashimoto*, 229
- , active site, GlcNAc 2-epimerase, renin, site-directed mutagenesis, *Takahashi, Takahashi, Kaneka, Ogasawara, Shindo, Saito, Kawamura*, 529
- binding system, bovine serum albumin, flavin, frontal gel chromatography, ligand self-association, *Sawada, Ishida, Horiike*, 899
- bioglass, bone morphogenetic protein, carrier-geometry, osteogenesis, vascularization, *Mahmood, Takita, Ojima, Kobayashi, Kohgo, Kuboki*, 163
- bleomycin, bleomycin resistance, calreticulin, heat shock protein, stress response, *Elm-ileik, Kumagai, Berengena, Ueda, Sugiyama*, 671
- bleomycin resistance, bleomycin, calreticulin, heat shock protein, stress response, *Elm-ileik, Kumagai, Berengena, Ueda, Sugiyama*, 671
- Bloom's syndrome, DNA topoisomerase III, RecQ helicase, Sgs1, Werner's syndrome, *Enomoto*, 501
- Bombyx mori*, ATPase, glycoprotein, TIME-EA4, timer protein, *Tani, Kamada, Ochiai, Isobe, Suwan, Kai*, 221
- , cryoprotection, freezing tolerance, repetitive sequence, sericin, *Tsujimoto, Takagi, Takahashi, Yamada, Nakamori*, 979
- bone morphogenetic protein, bioglass, carrier-geometry, osteogenesis, vascularization, *Mahmood, Takita, Ojima, Kobayashi, Kohgo, Kuboki*, 163
- bovine serum albumin, binding system, flavin, frontal gel chromatography, ligand self-association, *Sawada, Ishida, Horiike*, 899
- brain Ca²⁺ pumps, intracellular Ca²⁺-ATPase, SERCA2b isoform, *Salvador, Berengena, Sepúlveda, Mata*, 621
- brain-specific protein, dipeptidyl peptidase IV, DPPX, DPPX-L, DPPX-S, *Kin, Misumi, Ikehara*, 289
- BRG1, BRM, chromatin remodeling factor, differentiation, neural precursor cell, *Machida, Murai, Miyake, Iijima*, 43
- BRM, BRG1, chromatin remodeling factor, differentiation, neural precursor cell, *Machida, Murai, Miyake, Iijima*, 43
- budding-specific expression, ascidian, cDNA, cytochrome *b₆*, recombinant protein, *Yubisui, Takahashi, Takabayashi, Fujiwara, Kawamura*, 709
- butanediol dehydrogenase, chiral recognition, crystal structure, *Klebsiella pneumoniae*, short-chain dehydrogenase/reductase family, stereoisomer, *Otagiri, Kurisu, Ui, Takusagawa, Ohkuma, Kudo, Kusunoki*, 205

C

- C2-domain, calpain, calcium, connectin/titin, EF-hand motif, *Sorimachi, Suzuki*, 653
- C-terminal α -helix, bacteriorhodopsin, interhelical loops, membrane proteins, surface dynamics, *Yamaguchi, Tuzi, Yonebayashi, Naito, Needleman, Lanyi, Saito*, 373
- Ca²⁺-binding, α -amylase, *Bacillus stearothermophilus*, crystal structure, thermostability, *Suvd, Fujimoto, Takase, Matsumura, Mizuno*, 461
- Caenorhabditis elegans*, granulosa cells, midkine, Prp8, splicing factor, testis, *Takahashi, Muramatsu, Takagi, Fujisawa, Miyake, Muramatsu*, 599
- calcineurin, calmodulin, membrane, myristoylation, phospholipids, *Perrino, Martin*, 835
- , calmodulin, membrane, myristoylation, phospholipids, *Martin, Oxhorn, Rossow, Perrino*, 843
- calcium, calpain, C2-domain, connectin/titin, EF-hand motif, *Sorimachi, Suzuki*, 653
- calcium/calmodulin-dependent protein kinase II, CDK1, isoforms, maturation, *Xenopus laevis*, *Stevens, Rondelez, Merlevede, Goris*, 551
- calcium ion, calmodulin-dependent protein kinase, protein kinase kinase, protein phosphatase, signal transduction, *Fujisawa*, 193
- calmodulin, calcineurin, membrane, myristoylation, phospholipids, *Perrino, Martin*, 835
- , calcineurin, membrane, myristoylation, phospholipids, *Martin, Oxhorn, Rossow, Perrino*, 843
- calmodulin-dependent protein kinase, calcium ion, protein kinase kinase, protein phosphatase, signal transduction, *Fujisawa*, 193
- calpain, calcium, C2-domain, connectin/titin, EF-hand motif, *Sorimachi, Suzuki*, 653
- calreticulin, bleomycin, bleomycin resistance, heat shock protein, stress response, *Elm-ileik, Kumagai, Berengena, Ueda, Sugiyama*, 671
- CaM-kinase, kinetic analysis, protein phosphatase, substrate specificity, synthetic phosphopeptide, *Ishida, Shigeri, Tatsu, Endo, Kameshita, Okuno, Kitani, Takeuchi, Yumoto, Fujisawa*, 745
- cAMP, bHLH, chondrocyte, DEC1, gene structure, *Teramoto, Nakamasu, Noshiro, Matsuda, Gotoh, Shen, Tsutsumi, Kawamoto, Iwamoto, Kato*, 391
- cAMP-dependent protein kinase, casein kinase II, galloyl pedunculagin, inhibitor of A-kinase β , proline-rich protein, *Kosuge, Maekawa, Saito, Tanaka, Kouno, Ohtsuki*, 403
- cannabinoid, anandamide, 2-arachidonoylglycerol, CB2 receptor, MAP kinase, *Kobayashi, Arai, Waku, Sugiura*, 665
- carboxymethylation rate, hydrophobicity, phenylalanine, π electron, RNase A, *Chatani, Tanimizu, Ueno, Hayashi*, 917
- carrier-geometry, bone morphogenetic protein, bioglass, osteogenesis, vascularization, *Mahmood, Takita, Ojima, Kobayashi, Kohgo, Kuboki*, 163
- casein kinase II, cAMP-dependent protein kinase, galloyl pedunculagin, inhibitor of A-kinase β , proline-rich protein, *Kosuge, Maekawa, Saito, Tanaka, Kouno, Ohtsuki*, 403
- caspase-3, AAPH, apoptosis, cathepsin, cytochrome *c*, *Ishisaka, Kanno, Akiyama, Yoshiooka, Utsumi, Utsumi*, 35
- , Bcl-2, CTLL-2, ISP-1, sphingosine, *Yamaji, Nakamura, Takematsu, Kawasaki, Kozutsumi*, 521
- catalase, gene, oxidative stress, recombinant, sulfate-reducing bacteria, *Kitamura, Nakanishi, Kajima, Kumagai, Inoue*, 357
- cathepsin, AAPH, apoptosis, caspase-3, cytochrome *c*, *Ishisaka, Kanno, Akiyama, Yoshiooka, Utsumi, Utsumi*, 35
- cathepsin B, insect, RNA-binding protein, tissue remodeling, translational regulation, *Nishikawa, Kobayashi, Natori*, 485
- cationic lipid, DDAB lipid vesicle, gene transfer, protamine, retrovirus, *Mizuarai, Ono, You, Kamihira, Iijima*, 125
- caveolae, neuron, signaling, stathmin, tubulin, *Maekawa, Morii, Kumanogoh, Sano, Naruse, Sokawa, Mori*, 691
- CB2 receptor, anandamide, 2-arachidonoylglycerol, cannabinoind, MAP kinase, *Kobayashi, Arai, Waku, Sugiura*, 665
- CD4, celltype, HIV-1 Tat, Tip60, transcriptional regulation, *Hlubek, Löhberg, Meiler, Jung, Kirchner, Brabletz*, 635
- CD63, confocal laser scanning microscopy, degranulation, green fluorescent protein, RBL-2H3 cell, *Amano, Furuno, Hirashima, Ohyama, Nakanishi*, 739
- cdc27, DNA polymerase δ , monoclonal antibody, PCNA, reconstituted enzyme, *Shikata, Ohta, Yamada, Obuse, Yoshikawa, Tsurumoto*, 699
- CDK1, calcium/calmodulin-dependent protein kinase II, isoforms, maturation, *Xenopus laevis*, *Stevens, Rondelez, Merlevede, Goris*, 551
- cDNA, ascidian, budding-specific expression, cytochrome *b₆*, recombinant protein, *Yubisui, Takahashi, Takabayashi, Fujiwara, Kawamura*, 709
- cDNA and identification, dipeptidyl peptidase II (DPP II), quiescent cell proline dipeptidase (QPP), rat kidney, *Araki, Li, Yamamoto, Haneda, Nishi, Kikkawa, Ohkubo*, 279
- celltype, CD4, HIV-1 Tat, Tip60, transcriptional regulation, *Hlubek, Löhberg, Meiler, Jung, Kirchner, Brabletz*, 635
- chemotactic factor, apoptosis, isopeptide bond, monocytes, S19 ribosomal protein, transglutaminase, *Nishimura, Horino, Nishiura, Shibuya, Hiraoka, Tanase, Yamamoto*, 445
- chemotherapeutic agent, malaria, neplanocin A, *Plasmodium*, S-adenosylhomocysteine, *Nakanishi, Iwata, Yatome, Kitade*, 101
- chicken gizzard, smooth muscle, smooth muscle myosin, smooth muscle myosin light chain kinase, telokin, *Numata, Katoh, Yazawa*, 437
- chicken pinealocyte, circadian clock, meta II intermediate, pinopsin, rhodopsin, *Naka-*

C (cont'd)

- mura, Kojima, Okano, Imai, Terakita, Shichida, Fukada*, 329
- chiral recognition, butanediol dehydrogenase, crystal structure, *Klebsiella pneumoniae*, short-chain dehydrogenase/reductase family, stereoisomer, *Otagiri, Kurisu, Ui, Takusagawa, Ohkuma, Kudo, Kusunoki*, 205
- CHO, cholesterol, LDL, Niemann-Pick C, SREBP, *Higaki, Ninomiya, Sugimoto, Suzuki, Taniguchi, Niwa, Pentchev, Vanier, Ohno*, 875
- CHO cells, COS cells, Fab fragments, high-affinity IgE receptor, humanized antibody, *Takai, Okumura, Ra, Yokota, Okumura*, 5
- cholesterol, atherosclerosis, HDL, M-CSF, reverse cholesterol transport, *Irie, Koshiba, Koyama, Asakura, Shibata, Kimura, Naito, Yamauchi, Yada, Hanamura, Hanada, Abe, Nakamura*, 717
- , LDL, CHO, Niemann-Pick C, SREBP, *Higaki, Ninomiya, Sugimoto, Suzuki, Taniguchi, Niwa, Pentchev, Vanier, Ohno*, 875
- , DSC, fluorescence, interdigitation, 16:0LPC/DPPC, X-ray diffraction, *Lu, Hao, Chen*, 891
- chondrocyte, bHLH, cAMP, DEC1, gene structure, *Teramoto, Nakamasu, Noshiro, Matsuda, Gotoh, Shen, Tsutsumi, Kawamoto, Iwamoto, Kato*, 391
- chondroitin sulfate, 2-aminobenzamide, MALDI-TOF mass, ¹H NMR, glycosaminoglycan, *Sakaguchi, Watanabe, Ueoka, Sugiyama, Taketomi, Yamada, Sugahara*, 107
- chromatin, neuronal development, RNA polymerase II, *SPT*, transcription, *Yamaguchi, Narita, Inukai, Wada, Handa*, 185
- chromatin remodeling factor, BRG1, BRM, differentiation, neural precursor cell, *Machida, Murai, Miyake, Iijima*, 43
- chromatin structure, DT40 cells, histones, histone-modifying enzymes, transcription regulation, *Nakayama, Takami*, 491
- circadian clock, chicken pinealocyte, meta II intermediate, pinopsin, rhodopsin, *Nakamura, Kojima, Okano, Imai, Terakita, Shichida, Fukada*, 329
- circadian rhythm, melatonin, pineal gland, secretion, serotonin *N*-acetyltransferase, *Hirota, Kagiwada, Kasahara, Okano, Murata, Fukada*, 51
- circular dichroism, α -amylase inhibitory activity, cyclic and linear peptides, protease resistance, tendamistat, *Ono, Umezaki, Tojo, Hashimoto, Taniyama, Kaneko, Fujii, Morita, Shimasaki, Yamazaki, Yoshimura, Kato*, 783
- Citrobacter freundii*, cotransport, frameshift mutation, lactose, melibiose, *Shimamoto, Shimamoto, Xu, Okazaki, Kawakami, Tsuchiya*, 607
- codon and base biases, *Escherichia coli*, 16S rRNA, second codon, translation efficiency, *Sato, Terabe, Watanabe, Gojobori, Hori-Takemoto, Miura*, 851
- codon usage, DAF, transgenic animal, *Miyagawa, Yamada, Matsunami, Koresawa, Ikawa, Okabe, Shirakura*, 795
- cold adaptation mechanism, 3-isopropylmalate dehydrogenase, structure-function relationship, thermodynamics, thermophilic enzyme, *Yasugi, Amino, Suzuki, Oshima, Yamagishi*, 477
- collagen-binding, epidermal growth factor, fibronectin, fusion protein, wound healing, *Ishikawa, Terai, Kitajima*, 627
- common ancestor, archaeon (archaeobacterium), 3-isopropylmalate dehydrogenase, protein stability, *Sulfolobus, Miyazaki, Nakaya, Suzuki, Tamakoshi, Oshima, Yamagishi*, 777
- comparative biochemistry, disintegrin, *Echis carinatus*, snake venom, taxonomy, *Okuda, Nozaki, Sekiya, Morita*, 615
- complex formation, amphotericin B, ergosterol, lysophosphatidylcholine, micelle, *Kawabata, Onda, Mita*, 725
- confocal laser scanning microscopy, CD63, degranulation, green fluorescent protein, RBL-2H3 cell, *Amano, Furuno, Hirashima, Ohyama, Nakanishi*, 739
- conformational restoration, alkaline-stability, autolysis, serine protease, surface region, *Maeda, Mizutani, Yamagata, Ichishima, Nakajima*, 675
- connectin/titin, calpain, calcium, C2-domain, EF-hand motif, *Sorimachi, Suzuki*, 653
- consensus sequence, Delta, endothelial cells, Notch, *Yoneya, Tahara, Nagao, Yamada, Yamamoto, Osawa, Miyatani, Nishikawa*, 27
- COS cells, CHO cells, Fab fragments, high-affinity IgE receptor, humanized antibody, *Takai, Okumura, Ra, Yokota, Okumura*, 5
- cotransport, *Citrobacter freundii*, frameshift mutation, lactose, melibiose, *Shimamoto, Shimamoto, Xu, Okazaki, Kawakami, Tsuchiya*, 607
- cryoprotection, *Bombyx mori*, freezing tolerance, repetitive sequence, sericin, *Tsuji-moto, Takagi, Takahashi, Yamada, Nakamori*, 979
- crystal structure, butanediol dehydrogenase, chiral recognition, *Klebsiella pneumoniae*, short-chain dehydrogenase/reductase family, stereoisomer, *Otagiri, Kurisu, Ui, Takusagawa, Ohkuma, Kudo, Kusunoki*, 205
- , dissociation-association, glucose dehydrogenase, short-chain dehydrogenases/reductases, subunit interaction, *Yamamoto, Kurisu, Kusunoki, Tabata, Urabe, Osaki*, 303
- , α -amylase, cyclodextrin, enzymatic glucoside hydrolysis, site-directed mutagenesis, *Kondo, Ohtaki, Tonozuka, Sakano, Kamitori*, 423
- , binding diversity, noncovalent inhibitor, trypsin, *Tomoo, Satoh, Tsuda, Wanaka, Okamoto, Hijikata-Okunomiya, Okada, Ishida*, 455
- , α -amylase, *Bacillus stearothermophilus*, Ca²⁺-binding, thermostability, *Suvd, Fujimoto, Takase, Matsumura, Mizuno*, 461
- , cyclodextrin glucanotransferase, 1-deoxynojirimycin, protein-sugar complex, inhibitor, *Kanai, Haga, Yamane, Harata*, 593
- CTL-2, Bcl-2, caspase-3, ISP-1, sphingosine, *Yamaji, Nakamura, Takematsu, Kawasaki, Kazutsumi*, 521
- cyclic and linear peptides, α -amylase inhibitory activity, circular dichroism, protease resistance, tendamistat, *Ono, Umezaki, Tojo, Hashimoto, Taniyama, Kaneko, Fujii, Morita, Shimasaki, Yamazaki, Yoshimura, Kato*, 783
- 783
- cyclodextrin, α -amylase, crystal structure, enzymatic glucoside hydrolysis, site-directed mutagenesis, *Kondo, Ohtaki, Tonozuka, Sakano, Kamitori*, 423
- cyclodextrin glucanotransferase, crystal structure, 1-deoxynojirimycin, protein-sugar complex, inhibitor, *Kanai, Haga, Yamane, Harata*, 593
- CYP51,azole-antifungal agents, molecular modeling, point mutation, sterol 14-demethylase P450, *Nitahara, Kishimoto, Yabusaki, Gotoh, Yoshida, Horuchi, Aoyama*, 761
- Cys374, actin, fluorescence resonance energy transfer, *Yasunaga, Wakabayashi*, 201
- cytochrome b₆, ascidian, budding-specific expression, cDNA, recombinant protein, *Yubisui, Takahashi, Takabayashi, Fujiwara, Kawamura*, 709
- cytochrome c, AAPH, apoptosis, caspase-3, cathepsin, *Ishisaka, Kanno, Akiyama, Yoshioka, Utsumi, Utsumi*, 35

