

## Gel Electrophoresis

### 1. REVIEWS AND BOOKS

- 615 Brzeski, H.: An introduction to bioinformatics. In: Rapley, R. (Editor), *Nucleic Acid Protoc. Handb.*, Humana Press Inc., Totowa, 2000, pp. 1031-1043; *C.A.*, 133 (2000) 295943y - a review with 25 refs.
- 616 Gilar, M., Bouvier, E.S.P. and Compton, B.J.: Advances in sample preparation in electromigration, chromatographic and mass spectrometric separation methods. *J. Chromatogr. A*, 909 (2001) 111-135 - a review with 226 refs.
- 617 Guttman, A. and Ronai, Z.: Ultrathin-layer gel electrophoresis of biopolymers. *Electrophoresis (Weinheim)*, 21 (2000) 3952-3964 - a review with 104 refs.

See also 619, 625, 627, 642, 678, 679, 683, 684, 685, 690, 691, 789, 1075, 1129, 1218.

### 2. FUNDAMENTALS, THEORY AND GENERAL

#### 2a. General

- 618 Cao, C.-X., Zhou, S.-L., He, Y.-Z., Zheng, X.-Y., Chen, W.-K. and Qian, Y.-T.: Experimental study on moving neutralization reaction boundary created with the strong reactive electrolytes of HCl and NaOH in agarose gel. *J. Chromatogr. A*, 891 (2000) 337-347.
- 619 D'Hondt, J.-L.: The use of polyacrylamide gel electrophoresis in animal systematics, phylogeny, and ecophysiology. *J. Biochem. (Tokyo)*, 22 (2001) 404-412 - a review with 72 refs.

See also 623, 1211.

#### 2b. Thermodynamics and theoretical relationships

See 618.

#### 2d. Measurement of physico-chemical and related values

See 618.

### 3. GENERAL TECHNIQUES

#### 3a. Apparatus and accessories

- 620 Fadoulgiou, V.E., Glykos, N.M. and Kokkinidis, M.: A fast and inexpensive procedure for drying polyacrylamide gels. *Anal. Biochem.*, 287 (2000) 185-186.
- 621 Izzo, V., Craxi, A. and Barbieri, R.: Multiple voltage-gradient gel electrophoresis system. *Electrophoresis (Weinheim)*, 22 (2001) 29-32.

- 622 Schwarz, M.A., Galliker, B., Fluri, K., Kappes, T. and Hauser, P.C.: A two-electrode configuration for simplified amperometric detection in microfabricated electrophoretic separation device. *Analyst (Cambridge)*, 126 (2001) 147-151.

#### 3b. Detectors and detection procedures

- 623 Igarashi, H., Nagura, K. and Sugimura, H.: Trypan blue as a slow migrating dye for SSCP detection in polyacrylamide gel electrophoresis. *BioTechniques*, 29 (2000) 42-44; *C.A.*, 133 (2000) 330103y.

See also 622, 677, 687, 1051.

#### 3c. Stabilization media for electrophoresis

See 1097.

#### 3d. Quantitative analysis

- 624 Martynov, A., Schepkina, J., Chestkov, V., Radko, S.P., Kolosova, I. and Chrambach, A.: Towards a quantitative free flow electrophoresis and its application to particle size separations. *Prepar. Biochem. Biotechnol.*, 30 (2000) 331-341.

### 4. SPECIAL TECHNIQUES

#### 4a. Automation

See 691.

#### 4c. Combination with other physicochemical techniques, (MS, IR etc.)

See 616, 680, 681, 682, 688, 803, 863, 952, 1070, 1212.

#### 4e. Two dimensional databases

See 880.

#### 4f. Isoelectric focusing

- 625 Ivory, C.F.: A brief review of alternative electrofocusing techniques. *Sep. Sci. Technol.*, 35 (2000) 1777-1793; *C.A.*, 133 (2000) 331568r - a review with 27 refs.

See also 680, 692, 768, 804, 811, 950.

#### 4h. Two dimensional electrophoresis

See 678, 684, 685, 688, 689, 690, 691, 718, 743, 754, 757, 770, 828, 834, 869, 873, 920, 952, 1022, 1063, 1136, 1145, 1221.

## 4i. Other special techniques

See 617, 1217.

## 8. SUBSTANCES CONTAINING HETEROCYCLIC OXYGEN

## 8b. Aflatoxins and other mycotoxins

626 Alvarez, M.T., Carvajal, M., Rojo, F. and Escobar, A.: Comparison between inhibitory indirect ELISA and HPLC methods to quantify free and adducted aflatoxins in human urine. *Nat. Toxins*, 7, No.4 (1999) 139-145; C.A., 134 (2001) 1413j.

## 10. CARBOHYDRATES

## 10a. Mono and oligosaccharides. Structural studies

627 Michalski, J.-C. and Capon, C.: Monosaccharide composition of mucins. *Methods Mol. Biol. (Totowa)*, 125(Glycoprotein Methods and Protocols) (2000) 159-180; C.A., 133 (2000) 278095f - a review with 48 refs.

628 Naik, R.S., Davidson, E.A. and Gowda, Ch.: Developmental stage-specific biosynthesis of glycosylphosphatidylinositol anchors in intraerythrocytic *Plasmodium falciparum* and its inhibition in a novel manner by mannosamine. *J. Biol. Chem.*, 275 (2000) 24506-24511.

## 10b. Polysaccharides, mucopolysaccharides, lipopolysaccharides

629 Lin, Y., Lee, H., Berg, A.J., Lisanti, M.P., Shapiro, L. and Scherer, P.E.: The lipopolysaccharide-activated Toll-like receptor (TLR)-4 induces synthesis of the closely related receptor TLR-2 in adipocytes. *J. Biol. Chem.*, 275 (2000) 24255-24263.

630 Mbemba, E., Slimani, H., Atemezem, A., Saffar, L. and Gategno, L