D

- DAF, codon usage, transgenic animal, *Miyagawa, Yamada, Matsunami, Koresawa, Ikawa, Okabe, Shirakura*, 795
- DDAB lipid vesicle, cationic lipid, gene transfer, protamine, retrovirus, *Mizuarai, Ono, You, Kamihira, Iijima*, 125
- DEC1, bHLH, cAMP, chondrocyte, gene structure, *Teramoto, Nakamasu, Noshiro, Matsuda, Gotoh, Shen, Tsutsumi, Kawamoto, Iwamoto, Kato*, 391
- degranulation, CD63, confocal laser scanning microscopy, green fluorescent protein, RBL-2H3 cell, *Amano, Furuno, Hirashima, Ohyama, Nakanishi*, 739
- delayed-type hypersensitivity, differential display analysis, guinea pig, skin, tryptophanyl-tRNA synthetase, *Yang, Nakada-Tsukui, Ohtani, Goto, Yoshimura, Kobayashi, Watanabe*, 561
- Delta, consensus sequence, endothelial cells, Notch, *Yoneya, Tahara, Nagao, Yamada, Yamamoto, Osawa, Miyatani, Nishikawa*, 27
- 1-deoxynojirimycin, crystal structure, cyclodextrin glucanotransferase, protein-sugar complex, inhibitor, *Kanai, Haga, Yamane, Harata*, 593
- development, ABC transporter, antibiotic, *Myxococcus xanthus*, sporulation, *Kimura, Yamanishi, Tokumasu, Terasaka, Yoshinobu*, 351
- diabetic complications, hyperglycaemia, methylglyoxal, thiamine, triosephosphates, *Thorndal, Jahan, Ng*, 543
- diaphorase activity, flavoprotein domain of gp91phox, NBT reductase activity, *Han, Nisimoto, Lee, Kim, Lambeth*, 513
- differential display analysis, delayed-type hypersensitivity, guinea pig, skin, tryptophanyl-tRNA synthetase, *Yang, Nakada-Tsukui, Ohtani, Goto, Yoshimura, Kobayashi, Watanabe*, 561
- differentiation, BRG1, BRM, chromatin remodeling factor, neural precursor cell, *Machida, Murai, Miyake, Iijima*, 43
- dioxygen reduction, laccase, multicopper oxidase, trinuclear Cu center, *Zoppellaro, Sakurai, Huang*, 949

D (cont'd)

- dipeptidyl peptidase II (DPP II), cDNA and identification, quiescent cell proline dipeptidase (QPP), rat kidney, *Araki, Li, Yamamoto, Haneda, Nishi, Kikkawa, Ohkubo*, 279
- dipeptidyl peptidase IV, brain-specific protein, DPPX, DPPX-L, DPPX-S, *Kim, Misumi, Ikehara*, 289
- directed evolution, protein design, protein engineering, domain motion, *Shimotohna, Oue, Yano, Kuramitsu, Kagamiyama*, 943
- disintegrin, comparative biochemistry, *Echis carinatus*, snake venom, taxonomy, *Okuda, Nozaki, Sekiya, Morita*, 615
- dissociation-association, crystal structure, glucose dehydrogenase, short-chain dehydrogenases/reductases, subunit interaction, *Yamamoto, Kurisu, Kusunoki, Tabata, Ura-be, Osaki*, 303
- disulfide bond, amino acid sequence, fatty acid-binding protein, fish, *Lateolabrax japonicus*, *Odani, Baba, Tsuchida, Aoyagi, Wakui, Takahashi*, 69
- disulfide bonds, protein cross-linking, protein disulfide isomerase, oxidative refolding, thermal unfolding, *Gao, Mehta*, 179
- DNA bending, DNA kinking, DNA unwinding, HMG box, HMG2 protein, *Nakamura, Yoshioka, Shirakawa, Yoshida*, 643
- DNA binding, homologous recombination, nucleotide cofactor, Rad51 protein, RecA protein, *Kim, Maraboeuf, Kim, Shinohara, Takahashi*, 469
- DNA-binding domain, bacterial signal transduction, OmpR-family of proteins, transcriptional regulator, two-component system, *Itou, Tanaka*, 343
- DNA kinking, DNA bending, DNA unwinding, HMG box, HMG2 protein, *Nakamura, Yoshioka, Shirakawa, Yoshida*, 643
- DNA ligase, base pair mismatch, DNA sequencing, mutagenesis, nick-ligation, *Cherapanov, Yildirim, de Vries*, 61
- DNA polymerase δ , cdc27, monoclonal antibody, PCNA, reconstituted enzyme, *Shikata, Ohta, Yamada, Obuse, Yoshikawa, Tsurimoto*, 699
- DNA sequencing, base pair mismatch, DNA ligase, mutagenesis, nick-ligation, *Cherapanov, Yildirim, de Vries*, 61
- , amino acid sequence, molecular cloning, monoacylglycerol lipase, thermostable enzyme, *Kitaura, Suzuki, Imamura*, 397
- DNA topoisomerase III, Bloom's syndrome, RecQ helicase, Sgs1, Werner's syndrome, *Enomoto*, 501
- DNA unwinding, DNA bending, DNA kinking, HMG box, HMG2 protein, *Nakamura, Yoshioka, Shirakawa, Yoshida*, 643
- dolichol, N-linked glycoprotein biosynthesis, polyprenol, polyprenol reduction, reductase, *Tateyama, Sagami*, 297
- domain motion, directed evolution, protein design, protein engineering, *Shimotohna, Oue, Yano, Kuramitsu, Kagamiyama*, 943
- domain movement, aminotransferase, hyperthermophilic enzyme, *Pyrococcus horikoshii*, substrate recognition, *Ura, Harata, Matsui, Kuramitsu*, 173
- down regulation of iNOS, iNOS, NO, Oct-1, *Lee, Kim, Kang, Kim, Pyun, Choi*, 77
- DPPX, brain-specific protein, dipeptidyl peptidase IV, DPPX-L, DPPX-S, *Kim, Misumi, Ikehara*, 289
- DPPX-L, brain-specific protein, dipeptidyl peptidase IV, DPPX, DPPX-S, *Kim, Misumi, Ikehara*, 289
- DPPX-S, brain-specific protein, dipeptidyl peptidase IV, DPPX, DPPX-L, *Kim, Misumi, Ikehara*, 289
- DRM, Fc ϵ RI, Lyn, methyl- β -cyclodextrin, RBL-2H3, *Yamashita, Yamaguchi, Murakami, Nagasawa*, 861
- drug resistance, epitope, exporter, monoclonal antibody, tetracycline, *Nada, Murakami, Okamoto, Kubo, Yamaguchi*, 87
- DSC, cholesterol, fluorescence, interdigitation, 16:0LPC/DPPC, X-ray diffraction, *Lu, Hao, Chen*, 891
- DT40 cells, chromatin structure, histones, histone-modifying enzymes, transcription regulation, *Nakayama, Takami*, 491

E

- Echis carinatus*, comparative biochemistry, disintegrin, snake venom, taxonomy, *Okuda, Nozaki, Sekiya, Morita*, 615
- EF-hand motif, calpain, calcium, C2-domain, connectin/titin, *Sorimachi, Suzuki*, 653
- EGF, immobilized growth factor, juxtacrine, matricrine, PC12, *Ito, Chen, Imanishi, Morooka, Nishida, Okabayashi, Kasuga*, 733
- egg mass, 2-AEPn, *Aplysia kurodai*, phosphoglycosphingolipid, SIMS, *Araki, Yamada, Abe, Waki, Kon, Itonori, Sugita, Ando*, 93
- electric dipole moment, electrostatic force, electrostatic potential, γ -aminobutyric acid, glutamic acid, *Odai, Sugimoto, Hatakeyama, Kubo, Ito*, 909
- electron microscopy, Apaf1, apoptosis, mitochondria, necrosis, *Miyazaki, Yoshida, Sasaki, Hara, Kimura, Mak, Nomoto*, 963
- electrostatic force, electric dipole moment, electrostatic potential, γ -aminobutyric acid, glutamic acid, *Odai, Sugimoto, Hatakeyama, Kubo, Ito*, 909
- electrostatic potential, electric dipole moment, electrostatic force, γ -aminobutyric acid, glutamic acid, *Odai, Sugimoto, Hatakeyama, Kubo, Ito*, 909
- ELISA, antibody, PAK, peptide, phosphorylation, *Yu, Chang, Chan, Chen*, 243
- emerin, Emery-Dreifuss muscular dystrophy, lamin, nuclear envelope protein, nuclear matrix, *Sakaki, Koike, Takahashi, Sasagawa, Tomioka, Arahata, Ishiura*, 321
- Emery-Dreifuss muscular dystrophy, emerin, lamin, nuclear envelope protein, nuclear matrix, *Sakaki, Koike, Takahashi, Sasagawa, Tomioka, Arahata, Ishiura*, 321
- endo- β -N-acetylglucosaminidase, asparagine-linked oligosaccharides, endoglycosidase, *Streptococcus pneumoniae*, virulence, *Muramatsu, Tachikui, Ushida, Song, Qiu, Yamamoto, Muramatsu*, 923
- endoglycosidase, asparagine-linked oligosaccharides, endo- β -N-acetylglucosaminidase, *Streptococcus pneumoniae*, virulence, *Muramatsu, Tachikui, Ushida, Song, Qiu, Yamamoto, Muramatsu*, 923
- endothelial cells, consensus sequence, Delta,

Notch, *Yoneya, Tahara, Nagao, Yamada, Yamamoto, Osawa, Miyatani, Nishikawa*, 27

- enzymatic glucoside hydrolysis, α -amylase, cyclodextrin, crystal structure, site-directed mutagenesis, *Kondo, Ohtaki, Tonazuka, Sakano, Kamitori*, 423
- epidermal growth factor, collagen-binding, fibronectin, fusion protein, wound healing, *Ishikawa, Terai, Kitajima*, 627
- epidermis, 14-3-3 protein, fatty acid-binding protein, immunological cross-reaction, Western blot, *Odani, Nakamura, Sato, Fujii*, 213
- epitope, drug resistance, exporter, monoclonal antibody, tetracycline, *Nada, Murakami, Okamoto, Kubo, Yamaguchi*, 87
- ergosterol, amphotericin B, complex formation, lysophosphatidylcholine, micelle, *Kawabata, Onoda, Mita*, 725
- Escherichia coli*, folding, microsomal P450, proline-rich sequence, *Kusano, Sakaguchi, Kagawa, Waterman, Omura*, 259
- , folding, mitochondrial P450, proline-rich sequence, soluble microbial P450, *Kusano, Kagawa, Sakaguchi, Omura, Waterman*, 271
- , codon and base biases, 16S rRNA, second codon, translation efficiency, *Sato, Terabe, Watanabe, Gojobori, Hori-Takemoto, Miura*, 851
- estrous cycle, apoptosis, glutathione peroxidase, hydrogen peroxide, prostaglandin, *Nakamura, Ishigami, Makino, Sakamoto*, 937
- 18-ethynyl-11-deoxycorticosterone, adrenal gland, aldosterone, mechanism-based inhibitors, suicide inhibitors, *Matkovic, Gomez-Sanchez, Cozza*, 383
- exporter, drug resistance, epitope, monoclonal antibody, tetracycline, *Nada, Murakami, Okamoto, Kubo, Yamaguchi*, 87
- expression, leukemia, queuosine, tRNA-guanine transglycosylase, *Ishiwata, Katayama, Shindo, Ozawa, Itoh, Mizugaki*, 13

F

- Fab fragments, CHO cells, COS cells, high-affinity IgE receptor, humanized antibody, *Takai, Okumura, Ra, Yokota, Okumura*, 5
- fatty acid-binding protein, amino acid sequence, disulfide bond, fish, *Lateolabrax japonicus*, *Odani, Baba, Tsuchida, Aoyagi, Wakui, Takahashi*, 69
- , 14-3-3 protein, epidermis, immunological cross-reaction, Western blot, *Odani, Nakamura, Sato, Fujii*, 213
- Fc ϵ RI, DRM, Lyn, methyl- β -cyclodextrin, RBL-2H3, *Yamashita, Yamaguchi, Murakami, Nagasawa*, 861
- fibronectin, collagen-binding, epidermal growth factor, fusion protein, wound healing, *Ishikawa, Terai, Kitajima*, 627
- filamentous structure, module, RNA, secondary structure units, secondary structure, *Ishizaka, Ohshima, Yanagawa*, 971
- firefly luciferase, immobilization, refolding, SPR sensor, *Zako, Harada, Mannen, Yamaguchi, Kitayama, Ueda, Nagamune*, 1
- fish, amino acid sequence, disulfide bond, fatty acid-binding protein, *Lateolabrax japonicus*, *Odani, Baba, Tsuchida, Aoyagi*,

F (cont'd)

- Wakui, Takahashi, 69
 flavin, binding system, bovine serum albumin, frontal gel chromatography, ligand self-association, Sawada, Ishida, Horiike, 899
 flavoprotein domain of gp91phox, diaphorase activity, NBT reductase activity, Han, Nisimoto, Lee, Kim, Lambeth, 513
 fluorescence, cholesterol, DSC, interdigitation, 16:0LPC/DPPC, X-ray diffraction, Lu, Hao, Chen, 891
 fluorescence resonance energy transfer, actin, Cys374, Yasunaga, Wakabayashi, 201
 —, antisense oligonucleotides, liposome, Sendai virus, Nakamura, Hart, Frank, Marchuk, Shrive, Ota, Taira, Yoshikawa, Kaneda, 755
 fluorescent lipids, lipid bodies, lipid transport, oleaginous fungi, triacylglycerol biosynthesis, Kamisaka, Noda, 19
 folding, *Escherichia coli*, microsomal P450, proline-rich sequence, Kusano, Sakaguchi, Kagawa, Waterman, Omura, 259
 —, *Escherichia coli*, mitochondrial P450, proline-rich sequence, soluble microbial P450, Kusano, Kagawa, Sakaguchi, Omura, Waterman, 271
 folding intermediate, induction of aggregation, pre-molten globule, protein aggregation, reduced apo- α -lactalbumin, Li, Zhang, Wang, 821
 frameshift mutation, *Citrobacter freundii*, co-transport, lactose, melibiose, Shimamoto, Shimamoto, Xu, Okazaki, Kawakami, Tsuchiya, 607
 freezing tolerance, *Bombyx mori*, cryoprotection, repetitive sequence, sericin, Tsujimoto, Takagi, Takahashi, Yamada, Nakamori, 979
 frontal gel chromatography, binding system, bovine serum albumin, flavin, ligand self-association, Sawada, Ishida, Horiike, 899
 fusion protein, collagen-binding, epidermal growth factor, fibronectin, wound healing, Ishikawa, Terai, Kitajima, 627

G

- γ -aminobutyric acid, electric dipole moment, electrostatic force, electrostatic potential, glutamic acid, Odai, Sugimoto, Hatakeyama, Kubo, Ito, 909
 G proteins, adenovirus expression system, mammalian pheromone receptor, urine, vomeronasal organ, Hagino-Yamagishi, Matsuoka, Ichikawa, Wakabayashi, Mori, Yazaki, 509
 galloyl pedunculagin, cAMP-dependent protein kinase, casein kinase II, inhibitor of A-kinase β , proline-rich protein, Kosuge, Mae-kawa, Saito, Tanaka, Kouno, Ohtsuki, 403
 gene, catalase, oxidative stress, recombinant, sulfate-reducing bacteria, Kitamura, Nakanishi, Kajima, Kumagai, Inoue, 357
 gene expression, osteoblastic differentiation, Mizuno, Kuboki, 133
 gene structure, bHLH, cAMP, chondrocyte, DEC1, Teramoto, Nakamasu, Noshira, Matsuda, Gotoh, Shen, Tsutsumi, Kawamoto, Iwamoto, Kato, 391
 gene transfer, cationic lipid, DDAB lipid vesicle, protamine, retrovirus, Mizuarai, Ono,

- You, Kamuhira, Iijima, 125
 GlcNAc 2-epimerase, active site, binding protein, renin, site-directed mutagenesis, Takahashi, Takahashi, Kaneko, Ogasawara, Shindo, Saito, Kawamura, 529
 glioma cells, α B-crystallin, heat shock factor (HSF), potassium ion (K^+), stress response, Sadamitsu, Nagano, Fukumaki, Iwaki, 813
 glucose dehydrogenase, crystal structure, dissociation-association, short-chain dehydrogenases/reductases, subunit interaction, Yamamoto, Kurisu, Kusunoki, Tabata, Urabe, Osaki, 303
 glutamate receptor, agonist-receptor vibrational interaction, kainate, normal vibrational mode analysis, PM3 method, Kubo, Odai, Sugimoto, Ito, 869
 glutamic acid, electric dipole moment, electrostatic force, electrostatic potential, γ -aminobutyric acid, Odai, Sugimoto, Hatakeyama, Kubo, Ito, 909
 glutathione peroxidase, apoptosis, estrous cycle, hydrogen peroxide, prostaglandin, Nakamura, Ishigami, Makino, Sakamoto, 937
 glycoprotein, ATPase, *Bombyx mori*, TIME-EA4, timer protein, Tani, Kamada, Ochiai, Isobe, Suwan, Kai, 221
 glycosaminoglycan, 2-aminobenzamide, chondroitin sulfate, MALDI-TOF mass, 1 H NMR, Sakaguchi, Watanabe, Ueoka, Sugiyama, Taketomi, Yamada, Sugahara, 107
 granulosa cells, *Caenorhabditis elegans*, midline, Prp8, splicing factor, testis, Takahashi, Muramatsu, Takagi, Fujisawa, Miyake, Muramatsu, 599
 green fluorescent protein, CD63, confocal laser scanning microscopy, degranulation, RBL-2H3 cell, Amano, Furuno, Hirashima, Ohya, Nakanishi, 739
 guinea pig, delayed-type hypersensitivity, differential display analysis, skin, tryptophanyl-tRNA synthetase, Yang, Nakada-Tsuku, Ohtani, Goto, Yoshimura, Kobayashi, Watanabe, 561

H

- 1 H NMR, 2-aminobenzamide, chondroitin sulfate, MALDI-TOF mass, glycosaminoglycan, Sakaguchi, Watanabe, Ueoka, Sugiyama, Taketomi, Yamada, Sugahara, 107
 HDL, atherosclerosis, cholesterol, M-CSE, reverse cholesterol transport, Irie, Koshiha, Koyama, Asakura, Shibata, Kimura, Naito, Yamauchi, Yada, Hanamura, Hanada, Abe, Nakamura, 717
 head-S2 interaction, interaction between two regulatory light chains, N-terminally truncated HMM, phosphorylation-dependent regulation, smooth muscle myosin, Konishi, Kojima, Katoh, Yazawa, Kata, Fujiwara, Onishi, 365
 heat shock factor (HSF), α B-crystallin, glioma cells, potassium ion (K^+), stress response, Sadamitsu, Nagano, Fukumaki, Iwaki, 813
 heat shock protein, bleomycin, bleomycin resistance, calreticulin, stress response, Elm-ileik, Kumagai, Berengena, Ueda, Sugiyama, 671
Helicobacter pylori, Na $^+$ /H $^+$ antiporter, NhaA, pH sensor, Inoue, Tsuboi, Kanazawa, 569
 hemolysin, lantibiotic, streptin, streptolysin S,

- transposon, Karaya, Shimizu, Taketo, 769
 hepatocyte, bile acid, hepatotoxicity, hydrophilicity, lipid peroxidation, Hino, Morita, Une, Fujimura, Kuramoto, 683
 hepatotoxicity, bile acid, hepatocyte, hydrophilicity, lipid peroxidation, Hino, Morita, Une, Fujimura, Kuramoto, 683
 high-affinity IgE receptor, CHO cells, COS cells, Fab fragments, humanized antibody, Takai, Okumura, Ra, Yokota, Okumura, 5
 high performance liquid chromatography, N-linked oligosaccharide, non-small cell lung cancer, serum, two-dimensional map, Otake, Fujimoto, Tanaka, Nakagawa, Ikeda, Menon, Hase, Wada, Ikenaka, 537
 histone-modifying enzymes, chromatin structure, DT40 cells, histones, transcription regulation, Nakayama, Takami, 491
 histones, chromatin structure, DT40 cells, histone-modifying enzymes, transcription regulation, Nakayama, Takami, 491
 HIV-1 Tat, CD4, celltype, Tip60, transcriptional regulation, Hlubek, Löhberg, Meiler, Jung, Kirchner, Brabletz, 635
 HMG box, DNA bending, DNA kinking, DNA unwinding, HMG2 protein, Nakamura, Yoshioka, Shirakawa, Yoshida, 643
 HMG2 protein, DNA bending, DNA kinking, DNA unwinding, HMG box, Nakamura, Yoshioka, Shirakawa, Yoshida, 643
 homologous recombination, DNA binding, nucleotide cofactor, Rad51 protein, RecA protein, Kim, Maraboeuf, Kim, Shinohara, Takahashi, 469
 HPLC analyses of ADP and ATP, acetate kinase, kinetics, post-translational modification, sulfate-reducing bacterium, Yu, Ishida, Ozawa, Akutsu, Horiike, 411
 human synthetic phage display library, lysozyme, native conformation, single chain Fv fragment, Kikuchi, Takeda, Tsujimoto, Asada, Nagata, 237
 humanized antibody, CHO cells, COS cells, Fab fragments, high-affinity IgE receptor, Takai, Okumura, Ra, Yokota, Okumura, 5
 hydrogen peroxide, apoptosis, estrous cycle, glutathione peroxidase, prostaglandin, Nakamura, Ishigami, Makino, Sakamoto, 937
 hydrophilicity, bile acid, hepatocyte, hepatotoxicity, lipid peroxidation, Hino, Morita, Une, Fujimura, Kuramoto, 683
 hydrophobicity, carboxymethylation rate, phenylalanine, π electron, RNase A, Chatani, Tanimizu, Ueno, Hayashi, 917
 hyperglycaemia, diabetic complications, methylglyoxal, thiamine, triosephosphates, Thornalley, Jahan, Ng, 543
 hyperthermophilic enzyme, aminotransferase, domain movement, *Pyrococcus horikoshii*, substrate recognition, Ura, Harata, Matsui, Kuramitsu, 173

I

- I κ B- α , IL-1 β , inducible nitric oxide synthase, NF- κ B, Katsuyama, Hirata, 585
 IL-1 β , I κ B- α , inducible nitric oxide synthase, NF- κ B, Katsuyama, Hirata, 585
 immobilization, firefly luciferase, refolding, SPR sensor, Zako, Harada, Mannen, Yamaguchi, Kitayama, Ueda, Nagamune, 1
 immobilized growth factor, EGF, juxtacrine,

I (cont'd)

- matricrine, PC12, *Ito, Chen, Imanishi, Morooka, Nishida, Okabayashi, Kasuga*, 733
- immunological cross-reaction, 14-3-3 protein, epidermis, fatty acid-binding protein, Western blot, *Odani, Nakamura, Sato, Fujii*, 213
- inducible nitric oxide synthase, $1\kappa\text{B-}\alpha$, $\text{IL-1}\beta$, $\text{NF-}\kappa\text{B}$, *Katsuyama, Hirata*, 585
- induction of aggregation, folding intermediate, pre-molten globule, protein aggregation, reduced apo- α -lactalbumin, *Li, Zhang, Wang*, 821
- inhibition, MCP-1, molecular design, peptide mimic, phage library, *Kaji, Ikari, Hashiguchi, Ito, Matsumoto, Yoshimura, Kuratsu, Sugimura*, 577
- inhibitor, matrilysin, matrix metalloproteinase, thermolysin, thiorphan, *Oneda, Inouye*, 429
- , crystal structure, cyclodextrin glucanotransferase, 1-deoxynojirimycin, protein-sugar complex, *Kanai, Haga, Yamane, Harata*, 593
- inhibitor of A-kinase β , cAMP-dependent protein kinase, casein kinase II, galloyl pedunculagin, proline-rich protein, *Kosuge, Maekawa, Saito, Tanaka, Kouno, Ohtsuki*, 403
- inorganic pyrophosphatase, polymerase chain reaction, recombinant enzyme, thermophilic bacterium PS-3, thermostability, *Wada, Uchiyumi, Ichiba, Hachimori*, 955
- iNOS, down regulation of iNOS, NO, Oct-1, *Lee, Kim, Kang, Kim, Pyun, Choi*, 77
- insect, cathepsin B, RNA-binding protein, tissue remodeling, translational regulation, *Nishikawa, Kobayashi, Natori*, 485
- interaction between two regulatory light chains, head-S2 interaction, N-terminally truncated HMM, phosphorylation-dependent regulation, smooth muscle myosin, *Konishi, Kojima, Katoh, Yazawa, Kato, Fujiwara, Onishi*, 365
- interdigitation, cholesterol, DSC, fluorescence, 16:0LPC/DPPC, X-ray diffraction, *Lu, Hao, Chen*, 891
- interhelical loops, bacteriorhodopsin, C-terminal α -helix, membrane proteins, surface dynamics, *Yamaguchi, Tuzi, Yonebayashi, Naito, Needleman, Lanyi, Saito*, 373
- intracellular Ca^{2+} -ATPase, brain Ca^{2+} pumps, SERCA2b isoform, *Salvador, Berengena, Sepúlveda, Mata*, 621
- ionic strength, matrix targeting signal, mitochondrial processing peptidase, substrate recognition, surface plasmon resonance, *Kitada, Ito*, 155
- isoforms, calcium/calmodulin-dependent protein kinase II, CDK1, maturation, *Xenopus laevis*, *Stevens, Rondelez, Merlevede, Goris*, 551
- isopeptide bond, apoptosis, chemotactic factor, monocytes, S19 ribosomal protein, transglutaminase, *Nishimura, Horino, Nishiura, Shibuya, Hiraoka, Tanase, Yamamoto*, 445
- 3-isopropylmalate dehydrogenase, cold adaptation mechanism, structure-function relationship, thermodynamics, thermophilic enzyme, *Yasugi, Amino, Suzuki, Oshima, Yamagishi*, 477
- , archaeon (archaeobacterium), common ancestor, protein stability, *Sulfolobus*, *Miyazaki, Nakaya, Suzuki, Tamakoshi, Oshima, Yamagishi*, 777
- ISP-1, Bcl-2, caspase-3, CTLL-2, sphingosine, *Yamaji, Nakamura, Takematsu, Kawasaki, Kozutsumi*, 521

J

juxtacrine, EGF, immobilized growth factor, matricrine, PC12, *Ito, Chen, Imanishi, Morooka, Nishida, Okabayashi, Kasuga*, 733

K

kainate, agonist-receptor vibrational interaction, glutamate receptor, normal vibrational mode analysis, PM3 method, *Kuba, Odai, Sugimoto, Ito*, 869

kinetic analysis, CaM-kinase, protein phosphatase, substrate specificity, synthetic phosphopeptide, *Ishida, Shigeri, Tatsu, Endo, Kameshita, Okuno, Kitani, Takeuchi, Yumoto, Fujisawa*, 745

kinetics, acetate kinase, HPLC analyses of ADP and ATP, post-translational modification, sulfate-reducing bacterium, *Yu, Ishida, Ozawa, Akutsu, Horiike*, 411

Klebsiella pneumoniae, butanediol dehydrogenase, chiral recognition, crystal structure, short-chain dehydrogenase/reductase family, stereoisomer, *Otagiri, Kurisu, Ui, Takusagawa, Ohkuma, Kudo, Kusunoki*, 205

L

laccase, dioxygen reduction, multicopper oxidase, trinuclear Cu center, *Zoppellaro, Sakurai, Huang*, 949

lactose, *Citrobacter freundii*, cotransport, frameshift mutation, melibiose, *Shimamoto, Shimamoto, Xu, Okazaki, Kawakami, Tsuchiya*, 607

lamin, emerin, Emery-Dreifuss muscular dystrophy, nuclear envelope protein, nuclear matrix, *Sakaki, Koike, Takahashi, Sasagawa, Tomioka, Arahata, Ishiura*, 321

lantibiotic, hemolysin, streptin, streptolysin S, transposon, *Karaya, Shimizu, Taketo*, 769

large Mafs, basic-leucine zipper (b-Zip), Maf recognition elements (MARE), somite, transcription factor, *Kajihara, Kawachi, Kobayashi, Ogino, Takahashi, Yasuda*, 139

Lateolabrax japonicus, amino acid sequence, disulfide bond, fatty acid-binding protein, fish, *Odani, Baba, Tsuchida, Aoyagi, Wakui, Takahashi*, 69

LDL, cholesterol, CHO, Niemann-Pick C, SREBP, *Higaki, Ninomiya, Sugimoto, Suzuki, Taniguchi, Niwa, Pentchev, Vanier, Ohno*, 875

leukemia, expression, queuosine, tRNA-guanine transglycosylase, *Ishiwata, Katayama, Shindo, Ozawa, Itoh, Mizugaki*, 13

leupeptin, autophagic maturation, autophagosome-lysosome fusion, betaine homocysteine methyltransferase, macroautophagy, *Furuya, Kanazawa, Fujimura, Ueno, Kominami, Kadowaki*, 313

ligand self-association, binding system, bovine serum albumin, flavin, frontal gel chromatography, *Kanazawa, Ishida, Horiike*, 899

lipid bodies, fluorescent lipids, lipid transport, oleaginous fungi, triacylglycerol biosynthe-

sis, *Kamisaka, Noda*, 19

lipid peroxidation, bile acid, hepatocyte, hepatotoxicity, hydrophilicity, *Hino, Morita, Une, Fujimura, Kuramoto*, 683

lipid transport, fluorescent lipids, lipid bodies, oleaginous fungi, triacylglycerol biosynthesis, *Kamisaka, Noda*, 19

liposome, antisense oligonucleotides, fluorescence resonance energy transfer, Sendai virus, *Nakamura, Hart, Frank, Marchuk, Shrive, Ota, Taira, Yoshikawa, Kaneda*, 755

16:0LPC/DPPC, cholesterol, DSC, fluorescence, interdigitation, X-ray diffraction, *Lu, Hao, Chen*, 891

Lyn, DRM, Fc ϵ RI, methyl- β -cyclodextrin, RBL-2H3, *Yamashita, Yamaguchi, Murakami, Nagasawa*, 861

lysophosphatidylcholine, amphotericin B, complex formation, ergosterol, micelle, *Kawabata, Onda, Mita*, 725

lysozyme, human synthetic phage display library, native conformation, single chain Fv fragment, *Kikuchi, Takeda, Tsujimoto, Asada, Nagata*, 237

M

M-CSF, atherosclerosis, cholesterol, HDL, reverse cholesterol transport, *Irie, Koshiba, Koyama, Asakura, Shibata, Kimura, Naito, Yamauchi, Yada, Hanamura, Hanada, Abe, Nakamura*, 717

macroautophagy, autophagic maturation, autophagosome-lysosome fusion, betaine homocysteine methyltransferase, leupeptin, *Furuya, Kanazawa, Fujimura, Ueno, Kominami, Kadowaki*, 313

Maf recognition elements (MARE), basic-leucine zipper (b-Zip), large Mafs, somite, transcription factor, *Kajihara, Kawachi, Kobayashi, Ogino, Takahashi, Yasuda*, 139

malaria, chemotherapeutic agent, neplanocin A, *Plasmodium*, S-adenosylhomocysteine, *Nakanishi, Iwata, Yatome, Kitade*, 101

MALDI-TOF mass, 2-aminobenzamide, chondroitin sulfate, ^1H NMR, glycosaminoglycan, *Sakaguchi, Watanabe, Ueoka, Sugiyama, Taketomi, Yamada, Sugahara*, 107

mammalian pheromone receptor, adenovirus expression system, G proteins, urine, vomeronasal organ, *Hagino-Yamagishi, Matsuoka, Ichikawa, Wakabayashi, Mori, Yazaki*, 509

MAP kinase, anandamide, 2-arachidonoylglycerol, cannabinoid, CB2 receptor, *Kobayashi, Arai, Waku, Sugiura*, 665

matricrine, EGF, immobilized growth factor, juxtacrine, PC12, *Ito, Chen, Imanishi, Morooka, Nishida, Okabayashi, Kasuga*, 733

matrilysin, inhibitor, matrix metalloproteinase, thermolysin, thiorphan, *Oneda, Inouye*, 429

matrix metalloproteinase, inhibitor, matrilysin, thermolysin, thiorphan, *Oneda, Inouye*, 429

matrix targeting signal, ionic strength, mitochondrial processing peptidase, substrate recognition, surface plasmon resonance, *Kitada, Ito*, 155

maturation, calcium/calmodulin-dependent protein kinase II, CDK1, isoforms, *Xenopus laevis*, *Stevens, Rondelez, Merlevede, Goris*,

M (cont'd)

- 551
- MCP-1, inhibition, molecular design, peptide mimic, phage library, *Kaji, Ikari, Hashiguchi, Ito, Matsumoto, Yoshimura, Kuratsu, Sugimura, 577*
- mechanism-based inhibitors, adrenal gland, aldosterone, 18-ethynyl-11-deoxycorticosterone, suicide inhibitors, *Mathovic, Gomez-Sanchez, Cozza, 383*
- melatonin, circadian rhythm, pineal gland, secretion, serotonin *N*-acetyltransferase, *Hirota, Kagiwada, Kasahara, Okano, Murata, Fukada, 51*
- melibiose, *Citrobacter freundii*, cotransport, frameshift mutation, lactose, *Shimamoto, Shimamoto, Xu, Okazaki, Kawakami, Tsuchiya, 607*
- membrane, calcineurin, calmodulin, myristoylation, phospholipids, *Ferrino, Martin, 835*
- , calcineurin, calmodulin, myristoylation, phospholipids, *Martin, Oxhorn, Rossow, Ferrino, 843*
- membrane proteins, bacteriorhodopsin, C-terminal α -helix, interhelical loops, surface dynamics, *Yamaguchi, Tuzi, Yonebayashi, Naito, Needleman, Lanyi, Saito, 373*
- meta II intermediate, chicken pinealocyte, circadian clock, pinopsin, rhodopsin, *Nakamura, Kojima, Okano, Imai, Terakita, Shichida, Fukada, 329*
- metallothionein, aminopeptidase N, renal cancer, zinc, *Ishii, Usui, Yamamoto, Sugimura, Tatematsu, Hirano, 253*
- methyl- β -cyclodextrin, DRM, Fc ϵ RI, Lyn, RBL-2H3, *Yamashita, Yamaguchi, Murakami, Nagasawa, 861*
- methylglyoxal, diabetic complications, hyperglycaemia, thiamine, triosephosphates, *Thornalley, Jahan, Ng, 543*
- micelle, amphotericin B, complex formation, ergosterol, lysophosphatidylcholine, *Kawabata, Onda, Mita, 725*
- microsomal P450, *Escherichia coli*, folding, proline-rich sequence, *Kusano, Sakaguchi, Kagawa, Waterman, Omura, 259*
- midkine, *Caenorhabditis elegans*, granulosa cells, Prp8, splicing factor, testis, *Takahashi, Muramatsu, Takagi, Fujisawa, Miyake, Muramatsu, 599*
- milk-clotting enzyme, aspartic proteinase, *Rhizomucor pusillus* pepsin, site-directed mutagenesis, subsites, *Aikawa, Park, Sugiyama, Nishiyama, Horinouchi, Beppu, 791*
- mitochondria, Apaf1, apoptosis, electron microscopy, necrosis, *Miyazaki, Yoshida, Sasaki, Hara, Kimura, Mak, Nomoto, 963*
- mitochondrial P450, *Escherichia coli*, folding, proline-rich sequence, soluble microbial P450, *Kusano, Kagawa, Sakaguchi, Omura, Waterman, 271*
- mitochondrial phosphatetransporter, paralog, pseudogene, vacuole, yeast, *Takabatake, Siddique, Kouchi, Izui, Hata, 827*
- mitochondrial processing peptidase, ionic strength, matrix targeting signal, substrate recognition, surface plasmon resonance, *Kitada, Ito, 155*
- module, filamentous structure, RNA, secondary structure units, secondary structure, *Ishizaka, Ohshima, Yanagawa, 971*
- molecular cloning, amino acid sequence, DNA sequencing, monoacylglycerol lipase, thermostable enzyme, *Kitaura, Suzuki, Imamura, 397*
- molecular design, inhibition, MCP-1, peptide mimic, phage library, *Kaji, Ikari, Hashiguchi, Ito, Matsumoto, Yoshimura, Kuratsu, Sugimura, 577*
- molecular modeling, azole-antifungal agents, CYP51, point mutation, sterol 14-demethylase P450, *Nitahara, Kishimoto, Yabusaki, Gotoh, Yoshida, Horiuchi, Aoyama, 761*
- monoacylglycerol lipase, amino acid sequence, DNA sequencing, molecular cloning, thermostable enzyme, *Kitaura, Suzuki, Imamura, 397*
- monoclonal antibody, drug resistance, epitope, exporter, tetracycline, *Nada, Murakami, Okamoto, Kuba, Yamaguchi, 87*
- , cdc27, DNA polymerase δ , PCNA, reconstituted enzyme, *Shikata, Ohta, Yamada, Obuse, Yoshikawa, Tsurimoto, 699*
- monocytes, apoptosis, chemotactic factor, isopeptide bond, S19 ribosomal protein, transglutaminase, *Nishimura, Horino, Nishiura, Shibuya, Hiraoka, Tanase, Yamamoto, 445*
- mooth muscle, myosin assembly, myosin, myosin phosphatase, protein phosphatase-1, *Sato, Ogawa, 881*
- multicopper oxidase, dioxygen reduction, laccase, trinuclear Cu center, *Zoppellaro, Sakurai, Huang, 949*
- mutagenesis, base pair mismatch, DNA ligase, DNA sequencing, nick-ligation, *Cherepanov, Yildirim, de Vries, 61*
- myosin, myosin assembly, myosin phosphatase, protein phosphatase-1, mooth muscle, *Sato, Ogawa, 881*
- myosin assembly, myosin, myosin phosphatase, protein phosphatase-1, mooth muscle, *Sato, Ogawa, 881*
- myosin phosphatase, myosin assembly, myosin, protein phosphatase-1, mooth muscle, *Sato, Ogawa, 881*
- myristoylation, calcineurin, calmodulin, membrane, phospholipids, *Ferrino, Martin, 835*
- , calcineurin, calmodulin, membrane, phospholipids, *Martin, Oxhorn, Rossow, Ferrino, 843*
- Mycococcus xanthus*, ABC transporter, antibiotic, development, sporulation, *Kimura, Yamanishi, Tskumasu, Terasaka, Yoshinobu, 351*
- myxothiazol, 4'-phosphopantetheinyl transferase, *Sorangium cellulosum*, *Stigmatella aurantiaca*, thiolation domain, *Gaitatzis, Hans, Müller, Beyer, 119*

N

- N*-linked glycoprotein biosynthesis, dolichol, polyprenol, polyprenol reduction, reductase, *Tateyama, Sagami, 297*
- N*-linked oligosaccharide, high performance liquid chromatography, non-small cell lung cancer, serum, two-dimensional map, *Otake, Fujimoto, Tanaka, Nakagawa, Ikeda, Menon, Hase, Wada, Ikenaka, 537*
- N*-terminally truncated HMM, interaction between two regulatory light chains, head-S2 interaction, phosphorylation-dependent regulation, smooth muscle myosin, *Konishi, Kojima, Katoh, Yazawa, Kato, Fujiwara,*

- Onishi, 365*
- Na⁺/H⁺ antiporter, NhaA, *Helicobacter pylori*, pH sensor, *Inoue, Tsuboi, Kanazawa, 569*
- Na⁺/K⁺-ATPase, oligomer, P-type ATPase, Post-Albers scheme, tetraprotomer, *Taniguchi, Kaya, Abe, Mårdh, 335*
- native conformation, human synthetic phage display library, lysozyme, single chain Fv fragment, *Kikuchi, Takeda, Tsujimoto, Asada, Nagata, 237*
- NBT reductase activity, diaphorase activity, flavoprotein domain of gp91phox, *Han, Nisumoto, Lee, Kim, Lambeth, 513*
- necrosis, Apaf1, apoptosis, electron microscopy, mitochondria, *Miyazaki, Yoshida, Sasaki, Hara, Kimura, Mak, Nomoto, 963*
- neplanocin A, chemotherapeutic agent, malaria, *Plasmodium*, S-adenosylhomocysteine, *Nakanishi, Iwata, Yatome, Kitada, 101*
- neural precursor cell, BRG1, BRM, chromatin remodeling factor, differentiation, *Machida, Murai, Miyake, Iijima, 43*
- neuron, caveolae, signaling, stathmin, tubulin, *Maekawa, Morii, Kumanogoh, Sano, Naruse, Sokawa, Mori, 691*
- neuronal development, chromatin, RNA polymerase II, *SPT*, transcription, *Yamaguchi, Narita, Inukai, Wada, Handa, 185*
- NF- κ B, I κ B- α , IL-1 β , inducible nitric oxide synthase, *Katsuyama, Hirata, 585*
- NhaA, Na⁺/H⁺ antiporter, *Helicobacter pylori*, pH sensor, *Inoue, Tsuboi, Kanazawa, 569*
- nick-ligation, base pair mismatch, DNA ligase, DNA sequencing, mutagenesis, *Cherepanov, Yildirim, de Vries, 61*
- Niemann-Pick C, cholesterol, LDL, CHO, SREBP, *Higaki, Ninomiya, Sugimoto, Suzuki, Taniguchi, Niwa, Pentchev, Vanier, Ohno, 875*
- nitrocellulose membrane, alkaline phosphatase, antibody, phage display library, selection efficiency, variable region, *Nakamura, Watanabe, Nishimiya, Tsumoto, Ishimura, Kumagai, 209*
- NO, down regulation of iNOS, iNOS, Oct-1, *Lee, Kim, Kang, Kim, Pyun, Choi, 77*
- non-small cell lung cancer, high performance liquid chromatography, *N*-linked oligosaccharide, serum, two-dimensional map, *Otake, Fujimoto, Tanaka, Nakagawa, Ikeda, Menon, Hase, Wada, Ikenaka, 537*
- noncovalent inhibitor, binding diversity, crystal structure, trypsin, *Tomoo, Satoh, Tsuda, Wanaka, Okamoto, Hijikata-Okunomiya, Okada, Ishida, 455*
- normal vibrational mode analysis, agonist-receptor vibrational interaction, glutamate receptor, kainate, PM3 method, *Kubo, Odai, Sugimoto, Ito, 869*
- Notch, consensus sequence, Delta, endothelial cells, *Yoneya, Tahara, Nagao, Yamada, Yamamoto, Osawa, Miyatani, Nishikawa, 27*
- nuclear envelope protein, emerin, Emery-Dreifuss muscular dystrophy, lamin, nuclear matrix, *Sakaki, Koike, Takahashi, Sasagawa, Tomioka, Arahata, Ishiura, 321*
- nuclear matrix, emerin, Emery-Dreifuss muscular dystrophy, lamin, nuclear envelope protein, *Sakaki, Koike, Takahashi, Sasagawa, Tomioka, Arahata, Ishiura, 321*
- nucleotide cofactor, DNA binding, homologous

N (cont'd)

- recombination, Rad51 protein, RecA protein, *Kim, Maraboeuf, Kim, Shinohara, Takahashi*, 469
- O
- Oct-1, down regulation of iNOS, iNOS, NO, *Lee, Kim, Kang, Kim, Pyun, Choi*, 77
- oleaginous fungi, fluorescent lipids, lipid bodies, lipid transport, triacylglycerol biosynthesis, *Kamisaka, Noda*, 19
- oligomer, Na/K-ATPase, P-type ATPase, Post-Albers scheme, tetraprotomer, *Taniguchi, Kaya, Abe, Mårdh*, 335
- OmpR-family of proteins, bacterial signal transduction, DNA-binding domain, transcriptional regulator, two-component system, *Ito, Tanaka*, 343
- osteoblastic differentiation, gene expression, *Mizuno, Kuboki*, 133
- osteogenesis, bone morphogenetic protein, bio-glass, carrier-geometry, vascularization, *Mahmood, Takita, Ojima, Kobayashi, Kohgo, Kuboki*, 163
- overlay assay, binding protein, protein Ser/Thr phosphorylation, serine protease inhibitor (serpin), *Xenopus laevis* oocytes, *Goto, Muto, Sugimoto, Ikawa-Kitayama, Igarashi, Ito, Hashimoto*, 229
- oxidative refolding, disulfide bonds, protein cross-linking, protein disulfideisomerase, thermal unfolding, *Gao, Mehta*, 179
- oxidative stress, catalase, gene, recombinant, sulfate-reducing bacteria, *Kitamura, Nakanishi, Kojima, Kumagai, Inoue*, 357
- P
- π electron, carboxymethylation rate, hydrophobicity, phenylalanine, RNase A, *Chatani, Tanimizu, Ueno, Hayashi*, 917
- P-type ATPase, Na/K-ATPase, oligomer, Post-Albers scheme, tetraprotomer, *Taniguchi, Kaya, Abe, Mårdh*, 335
- PAK, antibody, ELISA, peptide, phosphorylation, *Yu, Chang, Chan, Chen*, 243
- paralog, mitochondrial phosphatetransporter, pseudogene, vacuole, yeast, *Takabatake, Siddique, Kouchi, Izui, Hata*, 827
- PC12, EGF, immobilized growth factor, juxtacrine, matricrine, *Ito, Chen, Imanishi, Morooka, Nishida, Okabayashi, Kasuga*, 733
- PCNA, cdc27, DNA polymerase δ , monoclonal antibody, reconstituted enzyme, *Shikata, Ohta, Yamada, Obuse, Yoshikawa, Tsurimoto*, 699
- pepsinogen, phylogeny, purification, stomach, *Xenopus laevis*, *Ikuzawa, Inokuchi, Kobayashi, Yasumasu*, 147
- peptide, antibody, ELISA, PAK, phosphorylation, *Yu, Chang, Chan, Chen*, 243
- peptide mimic, inhibition, MCP-1, molecular design, phage library, *Kaji, Ikari, Hashiguchi, Ito, Matsumoto, Yoshimura, Kuratsu, Sugimura*, 577
- pH sensor, Na⁺/H⁺ antiporter, NhaA, *Helicobacter pylori*, *Inoue, Tsuboi, Kanazawa*, 569
- phage display library, alkaline phosphatase, antibody, nitrocellulose membrane, selection efficiency, variable region, *Nakamura, Watanabe, Nishimiya, Tsumoto, Ishimura, Kumagai*, 209
- phage library, inhibition, MCP-1, molecular design, peptide mimic, *Kaji, Ikari, Hashiguchi, Ito, Matsumoto, Yoshimura, Kuratsu, Sugimura*, 577
- phenylalanine, carboxymethylation rate, hydrophobicity, π electron, RNase A, *Chatani, Tanimizu, Ueno, Hayashi*, 917
- phospholipids, calcineurin, calmodulin, membrane, myristoylation, *Ferrino, Martin*, 835
- , calcineurin, calmodulin, membrane, myristoylation, *Martin, Oxhorn, Rossou, Ferrino*, 843
- phosphonoglycosphingolipid, 2-AEPn, *Aplysia kurodai*, egg mass, SIMS, *Araki, Yamada, Abe, Waki, Kon, Itonori, Sugita, Ando*, 93
- 4'-phosphopantetheinyl transferase, myxothiazol, *Sorangium cellulosum*, *Stigmatella aurantiaca*, thiolation domain, *Gaitatzis, Hans, Müller, Beyer*, 119
- phosphorylation, antibody, ELISA, PAK, peptide, *Yu, Chang, Chan, Chen*, 243
- phosphorylation-dependent regulation, interaction between two regulatory light chains, head-S2 interaction, N-terminally truncated HMM, smooth muscle myosin, *Konishi, Kojima, Katoh, Yazawa, Kato, Fujiwara, Onishi*, 365
- phylogeny, pepsinogen, purification, stomach, *Xenopus laevis*, *Ikuzawa, Inokuchi, Kobayashi, Yasumasu*, 147
- pineal gland, circadian rhythm, melatonin, secretion, serotonin N-acetyltransferase, *Hirota, Kagiwada, Kasahara, Okano, Murata, Fukada*, 51
- pinopsin, chicken pinealocyte, circadian clock, meta II intermediate, rhodopsin, *Nakamura, Kojima, Okano, Imai, Terakita, Shichida, Fukada*, 329
- Plasmodium*, chemotherapeutic agent, malaria, neplanocin A, S-adenosylhomocysteine, *Nakanishi, Iwata, Yatome, Kitade*, 101
- PM3 method, agonist-receptor vibrational interaction, glutamate receptor, kainate, normal vibrational mode analysis, *Kubo, Odai, Sugimoto, Ito*, 869
- point mutation, azole-antifungal agents, CYP51, molecular modeling, sterol 14-demethylase P450, *Nitahara, Kishimoto, Yabusaki, Gotoh, Yoshida, Horiuchi, Aoyama*, 761
- polymerase chain reaction, inorganic pyrophosphatase, recombinant enzyme, thermophilic bacterium PS-3, thermostability, *Wada, Uchiumi, Ichiba, Hachimori*, 955
- polyprenol, dolichol, N-linked glycoprotein biosynthesis, polyprenol reduction, reductase, *Tateyama, Sagami*, 297
- polyprenol reduction, dolichol, N-linked glycoprotein biosynthesis, polyprenol, reductase, *Tateyama, Sagami*, 297
- Post-Albers scheme, Na/K-ATPase, oligomer, P-type ATPase, tetraprotomer, *Taniguchi, Kaya, Abe, Mårdh*, 335
- post-translational modification, acetate kinase, HPLC analyses of ADP and ATP, kinetics, sulfate-reducing bacterium, *Yu, Ishida, Ozawa, Akutsu, Horiike*, 411
- potassium ion (K⁺), α B-crystallin, glioma cells, heat shock factor (HSF), stress response, *Sadamitsu, Nagano, Fukumaki, Iwaki*, 813
- pre-molten globule, folding intermediate, induction of aggregation, protein aggregation, reduced apo- α -lactalbumin, *Li, Zhang, Wang*, 821
- proline-rich protein, cAMP-dependent protein kinase, casein kinase II, galloyl pedunculagin, inhibitor of A-kinase β , *Kosuge, Maekawa, Saito, Tanaka, Kouno, Ohtsuki*, 403
- proline-rich sequence, *Escherichia coli*, folding, microsomal P450, *Kusano, Sakaguchi, Kagawa, Waterman, Omura*, 259
- , *Escherichia coli*, folding, mitochondrial P450, soluble microbial P450, *Kusano, Kagawa, Sakaguchi, Omura, Waterman*, 271
- prostaglandin, apoptosis, estrous cycle, glutathione peroxidase, hydrogen peroxide, *Nakamura, Ishigami, Makino, Sakamoto*, 937
- protamine, cationic lipid, DDAB lipid vesicle, gene transfer, retrovirus, *Mizuarai, Ono, You, Kamihira, Iijima*, 125
- protease resistance, α -amylase inhibitory activity, circular dichroism, cyclic and linear peptides, tendamistat, *Ono, Umezaki, Tojo, Hashimoto, Taniyama, Kaneko, Fujii, Morita, Shimasaki, Yamazaki, Yoshimura, Kato*, 783
- 14-3-3 protein, epidermis, fatty acid-binding protein, immunological cross-reaction, Western blot, *Odani, Nakamura, Sato, Fujii*, 213
- protein aggregation, folding intermediate, induction of aggregation, pre-molten globule, reduced apo- α -lactalbumin, *Li, Zhang, Wang*, 821
- protein cross-linking, disulfide bonds, protein disulfideisomerase, oxidative refolding, thermal unfolding, *Gao, Mehta*, 179
- protein design, directed evolution, protein engineering, domain motion, *Shimotohno, Oue, Yano, Kuramitsu, Kagamiyama*, 943
- protein disulfideisomerase, disulfide bonds, protein cross-linking, oxidative refolding, thermal unfolding, *Gao, Mehta*, 179
- protein engineering, directed evolution, protein design, domain motion, *Shimotohno, Oue, Yano, Kuramitsu, Kagamiyama*, 943
- protein kinase kinase, calcium ion, calmodulin-dependent protein kinase, protein phosphatase, signal transduction, *Fujisawa*, 193
- protein phosphatase, calcium ion, calmodulin-dependent protein kinase, protein kinase kinase, signal transduction, *Fujisawa*, 193
- , CaM-kinase, kinetic analysis, substrate specificity, synthetic phosphopeptide, *Ishida, Shigeru, Tatsu, Endo, Kameshita, Okuno, Kitani, Takeuchi, Yumoto, Fujisawa*, 745
- protein phosphatase-1, myosin assembly, myosin, myosin phosphatase, smooth muscle, *Sato, Ogawa*, 881
- protein Ser/Thr phosphorylation, binding protein, overlay assay, serine protease inhibitor (serpin), *Xenopus laevis* oocytes, *Goto, Muto, Sugimoto, Ikawa-Kitayama, Igarashi, Ito, Hashimoto*, 229
- protein stability, archaeon (archaeobacterium), common ancestor, 3-isopropylmalate dehydrogenase, *Sulfolobus*, *Miyazaki, Nakaya, Suzuki, Tamakoshi, Oshima, Yamagishi*, 777
- protein-sugar complex, crystal structure, cyclodextrin glucanotransferase, 1-deoxy-nojirimycin, inhibitor, *Kanai, Haga, Yamane, Harata*, 593

P (cont'd)

Prp8, *Caenorhabditis elegans*, granulosa cells, midkine, splicing factor, testis, *Takahashi, Muramatsu, Takagi, Fujisawa, Miyake, Muramatsu*, 599
 pseudogene, mitochondrial phosphatetransporter, paralog, vacuole, yeast, *Takabatake, Siddique, Kouchi, Izui, Hata*, 827
 purification, pepsinogen, phylogeny, stomach, *Xenopus laevis*, *Ikuzawa, Inokuchi, Kobayashi, Yasumasu*, 147
Pyrococcus horikoshii, aminotransferase, domain movement, hyperthermophilic enzyme, substrate recognition, *Ura, Harata, Matsui, Kuramitsu*, 173

Q

queuosine, expression, leukemia, tRNA-guanine transglycosylase, *Ishiwata, Katayama, Shindo, Ozawa, Itoh, Mizugaki*, 13
 quiescent cell proline dipeptidase (QPP), cDNA and identification, dipeptidyl peptidase II (DPP II), rat kidney, *Araki, Li, Yamamoto, Haneda, Nishi, Kikkawa, Ohkubo*, 279

R

Rad51 protein, DNA binding, homologous recombination, nucleotide cofactor, RecA protein, *Kim, Maraboeuf, Kim, Shinohara, Takahashi*, 469
 rat kidney, cDNA and identification, dipeptidyl peptidase II (DPP II), quiescent cell proline dipeptidase (QPP), *Araki, Li, Yamamoto, Haneda, Nishi, Kikkawa, Ohkubo*, 279
 RBL-2H3, DRM, FcεRI, Lyn, methyl-β-cyclodextrin, *Yamashita, Yamaguchi, Murakami, Nagasawa*, 861
 RBL-2H3 cell, CD63, confocal laser scanning microscopy, degranulation, green fluorescent protein, *Amano, Furuno, Hirashima, Ohyama, Nakanishi*, 739
 RecA protein, DNA binding, homologous recombination, nucleotide cofactor, Rad51 protein, *Kim, Maraboeuf, Kim, Shinohara, Takahashi*, 469
 recombinant, catalase, gene, oxidative stress, sulfate-reducing bacteria, *Kitamura, Nakanishi, Kojima, Kumagai, Inoue*, 357
 recombinant enzyme, inorganic pyrophosphatase, polymerase chain reaction, thermophilic bacterium PS-3, thermostability, *Wada, Uchiyumi, Ichiba, Hachimori*, 955
 recombinant protein, ascidian, budding-specific expression, cDNA, cytochrome *b₆*, *Yubisui, Takahashi, Takabayashi, Fujiwara, Kawamura*, 709
 reconstituted enzyme, cdc27, DNA polymerase δ, monoclonal antibody, PCNA, *Shikata, Ohta, Yamada, Obuse, Yoshikawa, Tsurimoto*, 699
 RecQ helicase, Bloom's syndrome, DNA topoisomerase III, Sgs1, Werner's syndrome, *Enomoto*, 501
 redox regulation, selenocysteine, site-directed mutagenesis, thioredoxin, thioredoxin reductase, *Fujiwara, Fujii, Fujii, Taniguchi*, 803
 reduced apo-α-lactalbumin, folding intermediate, induction of aggregation, pre-molten

globule, protein aggregation, *Li, Zhang, Wang*, 821

reductase, dolichol, N-linked glycoprotein biosynthesis, polyprenol, polyprenol reduction, *Tateyama, Sagami*, 297
 refolding, firefly luciferase, immobilization, SPR sensor, *Zako, Harada, Mannen, Yamaguchi, Kitayama, Ueda, Nagamune*, 1
 renal cancer, aminopeptidase N, metallothionein, zinc, *Ishii, Usui, Yamamoto, Sugimura, Tatematsu, Hirano*, 253
 renin, active site, binding protein, GlcNAc 2-epimerase, site-directed mutagenesis, *Takahashi, Takahashi, Kaneko, Ogasawara, Shindo, Saito, Kawamura*, 529
 repetitive sequence, *Bombyx mori*, cryoprotection, freezing tolerance, sericin, *Tsujimoto, Takagi, Takahashi, Yamada, Nakamori*, 979
 retrovirus, cationic lipid, DDAB lipid vesicle, gene transfer, protamine, *Mizuarai, Ono, You, Kamihira, Iijima*, 125
 reverse cholesterol transport, atherosclerosis, cholesterol, HDL, M-CSF, *Irie, Koshiba, Koyama, Asakura, Shibata, Kimura, Naito, Yamauchi, Yada, Hanamura, Hanada, Abe, Nakamura*, 717
Rhizomucor pusillus pepsin, aspartic proteinase, milk-clotting enzyme, site-directed mutagenesis, subsites, *Aikawa, Park, Sugiyama, Nishiyama, Horinouchi, Beppu*, 791
 rhodopsin, chicken pinealocyte, circadian clock, meta II intermediate, pinopsin, *Nakamura, Kojima, Okano, Imai, Terakita, Shichuda, Fukada*, 329
 RNA, filamentous structure, module, secondary structure units, secondary structure, *Ishizaka, Ohshima, Yanagawa*, 971
 RNA-binding protein, cathepsin B, insect, tissue remodeling, translational regulation, *Nishikawa, Kobayashi, Natori*, 485
 RNA polymerase II, chromatin, neuronal development, SPT, transcription, *Yamaguchi, Narita, Inukai, Wada, Handa*, 185
 RNase A, carboxymethylation rate, hydrophobicity, phenylalanine, π electron, *Chatani, Tanimizu, Ueno, Hayashi*, 917

S

S-adenosylhomocysteine, chemotherapeutic agent, malaria, neplanocin A, *Plasmodium*, *Nakanishi, Iwata, Yatome, Kitade*, 101
 S19 ribosomal protein, apoptosis, chemotactic factor, isopeptide bond, monocytes, transglutaminase, *Nishimura, Horino, Nishiura, Shibuya, Hiraoka, Tanase, Yamamoto*, 445
 16S rRNA, codon and base biases, *Escherichia coli*, second codon, translation efficiency, *Sato, Terabe, Watanabe, Gojobori, Hori-Takenoto, Miura*, 851
 second codon, codon and base biases, *Escherichia coli*, 16S rRNA, translation efficiency, *Sato, Terabe, Watanabe, Gojobori, Hori-Takenoto, Miura*, 851
 secondary structure, filamentous structure, module, RNA, secondary structure units, *Ishizaka, Ohshima, Yanagawa*, 971
 secondary structure units, filamentous structure, module, RNA, secondary structure, *Ishizaka, Ohshima, Yanagawa*, 971
 secretion, circadian rhythm, melatonin, pineal gland, serotonin N-acetyltransferase, *Hiro-*

ta, Kagiwada, Kasahara, Okano, Murata, Fukada, 51

selection efficiency, alkaline phosphatase, antibody, nitrocellulose membrane, phage display library, variable region, *Nakamura, Watanabe, Nishimiya, Tsumoto, Ishimura, Kumagai*, 209
 selenocysteine, redox regulation, site-directed mutagenesis, thioredoxin, thioredoxin reductase, *Fujiwara, Fujii, Fujii, Taniguchi*, 803
 Sendai virus, antisense oligonucleotides, fluorescence resonance energy transfer, liposome, *Nakamura, Hart, Frank, Marchuk, Shrive, Ota, Taira, Yoshikawa, Kaneda*, 755
 SERCA2b isoform, brain Ca²⁺ pumps, intracellular Ca²⁺-ATPase, *Salvador, Berengena, Sepúlveda, Mata*, 621
 sericin, *Bombyx mori*, cryoprotection, freezing tolerance, repetitive sequence, *Tsujimoto, Takagi, Takahashi, Yamada, Nakamori*, 979
 serine protease, alkaline-stability, autolysis, conformational restoration, surface region, *Maeda, Mizutani, Yamagata, Ichishima, Nakajima*, 675
 serine protease inhibitor (serpin), binding protein, overlay assay, protein Ser/Thr phosphorylation, *Xenopus laevis* oocytes, *Goto, Muto, Sugimoto, Ikawa-Kitayama, Igarashi, Ito, Hashimoto*, 229
 serotonin N-acetyltransferase, circadian rhythm, melatonin, pineal gland, secretion, *Hirota, Kagiwada, Kasahara, Okano, Murata, Fukada*, 51
 serum, high performance liquid chromatography, N-linked oligosaccharide, non-small cell lung cancer, two-dimensional map, *Otake, Fujimoto, Tanaka, Nakagawa, Ikeda, Menon, Hase, Wada, Ikenaka*, 537
 Sgs1, Bloom's syndrome, DNA topoisomerase III, RecQ helicase, Werner's syndrome, *Enomoto*, 501
 short-chain dehydrogenase/reductase family, butanediol dehydrogenase, chiral recognition, crystal structure, *Klebsiella pneumoniae*, stereoisomer, *Otagiri, Kurisu, Ui, Takusagawa, Ohkuma, Kuda, Kusunoki*, 205
 short-chain dehydrogenases/reductases, crystal structure, dissociation-association, glucose dehydrogenase, subunit interaction, *Yamamoto, Kurisu, Kusunoki, Tabata, Urabe, Osaki*, 303
 signal transduction, calcium ion, calmodulin-dependent protein kinase, protein kinase kinase, protein phosphatase, *Fujisawa*, 193
 signaling, caveolae, neuron, stathmin, tubulin, *Maekawa, Morii, Kumanogoh, Sano, Naruse, Sokawa, Mori*, 691
 SIMS, 2-AEPn, *Aplysia kurodai*, egg mass, phosphonoglycosphingolipid, *Araki, Yamada, Abe, Waki, Kon, Itonori, Sugita, Ando*, 93
 single chain Fv fragment, human synthetic phage display library, lysozyme, native conformation, *Kikuchi, Takeda, Tsujimoto, Asada, Nagata*, 237
 site-directed mutagenesis, α-amylase, cyclodextrin, crystal structure, enzymatic glucoside hydrolysis, *Kondo, Ohtaki, Tonozuka, Sakano, Kamitori*, 423

S (cont'd)

- , active site, binding protein, GlcNAc 2-epimerase, renin, *Takahashi, Takahashi, Kaneko, Ogasawara, Shindo, Saito, Kawamura*, 529
- , aspartic proteinase, milk-clotting enzyme, *Rhizomucor pusillus* pepsin, subsites, *Aikawa, Park, Sugiyama, Nishiyama, Hori-nouchi, Beppu*, 791
- , redox regulation, selenocysteine, thio-redoxin, thioredoxin reductase, *Fujiwara, Fujii, Fujii, Taniguchi*, 803
- skin, delayed-type hypersensitivity, differential display analysis, guinea pig, tryptophanyl-tRNA synthetase, *Yang, Nakada-Tsukui, Ohtani, Goto, Yoshimura, Kobayashi, Watanabe*, 561
- smooth muscle, chicken gizzard, smooth muscle myosin, smooth muscle myosin light chain kinase, telokin, *Numata, Katoh, Yazawa*, 437
- smooth muscle myosin, interaction between two regulatory light chains, head-S2 interaction, N-terminally truncated HMM, phosphorylation-dependent regulation, *Konishi, Kojima, Katoh, Yazawa, Kato, Fujiwara, Onishi*, 365
- , chicken gizzard, smooth muscle, smooth muscle myosin light chain kinase, telokin, *Numata, Katoh, Yazawa*, 437
- smooth muscle myosin light chain kinase, chicken gizzard, smooth muscle, smooth muscle myosin, telokin, *Numata, Katoh, Yazawa*, 437
- snake venom, comparative biochemistry, disintegrin, *Echis carinatus*, taxonomy, *Okuda, Nozaki, Sekiya, Morita*, 615
- soluble microbial P450, *Escherichia coli*, folding, mitochondrial P450, proline-rich sequence, *Kusano, Kagawa, Sakaguchi, Omura, Waterman*, 271
- somite, basic-leucine zipper (b-Zip), large Mafs, Maf recognition elements (MARE), transcription factor, *Kajihara, Kawachi, Kobayashi, Ogino, Takahashi, Yasuda*, 139
- Sorangium cellulosum*, myxothiazol, 4'-phosphopantetheinyl transferase, *Stigmatella aurantiaca*, thiolation domain, *Gaitatzis, Hans, Müller, Beyer*, 119
- sphingosine, Bcl-2, caspase-3, CTLL-2, ISP-1, *Yamaji, Nakamura, Takematsu, Kawasaki, Kozutsumi*, 521
- splicing factor, *Caenorhabditis elegans*, granulosa cells, midkine, Prp8, testis, *Takahashi, Muramatsu, Takagi, Fujisawa, Miyake, Muramatsu*, 599
- sporulation, ABC transporter, antibiotic, development, *Myxococcus xanthus*, *Kimura, Yamanishi, Tokumasu, Terasaka, Yoshinobu*, 351
- SPR sensor, firefly luciferase, immobilization, refolding, *Zako, Harada, Mannen, Yamaguchi, Kitayama, Ueda, Nagamune*, 1
- SPT, chromatin, neuronal development, RNA polymerase II, transcription, *Yamaguchi, Narita, Inukai, Wada, Handa*, 185
- SREBP, cholesterol, LDL, CHO, Niemann-Pick C, *Higashi, Ninomiya, Sugimoto, Suzuki, Taniguchi, Niwa, Pentchev, Vanier, Ohno*, 875
- stathmin, caveolae, neuron, signaling, tubulin, *Maekawa, Morii, Kumanogoh, Sano, Naruse, Sokawa, Mori*, 691
- stereoisomer, butanediol dehydrogenase, chiral recognition, crystal structure, *Klebsiella pneumoniae*, short-chain dehydrogenase/reductase family, *Otagiri, Kurisu, Ui, Takusagawa, Ohkuma, Kudo, Kusunoki*, 205
- sterol 14-demethylase P450, azole-antifungal agents, CYP51, molecular modeling, point mutation, *Nitahara, Kishimoto, Yabusaki, Gotoh, Yoshida, Horiuchi, Aoyama*, 761
- Stigmatella aurantiaca*, myxothiazol, 4'-phosphopantetheinyl transferase, *Sorangium cellulosum*, thiolation domain, *Gaitatzis, Hans, Müller, Beyer*, 119
- stomach, pepsinogen, phylogeny, purification, *Xenopus laevis*, *Ikezawa, Inokuchi, Kobayashi, Yasumasu*, 147
- streptin, hemolysin, lantibiotic, streptolysin S, transposon, *Karaya, Shimizu, Taketo*, 769
- Streptococcus pneumoniae*, asparagine-linked oligosaccharides, endo- β -N-acetylglucosaminidase, endoglycosidase, virulence, *Muramatsu, Tachikui, Ushida, Song, Qiu, Yamamoto, Muramatsu*, 923
- streptolysin S, hemolysin, lantibiotic, streptin, transposon, *Karaya, Shimizu, Taketo*, 769
- stress response, bleomycin, bleomycin resistance, calreticulin, heat shock protein, *Elm-ileik, Kumagai, Berengena, Ueda, Sugiyama*, 671
- , α B-crystallin, glioma cells, heat shock factor (HSF), potassium ion (K⁺), *Sadamitsu, Nagano, Fukumaki, Iwaki*, 813
- structure-function relationship, cold adaptation mechanism, 3-isopropylmalate dehydrogenase, thermodynamics, thermophilic enzyme, *Yasugi, Amino, Suzuki, Oshima, Yamagishi*, 477
- subsites, aspartic proteinase, milk-clotting enzyme, *Rhizomucor pusillus* pepsin, site-directed mutagenesis, *Aikawa, Park, Sugiyama, Nishiyama, Horinouchi, Beppu*, 791
- substrate recognition, ionic strength, matrix targeting signal, mitochondrial processing peptidase, surface plasmon resonance, *Kitada, Ito*, 155
- , aminotransferase, domain movement, hyperthermophilic enzyme, *Pyrococcus horikoshii*, *Ura, Harata, Matsui, Kuramitsu*, 173
- substrate specificity, CaM-kinase, kinetic analysis, protein phosphatase, synthetic phosphopeptide, *Ishida, Shigeri, Tatsu, Endo, Kameshita, Okuno, Kitani, Takeuchi, Yumoto, Fujisawa*, 745
- subunit interaction, crystal structure, dissociation-association, glucose dehydrogenase, short-chain dehydrogenases/reductases, *Yamamoto, Kurisu, Kusunoki, Tabata, Ura-be, Osaki*, 303
- suicide inhibitors, adrenal gland, aldosterone, 18-ethynyl-11-deoxycorticosterone, mechanism-based inhibitors, *Mathovic, Gomez-Sanchez, Cozza*, 383
- sulfate-reducing bacteria, catalase, gene, oxidative stress, recombinant, *Kitamura, Nakanishi, Kojima, Kumagai, Inoue*, 357
- sulfate-reducing bacterium, acetate kinase, HPLC analyses of ADP and ATP, kinetics, post-translational modification, *Yu, Ishida, Ozawa, Akutsu, Horiike*, 411
- Sulfolobus*, archaeon (archaeobacterium), common ancestor, 3-isopropylmalate dehydrogenase, protein stability, *Miyazaki, Nakaya, Suzuki, Tamakoshi, Oshima, Yamagishi*, 777
- surface dynamics, bacteriorhodopsin, C-terminal α -helix, interhelical loops, membrane proteins, *Yamaguchi, Tuzi, Yonebayashi, Naito, Needleman, Lanyi, Saito*, 373
- surface plasmon resonance, ionic strength, matrix targeting signal, mitochondrial processing peptidase, substrate recognition, *Kitada, Ito*, 155
- surface region, alkaline-stability, autolysis, conformational restoration, serine protease, *Maeda, Mizutani, Yamagata, Ichishima, Nakajima*, 675
- synthetic phosphopeptide, CaM-kinase, kinetic analysis, protein phosphatase, substrate specificity, *Ishida, Shigeri, Tatsu, Endo, Kameshita, Okuno, Kitani, Takeuchi, Yumoto, Fujisawa*, 745

T

- taxonomy, comparative biochemistry, disintegrin, *Echis carinatus*, snake venom, *Okuda, Nozaki, Sekiya, Morita*, 615
- telokin, chicken gizzard, smooth muscle, smooth muscle myosin, smooth muscle myosin light chain kinase, *Numata, Katoh, Yazawa*, 437
- tendamistat, α -amylase inhibitory activity, circular dichroism, cyclic and linear peptides, protease resistance, *Ono, Umezaki, Tojo, Hashimoto, Taniyama, Kaneko, Fujii, Morita, Shimasaki, Yamazaki, Yoshimura, Kato*, 783
- testis, *Caenorhabditis elegans*, granulosa cells, midkine, Prp8, splicing factor, *Takahashi, Muramatsu, Takagi, Fujisawa, Miyake, Muramatsu*, 599
- tetracycline, drug resistance, epitope, exporter, monoclonal antibody, *Nada, Murakami, Okamoto, Kubo, Yamaguchi*, 87
- tetraprotomer, Na/K-ATPase, oligomer, P-type ATPase, Post-Albers scheme, *Taniguchi, Kaya, Abe, Mårdh*, 335
- thermal unfolding, disulfide bonds, protein cross-linking, protein disulfide isomerase, oxidative refolding, *Gao, Mehta*, 179
- thermodynamics, cold adaptation mechanism, 3-isopropylmalate dehydrogenase, structure-function relationship, thermophilic enzyme, *Yasugi, Amino, Suzuki, Oshima, Yamagishi*, 477
- thermolysin, inhibitor, matrilysin, matrix metalloproteinase, thiorphan, *Oneda, Inouye*, 429
- thermophilic bacterium PS-3, inorganic pyrophosphatase, polymerase chain reaction, recombinant enzyme, thermostability, *Wada, Uchiumi, Ichiba, Hachimori*, 955
- thermophilic enzyme, cold adaptation mechanism, 3-isopropylmalate dehydrogenase, structure-function relationship, thermodynamics, *Yasugi, Amino, Suzuki, Oshima, Yamagishi*, 477
- thermostability, α -amylase, *Bacillus stearothermophilus*, Ca²⁺-binding, crystal structure, *Suud, Fujimoto, Takase, Matsumura, Mizuno*, 461
- , inorganic pyrophosphatase, polymerase

T (cont'd)

chain reaction, recombinant enzyme, thermophilic bacterium PS-3, *Wada, Uchiyumi, Ichiba, Hachimori*, 955

thermostable enzyme, amino acid sequence, DNA sequencing, molecular cloning, monoacylglycerol lipase, *Kitaura, Suzuki, Imamura*, 397

thiamine, diabetic complications, hyperglycaemia, methylglyoxal, triosephosphates, *Thornalley, Jahan, Ng*, 543

thiolation domain, myxothiazol, 4'-phosphopantetheinyl transferase, *Sorangium cellulosum, Stigmatella aurantiaca, Gaitatzis, Hans, Müller, Beyer*, 119

thioredoxin, redox regulation, selenocysteine, site-directed mutagenesis, thioredoxin reductase, *Fujiwara, Fujii, Fujii, Taniguchi*, 803

thioredoxin reductase, redox regulation, selenocysteine, site-directed mutagenesis, thioredoxin, *Fujiwara, Fujii, Fujii, Taniguchi*, 803

thiorphan, inhibitor, matrilysin, matrix metalloproteinase, thermolysin, *Oneda, Inouye*, 429

TIME-EA4, ATPase, *Bombyx mori*, glycoprotein, timer protein, *Tani, Kamada, Ochiai, Isobe, Suwan, Kai*, 221

timer protein, ATPase, *Bombyx mori*, glycoprotein, TIME-EA4, *Tani, Kamada, Ochiai, Isobe, Suwan, Kai*, 221

Tip60, CD4, celltype, HIV-1 Tat, transcriptional regulation, *Hlubek, Lohberg, Meiler, Jung, Kirchner, Brabletz*, 635

tissue remodeling, cathepsin B, insect, RNA-binding protein, translational regulation, *Nishikawa, Kobayashi, Natori*, 485

transcription, chromatin, neuronal development, RNA polymerase II, *SPT, Yamaguchi, Narita, Inukai, Wada, Handa*, 185

transcription factor, basic-leucine zipper (b-Zip), large Mafs, Maf recognition elements (MARE), somite, *Kajihara, Kawachi, Kobayashi, Ogino, Takahashi, Yasuda*, 139

transcription regulation, chromatin structure, DT40 cells, histones, histone-modifying enzymes, *Nakayama, Takami*, 491

transcriptional regulation, CD4, celltype, HIV-1 Tat, Tip60, *Hlubek, Lohberg, Meiler, Jung, Kirchner, Brabletz*, 635

transcriptional regulator, bacterial signal transduction, DNA-binding domain, OmpR-family of proteins, two-component system, *Itou, Tanaka*, 343

transgenic animal, codon usage, DAF, *Miyagawa, Yamada, Matsunami, Koresawa, Ikawa, Okabe, Shirakura*, 795

transglutaminase, apoptosis, chemotactic factor, isopeptide bond, monocytes, S19 ribosomal protein, *Nishimura, Horino, Nishi-*

ura, Shibuya, Hiraoka, Tanase, Yamamoto, 445

translation efficiency, codon and base biases, *Escherichia coli*, 16S rRNA, second codon, *Sato, Terabe, Watanabe, Gojobori, Hori-Takemoto, Miura*, 851

translational regulation, cathepsin B, insect, RNA-binding protein, tissue remodeling, *Nishikawa, Kobayashi, Natori*, 485

transposon, hemolysin, lantibiotic, streptin, streptolysin S, *Karaya, Shimizu, Taketo*, 769

triacylglycerol biosynthesis, fluorescent lipids, lipid bodies, lipid transport, oleaginous fungi, *Kamisaka, Noda*, 19

trinuclear Cu center, dioxygen reduction, laccase, multicopper oxidase, *Zoppellaro, Sakurai, Huang*, 949

triosephosphates, diabetic complications, hyperglycaemia, methylglyoxal, thiamine, *Thornalley, Jahan, Ng*, 543

triple-helix, ascorbic acid, ascorbic acid 2-phosphate, type IV collagen, *Yoshikawa, Takahashi, Imamura, Sado, Hayashi*, 929

tRNA-guanine transglycosylase, expression, leukemia, queuosine, *Ishiwata, Katayama, Shindo, Ozawa, Itoh, Mizugaki*, 13

trypsin, binding diversity, crystal structure, noncovalent inhibitor, *Tomoo, Satoh, Tsuda, Wanaka, Okamoto, Hijikata-Okunomiya, Okada, Ishida*, 455

tryptophanyl-tRNA synthetase, delayed-type hypersensitivity, differential display analysis, guinea pig, skin, *Yang, Nakada-Tsukui, Ohtani, Goto, Yoshimura, Kobayashi, Watanabe*, 561

tubulin, caveolae, neuron, signaling, stathmin, *Maekawa, Morii, Kumanogoh, Sano, Naruse, Sokawa, Mori*, 691

two-component system, bacterial signal transduction, DNA-binding domain, OmpR-family of proteins, transcriptional regulator, *Itou, Tanaka*, 343

two-dimensional map, high performance liquid chromatography, N-linked oligosaccharide, non-small cell lung cancer, serum, *Otake, Fujimoto, Tanaka, Nakagawa, Ikeda, Menon, Hase, Wada, Ikenaka*, 537

type IV collagen, ascorbic acid, ascorbic acid 2-phosphate, triple-helix, *Yoshikawa, Takahashi, Imamura, Sado, Hayashi*, 929

U

urine, adenovirus expression system, G proteins, mammalian pheromone receptor, vomeronasal organ, *Hagino-Yamagishi, Matsuoka, Ichikawa, Wakabayashi, Mori, Yazaki*, 509

V

vacuole, mitochondrial phosphatetransporter,

paralog, pseudogene, yeast, *Takabatake, Siddique, Kouchi, Izui, Hata*, 827

variable region, alkaline phosphatase, antibody, nitrocellulose membrane, phage display library, selection efficiency, *Nakamura, Watanabe, Nishimiya, Tsumoto, Ishimura, Kumagai*, 209

vascularization, bone morphogenetic protein, bioglass, carrier-geometry, osteogenesis, *Mahmood, Takita, Ojima, Kobayashi, Kohgo, Kuboki*, 163

virulence, asparagine-linked oligosaccharides, endo- β -N-acetylglucosaminidase, endoglycosidase, *Streptococcus pneumoniae, Muramatsu, Tachikui, Ushida, Song, Qiu, Yamamoto, Muramatsu*, 923

vomer nasal organ, adenovirus expression system, G proteins, mammalian pheromone receptor, urine, *Hagino-Yamagishi, Matsuoka, Ichikawa, Wakabayashi, Mori, Yazaki*, 509

W

Werner's syndrome, Blooms syndrome, DNA topoisomerase III, RecQ helicase, Sgs1, *Enomoto*, 501

Western blot, 14-3-3 protein, epidermis, fatty acid-binding protein, immunological cross-reaction, *Odani, Nakamura, Sato, Fujii*, 213

wound healing, collagen-binding, epidermal growth factor, fibronectin, fusion protein, *Ishikawa, Terai, Kitajima*, 627

X

X-ray diffraction, cholesterol, DSC, fluorescence, interdigitation, 16:0LPC/DPPC, *Lu, Hao, Chen*, 891

Xenopus laevis, pepsinogen, phylogeny, purification, stomach, *Ikuzawa, Inokuchi, Kobayashi, Yasumasu*, 147

—, calcium/calmodulin-dependent protein kinase II, CDK1, isoforms, maturation, *Stevens, Rondelez, Merlevede, Goris*, 551

Xenopus laevis oocytes, binding protein, overlay assay, protein Ser/Thr phosphorylation, serine protease inhibitor (serpin), *Goto, Muto, Sugimoto, Ikawa-Kitayama, Igarashi, Ito, Hashimoto*, 229

Y

yeast, mitochondrial phosphatetransporter, paralog, pseudogene, vacuole, *Takabatake, Siddique, Kouchi, Izui, Hata*, 827

Z

zinc, aminopeptidase N, metallothionein, renal cancer, *Ishii, Usui, Yamamoto, Sugimura, Tatematsu, Hirano*, 253

THE JOURNAL OF BIOCHEMISTRY

EDITED FOR
THE JAPANESE BIOCHEMICAL SOCIETY
VOLUME 129, 2001

EDITORIAL BOARD

Editor-in-Chief

Koichi SUZUKI (Tokyo)

Editors

JB Reviews
Biochemistry

Tadaomi TAKENAWA (Tokyo)
Toshisuke KAWASAKI (Kyoto)
Eiki KOMINAMI (Tokyo)

Molecular Biology
Cell
Biotechnology

Yoshiaki FUJII-KURIYAMA (Sendai)
Toshiaki KATADA (Tokyo)
Izumi KUMAGAI (Sendai)

Managing Editors

Toshiaki KATADA (Tokyo)

Naoyuki TANIGUCHI (Suita)

Associate Editors

Biochemistry

Kuniyo INOUE (Kyoto)
Hideo KANO (Sapporo)
Shinichi KOHSAKA (Kodaira)
Masaru TANOKURA (Tokyo)
Shuichi TSUJI (Hadano)
Kenji YAMAMOTO (Fukuoka)

Katsura IzUI (Kyoto)
Hisao KATO (Suita)
Masataka MORI (Kumamoto)
Tomofusa TSUCHIYA (Okayama)
Akihito YAMAGUCHI (Ibaraki)

Molecular Biology

Fumio HANAOKA (Suita)
Motoya KATSUKI (Okazaki)
Hiroyuki SASAKI (Mishima)
Tatsuya HAGA (Tokyo)
Akihiko NAKANO (Wako)
Kenji SOBUE (Suita)

Kenshi HAYASHI (Fukuoka)
Kunihiro MATSUMOTO (Nagoya)
Masayuki YAMAMOTO (Tsukuba)
Atsushi MIYAJIMA (Tokyo)
Shigeo OHNO (Yokohama)

Cell

Biotechnology

Shinji IJIMA (Nagoya)
Yasufumi KANEDA (Suita)

Masahiro IWAKURA (Tsukuba)
Eiichi TAMIYA (Ishikawa)

Advisory Board

Biochemistry

Elinor T. ADMAN (Seattle)
Shoei FURUKAWA (Gifu)
Masaaki HIROSE (Uji)
Tokuji IKEDA (Kyoto)
Makoto ITO (Fukuoka)
Ushio KIKKAWA (Kobe)
Hisatake KONDO (Sendai)
Ta-Hsiu LIAO (Taipei)
Alfred H. MERRILL, Jr. (Atlanta)
Norio MUTO (Shobara)
Fumihiko SATO (Kyoto)
Yukio SUGIURA (Uji)
Dennis E. VANCE (Edmonton)
Satoshi YAMASHITA (Maebashi)
Tadashi YOSHIMOTO (Nagasaki)

Kurt DRICKAMER (Oxford)
Saburo HARA (Kyoto)
Michio HOMMA (Nagoya)
Tatsuro IRIMURA (Tokyo)
Keiichi KAWANO (Toyama)
Kiyoshi KITA (Tokyo)
Konosuke KUMAKURA (Tokyo)
Masatomo MAEDA (Suita)
Taeko MIYAGI (Natori)
Hideaki NAGASE (London)
Toru SHIMIZU (Sendai)
Koji SUZUKI (Tsu)
Tetsuro YAMAMOTO (Kumamoto)
Koji YODA (Tokyo)

Kiyoshi FURUKAWA (Tokyo)
Seisuke HATTORI (Kodaira)
Yoshimi HOMMA (Fukushima)
Akio ITO (Fukuoka)
Seiichi KAWASHIMA (Tokyo)
Takehiko KOIDE (Hyogo)
Kunihiro KUWAJIMA (Tokyo)
Peter MALONEY (Baltimore)
Tomonari MURAMATSU (Tokyo)
Takaaki NISHIOKA (Kyoto)
Kazuyuki SUGAHARA (Kobe)
Noriaki TAKEGUCHI (Toyama)
Hirohei YAMAMURA (Kobe)
Shinji YOKOYAMA (Nagoya)

Molecular Biology

Hiroyuki ARAKI (Mishima)
Akira HORII (Sendai)
Hidetoshi INOKO (Isehara)
Daisuke KITAMURA (Noda)
Ken-ichirou MOROHASHI (Okazaki)
Lorenz POELLINGER (Stockholm)
Takashi TODA (London)
Hideyo YASUDA (Hachioji)

James D. ENGEL (Evanston)
Nobumichi HOZUMI (Noda)
Tetsuro ISHII (Tsukuba)
Hisao MASAI (Tokyo)
Tsunehiro MUKAI (Saga)
Tomokazu SUZUKI (Itami)
Morimasa WADA (Fukuoka)
Yoshihiro YONEDA (Suita)

Akiyoshi FUKAMIZU (Tsukuba)
Toshinori IDE (Hiroshima)
Takeo KISHIMOTO (Yokohama)
Takeshi MIZUNO (Nagoya)
Yusaku NAKABEPPU (Fukuoka)
Shoji TAJIMA (Suita)
Masao YAMADA (Tokyo)

Cell

Toshiya ENDO (Nagoya)
Haruhiro HIGASHIDA (Kanazawa)
Kozo KAIBUCHI (Nagoya)
Eisuke MEKADA (Suita)
Toru NAKANO (Suita)
Hiroshi OHNO (Kanazawa)
Mamoru SANO (Kyoto)
Mitsuo TAGAYA (Hachioji)

Yukio FUJIKI (Fukuoka)
Masaki INAGAKI (Nagoya)
Akira KIKUCHI (Hiroshima)
Takashi MURAMATSU (Nagoya)
Kazuhisa NAKAYAMA (Tsukuba)
Harumasa OKAMOTO (Tsukuba)
Hiroyuki SUGIYAMA (Fukuoka)
Takashi YOKOTA (Tokyo)

Yasuhisa FUKUI (Tokyo)
Makoto INUI (Ube)
Toshio KITAMURA (Tokyo)
Shigekazu NAGATA (Suita)
Masuo OBINATA (Sendai)
David SAFFEN (Tokyo)
Tetsuya TAGA (Tokyo)
Akihiko YOSHIMURA (Kurume)

Biotechnology

Yoshiharu DOI (Wako)
Patricia A. JENNINGS (San Diego)
Izumi KUBO (Hachioji)
Fumio MIZUTANI (Tsukuba)
Shigemi NORIOKA (Suita)
Kiyotaka SHIBA (Tokyo)
Toshifumi TAKEUCHI (Hiroshima)

Nobuyoshi ESAKI (Uji)
Makoto KIMURA (Fukuoka)
Isamu MATSUMOTO (Tokyo)
Teruyuki NAGAMUNE (Tokyo)
Takahiro OCHIYA (Tokyo)
Masayasu SUZUKI (Iizuka)
Norihiko TSUKAGOSHI (Nagoya)

Shigehisa HIROSE (Yokohama)
Kazukiyo KOBAYASHI (Nagoya)
Kohnosuke MITANI (Los Angeles)
Satoshi NISHIKAWA (Tsukuba)
Teruo OKANO (Tokyo)
Yoshinobu TAKAKURA (Kyoto)

COPYRIGHT, 2001 © BY THE JAPANESE BIOCHEMICAL SOCIETY

PUBLISHED

BY

THE JAPANESE BIOCHEMICAL SOCIETY

CONTENTS OF VOLUME 129

No. 1, January, 2001

	PAGE
Rapid Communication	
Monitoring of the Refolding Process for Immobilized Firefly Luciferase with a Biosensor Based on Surface Plasmon Resonance	1
<p style="text-align: right; margin-right: 20px;">T. Zako, K. Harada, T. Mannen, S. Yamaguchi, A. Kitayama, H. Ueda, and T. Nagamune</p>	
Regular Papers	
Expression of Humanized Fab Fragments That Recognize the IgE-Binding Domain of Human FcεRIα in COS and CHO Cells	5
<p style="text-align: right; margin-right: 20px;">T. Takai, K. Okumura, C. Ra, T. Yokota, and Y. Okumura</p>	
Increased Expression of Queuosine Synthesizing Enzyme, tRNA-Guanine Transglycosylase, and Queuosine Levels in tRNA of Leukemic Cells	13
<p style="text-align: right; margin-right: 20px;">S. Ishiwata, J. Katayama, H. Shindo, Y. Ozawa, K. Itoh, and M. Mizugaki</p>	
Intracellular Transport of Phosphatidic Acid and Phosphatidylcholine into Lipid Bodies in an Oleaginous Fungus, <i>Mortierella ramanniana</i> var. <i>angulispora</i>	19
<p style="text-align: right; margin-right: 20px;">Y. Kamisaka and N. Noda</p>	
Molecular Cloning of Delta-4, a New Mouse and Human Notch Ligand	27
<p style="text-align: right; margin-right: 20px;">T. Yoneya, T. Tahara, K. Nagao, Y. Yamada, T. Yamamoto, M. Osawa, S. Miyatani, and M. Nishikawa</p>	
Activation of Caspase-3 by Lysosomal Cysteine Proteases and Its Role in 2,2'-Azobis-(2-Amidinopropane)Dihydrochloride (AAPH)-Induced Apoptosis in HL-60 Cells	35
<p style="text-align: right; margin-right: 20px;">R. Ishisaka, T. Kanno, J. Akiyama, T. Yoshioka, K. Utsumi, and T. Utsumi</p>	
Expression of Chromatin Remodeling Factors during Neural Differentiation	43
<p style="text-align: right; margin-right: 20px;">Y. Machida, K. Murai, K. Miyake, and S. Iijima</p>	
Effect of Brefeldin A on Melatonin Secretion of Chick Pineal Cells	51
<p style="text-align: right; margin-right: 20px;">T. Hirota, S. Kagiwada, T. Kasahara, T. Okano, M. Murata, and Y. Fukada</p>	
Joining of Short DNA Oligonucleotides with Base Pair Mismatches by T4 DNA Ligase	61
<p style="text-align: right; margin-right: 20px;">A. Cherepanov, E. Yildirim, and S. de Vries</p>	
Hepatic Fatty Acid-Binding Proteins of a Teleost, <i>Lateolabrax japonicus</i> . The Primary Structures and Location of a Disulfide Bond	69
<p style="text-align: right; margin-right: 20px;">S. Odani, K. Baba, Y. Tsuchida, Y. Aoyagi, S. Wakui, and Y. Takahashi</p>	
Octamer Binding Protein-1 Is Involved in Inhibition of Inducible Nitric Oxide Synthase Expression by Exogenous Nitric Oxide in Murine Liver Cells	77
<p style="text-align: right; margin-right: 20px;">B.-S. Lee, Y.-M. Kim, H.-S. Kang, H.M. Kim, K.-H. Pyun, and I. Choi</p>	
Monoclonal Antibody That Binds to the Central Loop of the Tn10-Encoded Metal Tetracycline/H ⁺ Antiporter of <i>Escherichia coli</i>	87
<p style="text-align: right; margin-right: 20px;">S. Nada, S. Murakami, S. Okamoto, Y. Kubo, and A. Yamaguchi</p>	
Characterization of a Novel Triphosphonoctaosylceramide from the Eggs of the Sea Hare, <i>Aplysia kurodai</i>	93
<p style="text-align: right; margin-right: 20px;">S. Araki, S. Yamada, S. Abe, H. Waki, K. Kon, S. Itonori, M. Sugita, and S. Ando</p>	
Purification and Properties of Recombinant <i>Plasmodium falciparum</i> S-Adenosyl-L-Homocysteine Hydrolase	101
<p style="text-align: right; margin-right: 20px;">M. Nakanishi, A. Iwata, C. Yatome, and Y. Kitade</p>	
Isolation of Reducing Oligosaccharide Chains from the Chondroitin/Dermatan Sulfate-Protein Linkage Region and Preparation of Analytical Probes by Fluorescent Labeling with 2-Aminobenzamide	107
<p style="text-align: right; margin-right: 20px;">H. Sakaguchi, M. Watanabe, C. Ueoka, E. Sugiyama, T. Taketomi, S. Yamada, and K. Sugahara</p>	

	PAGE
The <i>mtaA</i> Gene of the Myxothiazol Biosynthetic Gene Cluster from <i>Stigmatella aurantiaca</i> DW4/3-1 Encodes a Phosphopantetheinyl Transferase that Activates Polyketide Synthases and Polypeptide Synthetases	N. Gaitatzis, A. Hans, R. Müller, and S. Beyer 119
Protamine-Modified DDAB Lipid Vesicles Promote Gene Transfer in the Presence of Serum	S. Mizuarai, K. Ono, J. You, M. Kamihira, and S. Iijima 125
Osteoblast-Related Gene Expression of Bone Marrow Cells during the Osteoblastic Differentiation Induced by Type I Collagen	M. Mizuno and Y. Kuboki 133
Isolation, Characterization, and Expression Analysis of Zebrafish Large Mafs	M. Kajihara, S. Kawauchi, M. Kobayashi, H. Ogino, S. Takahashi, and K. Yasuda 139
Amphibian Pepsinogens: Purification and Characterization of <i>Xenopus</i> Pepsinogens, and Molecular Cloning of <i>Xenopus</i> and Bullfrog Pepsinogens	M. Ikuzawa, T. Inokuchi, K. Kobayashi, and S. Yasumasu 147
Electrostatic Recognition of Matrix Targeting Signal by Mitochondrial Processing Peptidase	S. Kitada and A. Ito 155
Geometric Effect of Matrix upon Cell Differentiation: BMP-Induced Osteogenesis Using a New Bioglass with a Feasible Structure	J. Mahmood, H. Takita, Y. Ojima, M. Kobayashi, T. Kohgo, and Y. Kuboki 163
Temperature Dependence of the Enzyme-Substrate Recognition Mechanism	H. Ura, K. Harata, I. Matsui, and S. Kuramitsu 173
Interchain Disulfide Bonds Promote Protein Cross-Linking during Protein Folding	Y. Gao and K. Mehta 179

No. 2, February, 2001

JB Reviews

<i>SPT</i> Genes: Key Players in the Regulation of Transcription, Chromatin Structure and Other Cellular Processes	Y. Yamaguchi, T. Narita, N. Inukai, T. Wada, and H. Handa 185
Regulation of the Activities of Multifunctional Ca ²⁺ /Calmodulin-Dependent Protein Kinases	H. Fujisawa 193

Rapid Communications

Relocation of Cys374 of Actin Induced by Labeling with Fluorescent Dyes	T. Yasunaga and T. Wakabayashi 201
Crystal Structure of <i>meso</i> -2,3-Butanediol Dehydrogenase in a Complex with NAD ⁺ and Inhibitor Mercaptoethanol at 1.7 Å Resolution for Understanding of Chiral Substrate Recognition Mechanisms	M. Otagiri, G. Kurisu, S. Ui, Y. Takusagawa, M. Ohkuma, T. Kudo, and M. Kusunoki 205
Planning of a Phage VH Library Using Nitrocellulose Membranes: Application to Selection of a Human VH Library	M. Nakamura, H. Watanabe, Y. Nishimiya, K. Tsumoto, K. Ishimura, and I. Kumagai 209

Regular Papers

Identification of a Rat 30-kDa Protein Recognized by the Antibodies to a Recombinant Rat Cutaneous Fatty Acid-Binding Protein as a 14-3-3 Protein	S. Odani, J. Nakamura, T. Sato, and H. Fujii 213
Carbohydrate Moiety of Time-Interval Measuring Enzyme Regulates Time Measurement through Its Interaction with Time-Holding Peptide PIN	N. Tani, G. Kamada, K. Ochiai, M. Isobe, S. Suwan, and H. Kai 221

	PAGE
A Serpin with M_r 43,000 Is a Binding Protein of M_r 25,000 Protein, a Substrate for Protein Ser/Thr Kinase Detected in <i>Xenopus laevis</i> Oocytes	229
A Single-Chain Fv Fragment 2A3 Specific for Native Lysozyme: Isolation from a Human Synthetic Phage Display Antibody Library and Characterization	237
Enzyme-Linked Immunosorbent Assay for the Determination of p21-Activated Kinase Activity	243
Decreases of Metallothionein and Aminopeptidase N in Renal Cancer Tissues	253
Microsomal P450s Use Specific Proline-Rich Sequences for Efficient Folding, but Not for Maintenance of the Folded Structure	259
Importance of a Proline-Rich Sequence in the Amino-Terminal Region for Correct Folding of Mitochondrial and Soluble Microbial P450s	271
Purification, Molecular Cloning, and Immunohistochemical Localization of Dipeptidyl Peptidase II from the Rat Kidney and Its Identity with Quiescent Cell Proline Dipeptidase	279
Biosynthesis and Characterization of the Brain-Specific Membrane Protein DPPX, a Dipeptidyl Peptidase IV-Related Protein	289
Study on the Biosynthesis of Dolichol in Yeast: Recognition of the Prenyl Chain Length in Polyprenol Reduction	297
Crystal Structure of Glucose Dehydrogenase from <i>Bacillus megaterium</i> IWG3 at 1.7 Å Resolution	303
Leupeptin-Induced Appearance of Partial Fragment of Betaine Homocysteine Methyltransferase during Autophagic Maturation in Rat Hepatocytes	313
Interaction between Emerin and Nuclear Lamins	321
Regulatory Mechanism for the Stability of the Meta II Intermediate of Pinopsin	329

No. 3, March, 2001

JB Reviews

The Oligomeric Nature of Na/K-Transport ATPase	335
The OmpR-Family of Proteins: Insight into the Tertiary Structure and Functions of Two-Component Regulator Proteins	343

Regular Papers

Characterization of the <i>mac-1</i> Gene Encoding a Putative ABC Transporter from <i>Myxococcus xanthus</i>	351
Cloning and Expression of the Catalase Gene from the Anaerobic Bacterium <i>Desulfovibrio vulgaris</i> (Miyazaki F)	357

	PAGE
Two New Modes of Smooth Muscle Myosin Regulation by the Interaction between the Two Regulatory Light Chains, and by the S2 Domain	365
Surface Dynamics of Bacteriorhodopsin as Revealed by ¹³ C NMR Studies on [¹³ C]Ala-Labeled Proteins: Detection of Millisecond or Microsecond Motions in Interhelical Loops and C-Terminal α -Helix	373
Inhibition of Aldosterone Production in Rat Adrenal Mitochondria by 18-Ethynyl-11-Deoxycorticosterone: A Simple Model for Kinetic Interpretation of Mechanism-Based Inhibitors	383
Gene Structure and Chromosomal Location of a Human bHLH Transcriptional Factor DEC1-Stra13-SHARP-2/BHLHB2	391
Monoacylglycerol Lipase from Moderately Thermophilic <i>Bacillus</i> sp. Strain H-257: Molecular Cloning, Sequencing, and Expression in <i>Escherichia coli</i> of the Gene	397
Biochemical Characterization of Galloyl Pedunculagin (Ellagitannin) as a Selective Inhibitor of the β -Regulatory Subunit of A-Kinase <i>In Vitro</i>	403
Purification and Characterization of Homo- and Hetero-Dimeric Acetate Kinases from the Sulfate-Reducing Bacterium <i>Desulfovibrio vulgaris</i>	411
Studies on the Hydrolyzing Mechanism for Cyclodextrins of <i>Thermoactinomyces vulgaris</i> R-47 α -Amylase 2 (TVAII). X-Ray Structure of the Mutant E354A Complexed with β -Cyclodextrin, and Kinetic Analyses on Cyclodextrins	423
Interactions of Human Matrix Metalloproteinase 7 (Matrilysin) with the Inhibitors Thiorphan and R-94138	429
Functional Role of the C-Terminal Domain of Smooth Muscle Myosin Light Chain Kinase on the Phosphorylation of Smooth Muscle Myosin	437
Apoptotic Cells of an Epithelial Cell Line, AsPC-1, Release Monocyte Chemotactic S19 Ribosomal Protein Dimer	445
Binding Diversity of a Noncovalent-Type Low-Molecular-Weight Serine Protease Inhibitor and Function of a Catalytic Water Molecule: X-Ray Crystal Structure of PKSI-527-Inhibited Trypsin	455
Crystal Structure of <i>Bacillus stearothermophilus</i> α -Amylase: Possible Factors Determining the Thermostability	461
Effect of Ions and Nucleotides on the Interactions of Yeast Rad51 Protein with Single-Stranded Oligonucleotides	469
Cold Adaptation of the Thermophilic Enzyme 3-Isopropylmalate Dehydrogenase	477
Cloning of cDNA for Cathepsin B mRNA 3'-Untranslated-Region-Binding Protein (CBBP), and Characterization of Recombinant CBBP	485

No. 4, April, 2001

JB Reviews

Participation of Histones and Histone-Modifying Enzymes in Cell Functions through Alterations in Chromatin Structure	491
----------------------------------------------------------------------------------------------------------------------	-----

	PAGE
Functions of RecQ Family Helicases: Possible Involvement of Bloom's and Werner's Syndrome Gene Products in Guarding Genome Integrity during DNA Replication	T. Enomoto 501
Rapid Communication	
The Mouse Putative Pheromone Receptor Was Specifically Activated by Stimulation with Male Mouse Urine	K. Hagino-Yamagishi, M. Matsuoka, M. Ichikawa, Y. Wakabayashi, Y. Mori, and K. Yazaki 509
Regular Papers	
Characterization of the Flavoprotein Domain of gp91 <i>phox</i> Which Has NADPH Diaphorase Activity	C.-H. Han, Y. Nisimoto, S.-H. Lee, E.T. Kim, and J.D. Lambeth 513
Apoptosis of CTLL-2 Cells Induced by an Immunosuppressant, ISP-I, Is Caspase-3-Like Protease-Independent	T. Yamaji, S. Nakamura, H. Takematsu, T. Kawasaki, and Y. Kozutsumi 521
Identification of Functionally Important Cysteine Residues of the Human Renin-Binding Protein as the Enzyme <i>N</i> -Acetyl-D-Glucosamine 2-Epimerase	S. Takahashi, K. Takahashi, T. Kaneko, H. Ogasawara, S. Shindo, K. Saito, and Y. Kawamura 529
Isolation and Characterization of an <i>N</i> -Linked Oligosaccharide That Is Significantly Increased in Sera from Patients with Non-Small Cell Lung Cancer	Y. Otake, I. Fujimoto, F. Tanaka, T. Nakagawa, T. Ikeda, K.K. Menon, S. Hase, H. Wada, and K. Ikenaka 537
Suppression of the Accumulation of Triosephosphates and Increased Formation of Methylglyoxal in Human Red Blood Cells during Hyperglycaemia by Thiamine <i>In Vitro</i>	P.J. Thornalley, I. Jahan, and R. Ng 543
Cloning and Differential Expression of New Calcium, Calmodulin-Dependent Protein Kinase II Isoforms in <i>Xenopus laevis</i> Oocytes and Several Adult Tissues	I. Stevens, E. Rondelez, W. Merlevede, and J. Goris 551
Identification and Cloning of Genes Associated with the Guinea Pig Skin Delayed-Type Hypersensitivity Reaction	D. Yang, K. Nakada-Tsukui, M. Ohtani, R. Goto, T. Yoshimura, Y. Kobayashi, and N. Watanabe 561
Chimeric Na ⁺ /H ⁺ Antiporters Constructed from NhaA of <i>Helicobacter pylori</i> and <i>Escherichia coli</i> : Implications for Domains of NhaA for pH Sensing	H. Inoue, Y. Tsuboi, and H. Kanazawa 569
Peptide Mimics of Monocyte Chemoattractant Protein-1 (MCP-1) with an Antagonistic Activity	M. Kaji, M. Ikari, S. Hashiguchi, Y. Ito, R. Matsumoto, T. Yoshimura, J. Kuratsu, and K. Sugimura 577
A Pyrrolidinone Derivative Inhibits Cytokine-Induced iNOS Expression and NK- κ B Activation by Preventing Phosphorylation and Degradation of I κ B- α	K. Katsuyama and Y. Hirata 585
Crystal Structure of Cyclodextrin Glucanotransferase from Alkalophilic <i>Bacillus</i> sp. 1011 Complexed with 1-Deoxynojirimycin at 2.0 Å Resolution	R. Kanai, K. Haga, K. Yamane, and K. Harata 593
A Splicing Factor, Prp8: Preferential Localization in the Testis and Ovary in Adult Mice	A. Takahashi, H. Muramatsu, S. Takagi, H. Fujisawa, Y. Miyake, and T. Muramatsu 599
A Cryptic Melibiose Transporter Gene Possessing a Frameshift from <i>Citrobacter freundii</i>	T. Shimamoto, T. Shimamoto, X.-J. Xu, N. Okazaki, H. Kawakami, and T. Tsuchiya 607
Comparative Biochemistry of Disintegrins Isolated from Snake Venom: Consideration of the Taxonomy and Geographical Distribution of Snakes in the Genus <i>Echis</i>	D. Okuda, C. Nozaki, F. Sekiya, and T. Morita 615

	PAGE
Distribution of the Intracellular Ca ²⁺ -ATPase Isoform 2b in Pig Brain Subcellular Fractions and Cross-Reaction with a Monoclonal Antibody Raised against the Enzyme Isoform 1	J.M. Salvador, M. Berengena, M.R. Sepúlveda, and A.M. Mata 621
Production of a Biologically Active Epidermal Growth Factor Fusion Protein with High Collagen Affinity	T. Ishikawa, H. Terai, and T. Kitajima 627
Tip60 Is a Cell-Type-Specific Transcriptional Regulator	F. Hlubek, C. Löhberg, J. Meiler, A. Jung, T. Kirchner, and T. Brabletz 635
HMG Box A in HMG2 Protein Functions as a Mediator of DNA Structural Alteration Together with Box B	Y. Nakamura, K. Yoshioka, H. Shirakawa, and M. Yoshida 643
No. 5, May, 2001	
JB Review	
The Structure of Calpain	H. Sorimachi and K. Suzuki 653
Rapid Communications	
Activation by 2-Arachidonoylglycerol, an Endogenous Cannabinoid Receptor Ligand, of p42/44 Mitogen-Activated Protein Kinase in HL-60 Cells	Y. Kobayashi, S. Arai, K. Waku, and T. Sugiura 665
Use of Bleomycin- and Heat Shock-Induced Calreticulin Promoter for Construction of a Mammalian Expression Vector	H. Elmileik, T. Kumagai, M. Berengena, K. Ueda, and M. Sugiyama 671
Regular Papers	
Alkaline-Resistance Model of Subtilisin ALP I, a Novel Alkaline Subtilisin	H. Maeda, O. Mizutani, Y. Yamagata, E. Ichishima, and T. Nakajima 675
Effects of Deoxycholic Acid and Its Epimers on Lipid Peroxidation in Isolated Rat Hepatocytes	A. Hino, M. Morita, M. Une, K. Fujimura, and T. Kuramoto 683
Localization of Neuronal Growth-Associated, Microtubule-Destabilizing Factor SCG10 in Brain-Derived Raft Membrane Microdomains	S. Maekawa, H. Morii, H. Kumanogoh, M. Sano, Y. Naruse, Y. Sokawa, and N. Mori 691
The Human Homologue of Fission Yeast cdc27, p66, Is a Component of Active Human DNA Polymerase δ	K. Shikata, S. Ohta, K. Yamada, C. Obuse, H. Yoshikawa, and T. Tsurimoto 699
Characterization of Cytochrome <i>b₅</i> in the Ascidian <i>Polyandrocarpa misakiensis</i> and Budding-Specific Expression	T. Yubisui, F. Takahashi, T. Takabayashi, S. Fujiwara, and K. Kawamura 709
Effects of Recombinant Human Macrophage Colony-Stimulating Factor on Atherosclerotic Lesions Established in the Aorta of High Cholesterol-Fed Rabbits	H. Irie, H. Koshiba, M. Koyama, E. Asakura, H. Shibata, K. Kimura, K. Naito, T. Yamauchi, K. Yada, T. Hanamura, S. Hanada, S. Abe, and N. Nakamura 717
Effect of Aggregation of Amphotericin B on Lysophosphatidylcholine Micelles as Related to Its Complex Formation with Cholesterol or Ergosterol	M. Kawabata, M. Onda, and T. Mita 725
Differential Control of Cellular Gene Expression by Diffusible and Non-Diffusible EGF	Y. Ito, G. Chen, Y. Imanishi, T. Morooka, E. Nishida, Y. Okabayashi, and M. Kasuga 733
Dynamics of Intracellular Granules with CD63-GFP in Rat Basophilic Leukemia Cells	T. Amano, T. Furuno, N. Hirashima, N. Ohyama, and M. Nakanishi 739

Substrate Specificity of Ca ²⁺ /Calmodulin-Dependent Protein Kinase Phosphatase: Kinetic Studies Using Synthetic Phosphopeptides as Model Substrates	A. Ishida, Y. Shigeri, Y. Tatsu, Y. Endo, I. Kameshita, S. Okuno, T. Kitani, M. Takeuchi, N. Yumoto, and H. Fujisawa	745
Efficient Transfer of Intact Oligonucleotides into the Nucleus of Ligament Scar Fibroblasts by HVJ-Cationic Liposomes Is Correlated with Effective Antisense Gene Inhibition	N. Nakamura, D.A. Hart, C.B. Frank, L.L. Marchuk, N.G. Shrive, N. Ota, K. Taira, H. Yoshikawa, and Y. Kaneda	755
The Amino Acid Residues Affecting the Activity and Azole Susceptibility of Rat CYP51 (Sterol 14-Demethylase P450)	Y. Nitahara, K. Kishimoto, Y. Yabusaki, O. Gotoh, Y. Yoshida, T. Horiuchi, and Y. Aoyama	761
New Gene Cluster for Lantibiotic Streptin Possibly Involved in Streptolysin S Formation	K. Karaya, T. Shimizu, and A. Taketo	769
Ancestral Residues Stabilizing 3-Isopropylmalate Dehydrogenase of an Extreme Thermophile: Experimental Evidence Supporting the Thermophilic Common Ancestor Hypothesis	J. Miyazaki, S. Nakaya, T. Suzuki, M. Tamakoshi, T. Oshima, and A. Yamagishi	777
Cyclic and Linear Peptides Derived from α -Amylase Inhibitory Protein Tendamistat	S. Ono, M. Umezaki, N. Tojo, S. Hashimoto, H. Taniyama, T. Kaneko, T. Fujii, H. Morita, C. Shimasaki, I. Yamazaki, T. Yoshimura, and T. Kato	783
Replacements of Amino Acid Residues at Subsites and Their Effects on the Catalytic Properties in <i>Rhizomucor pusillus</i> Pepsin, an Aspartic Proteinase from <i>Rhizomucor pusillus</i>	J. Aikawa, Y.-N. Park, M. Sugiyama, M. Nishiyama, S. Horinouchi, and T. Beppu	791
A Synthetic DAF (CD55) Gene Based on Optimal Codon Usage for Transgenic Animals	S. Miyagawa, M. Yamada, K. Matsunami, Y. Koresawa, M. Ikawa, M. Okabe, and R. Shirakura	795
Roles of N-Terminal Active Cysteines and C-Terminal Cysteine-Selenocysteine in the Catalytic Mechanism of Mammalian Thioredoxin Reductase	N. Fujiwara, T. Fujii, J. Fujii, and N. Taniguchi	803
Heat Shock Factor 2 Is Involved in the Upregulation of α B-Crystallin by High Extracellular Potassium	C. Sadamitsu, T. Nagano, Y. Fukumaki, and A. Iwaki	813
Only the Reduced Conformer of α -Lactalbumin Is Inducible to Aggregation by Protein Aggregates	J. Li, S. Zhang, and C. Wang	821
Characterization of a <i>Saccharomyces cerevisiae</i> Gene That Encodes a Mitochondrial Phosphate Transporter-Like Protein	R. Takabatake, A.-B.M. Siddique, H. Kouchi, K. Izui, and S. Hata	827
Ca ²⁺ - and Myristoylation-Dependent Association of Calcineurin with Phosphatidylserine	B.A. Perrino and B.A. Martin	835
A Cluster of Basic Amino Acid Residues in Calcineurin B Participates in the Binding of Calcineurin to Phosphatidylserine Vesicles	B.A. Martin, B.C. Oxhorn, C.R. Rossow, and B.A. Perrino	843

No. 6, June, 2001

Regular Papers

Codon and Base Biases after the Initiation Codon of the Open Reading Frames in the <i>Escherichia coli</i> Genome and Their Influence on the Translation Efficiency	T. Sato, M. Terabe, H. Watanabe, T. Gojobori, C. Hori-Takemoto, and K. Miura	851
Detergent-Resistant Membrane Domains Are Required for Mast Cell Activation but Dispensable for Tyrosine Phosphorylation upon Aggregation of the High Affinity Receptor for IgE	T. Yamashita, T. Yamaguchi, K. Murakami, and S. Nagasawa	861
Quantum Chemical Study of Agonist-Receptor Vibrational Interactions for Activation of the Glutamate Receptor	M. Kubo, K. Odai, T. Sugimoto, and E. Ito	869

	PAGE
Isolation of NPC1-Deficient Chinese Hamster Ovary Cell Mutants by Gene Trap Mutagenesis	875
	K. Higaki, H. Ninomiya, Y. Sugimoto, T. Suzuki, M. Taniguchi, H. Niwa, P.G. Pentchev, M.T. Vanier, and K. Ohno
Myosin Assembly Critical for the Enzyme Activity of Smooth Muscle Myosin Phosphatase: Effects of MgATP, Ionic Strength, and Mg ²⁺	881
	O. Sato and Y. Ogawa
Effect of Cholesterol on the Formation of an Interdigitated Gel Phase in Lysophosphatidylcholine and Phosphatidylcholine Binary Mixtures	891
	J.-Z. Lu, Y.-H. Hao, and J.-W. Chen
Frontal Gel Chromatographic Analysis of the Interaction of a Protein with Self-Associating Ligands: Aberrant Saturation in the Binding of Flavins to Bovine Serum Albumin	899
	O. Sawada, T. Ishida, and K. Horiike
A Theoretical Study of Electronic and Structural States of Neurotransmitters: γ -Aminobutyric Acid and Glutamic Acid	909
	K. Odai, T. Sugimoto, D. Hatakeyama, M. Kubo, and E. Ito
Structural and Functional Changes in Bovine Pancreatic Ribonuclease A by the Replacement of Phe120 with Other Hydrophobic Residues	917
	E. Chatani, N. Tanimizu, H. Ueno, and R. Hayashi
Molecular Cloning and Expression of Endo- β - <i>N</i> -Acetylglucosaminidase D, Which Acts on the Core Structure of Complex Type Asparagine-Linked Oligosaccharides	923
	H. Muramatsu, H. Tachikui, H. Ushida, X. Song, Y. Qiu, S. Yamamoto, and T. Muramatsu
Secretion of Non-Helical Collagenous Polypeptides of α 1(IV) and α 2(IV) Chains upon Depletion of Ascorbate by Cultured Human Cells	929
	K. Yoshikawa, S. Takahashi, Y. Imamura, Y. Sado, and T. Hayashi
The Down-Regulation of Glutathione Peroxidase Causes Bovine Luteal Cell Apoptosis during Structural Luteolysis	937
	T. Nakamura, T. Ishigami, N. Makino, and K. Sakamoto
Demonstration of the Importance and Usefulness of Manipulating Non-Active-Site Residues in Protein Design	943
	A. Shimotohno, S. Oue, T. Yano, S. Kuramitsu, and H. Kagamiyama
A Novel Mixed Valence Form of <i>Rhus vernicifera</i> Laccase and Its Reaction with Dioxygen to Give a Peroxide Intermediate Bound to the Trinuclear Center	949
	G. Zoppellaro, T. Sakurai, and H. Huang
Enhancement of the Thermostability of Thermophilic Bacterium PS-3 PPase on Substitution of Ser-89 with Carboxylic Amino Acids	955
	M. Wada, T. Uchiumi, T. Ichiba, and A. Hachimori
Caspase-Independent Cell Death and Mitochondrial Disruptions Observed in the Apaf1-Deficient Cells	963
	K. Miyazaki, H. Yoshida, M. Sasaki, H. Hara, G. Kimura, T.W. Mak, and K. Nomoto
Protein Anatomy: Structure and Function of Peptide Fragments Corresponding to the Secondary Structure Units of Barnase	971
	M. Ishizaka, Y. Ohshima, and H. Yanagawa
Cryoprotective Effect of the Serine-Rich Repetitive Sequence in Silk Protein Sericin	979
	K. Tsujimoto, H. Takagi, M. Takahashi, H. Yamada, and S. Nakamori

(Continued from back cover)

Receptors and Signal Transduction

- Detergent-Resistant Membrane Domains Are Required for Mast Cell Activation but Dispensable for Tyrosine Phosphorylation upon Aggregation of the High Affinity Receptor for IgE T. Yamashita, T. Yamaguchi, K. Murakami, and S. Nagasawa 861

Cell Death

- The Down-Regulation of Glutathione Peroxidase Causes Bovine Luteal Cell Apoptosis during Structural Luteolysis T. Nakamura, T. Ishigami, N. Makino, and K. Sakamoto 937
- Caspase-Independent Cell Death and Mitochondrial Disruptions Observed in the Apaf1-Deficient Cells K. Miyazaki, H. Yoshida, M. Sasaki, H. Hara, G. Kimura, T.W. Mak, and K. Nomoto 963

BIOTECHNOLOGY

Gene and Protein Engineering

- Enhancement of the Thermostability of Thermophilic Bacterium PS-3 PPase on Substitution of Ser-89 with Carboxylic Amino Acids M. Wada, T. Uchiumi, T. Ichiba, and A. Hachimori 955
- Cryoprotective Effect of the Serine-Rich Repetitive Sequence in Silk Protein Sericin K. Tsujimoto, H. Takagi, M. Takahashi, H. Yamada, and S. Nakamori 979

CONTENTS Rearranged According to Subject Categories, Vol. 129, No. 6

BIOCHEMISTRY

Protein Structure

- Structural and Functional Changes in Bovine Pancreatic Ribonuclease A by the Replacement of Phe120 with Other Hydrophobic Residues E. Chatani, N. Tanimizu, H. Ueno, and R. Hayashi 917

- Protein Anatomy: Structure and Function of Peptide Fragments Corresponding to the Secondary Structure Units of Barnase M. Ishizaka, Y. Ohshima, and H. Yanagawa 971

Biomolecular Structures

- Quantum Chemical Study of Agonist-Receptor Vibrational Interactions for Activation of the Glutamate Receptor M. Kubo, K. Odai, T. Sugimoto, and E. Ito 869

- A Theoretical Study of Electronic and Structural States of Neurotransmitters: γ -Aminobutyric Acid and Glutamic Acid K. Odai, T. Sugimoto, D. Hatakeyama, M. Kubo, and E. Ito 909

Glycobiology and Carbohydrate Biochemistry

- Molecular Cloning and Expression of Endo- β -N-Acetylglucosaminidase D, Which Acts on the Core Structure of Complex Type Asparagine-Linked Oligosaccharides H. Muramatsu, H. Tachikui, H. Ushida, X. Song, Y. Qiu, S. Yamamoto, and T. Muramatsu 923

Lipid Biochemistry

- Isolation of NPC1-Deficient Chinese Hamster Ovary Cell Mutants by Gene Trap Mutagenesis K. Higaki, H. Ninomiya, Y. Sugimoto, T. Suzuki, M. Taniguchi, H. Niwa, P.G. Pentchev, M.T. Vanier, and K. Ohno 875

- Effect of Cholesterol on the Formation of an Interdigitated Gel Phase in Lysophosphatidylcholine and Phosphatidylcholine Binary Mixtures J.-Z. Lu, Y.-H. Hao, and J.-W. Chen 891

Enzymology

- Demonstration of the Importance and Usefulness of Manipulating Non-Active-Site Residues in Protein Design A. Shimotohno, S. Oue, T. Yano, S. Kuramitsu, and H. Kagamiyama 943

- A Novel Mixed Valence Form of *Rhus vernicifera* Laccase and Its Reaction with Dioxygen to Give a Peroxide Intermediate Bound to the Trinuclear Center G. Zoppellaro, T. Sakurai, and H. Huang 949

Analytical Biochemistry

- Frontal Gel Chromatographic Analysis of the Interaction of a Protein with Self-Associating Ligands: Aberrant Saturation in the Binding of Flavins to Bovine Serum Albumin O. Sawada, T. Ishida, and K. Horiike 899

MOLECULAR BIOLOGY

Protein Synthesis

- Codon and Base Biases after the Initiation Codon of the Open Reading Frames in the *Escherichia coli* Genome and Their Influence on the Translation Efficiency T. Sato, M. Terabe, H. Watanabe, T. Gojobori, C. Hori-Takemoto, and K. Miura 851

CELL

Muscles, Cell Motility and Shape

- Myosin Assembly Critical for the Enzyme Activity of Smooth Muscle Myosin Phosphatase: Effects of MgATP, Ionic Strength, and Mg^{2+} O. Sato and Y. Ogawa 881

Extracellular Matrices and Cell Adhesion Molecules

- Secretion of Non-Helical Collagenous Polypeptides of α 1(IV) and α 2(IV) Chains upon Depletion of Ascorbate by Cultured Human Cells K. Yoshikawa, S. Takahashi, Y. Imamura, Y. Sado, and T. Hayashi 929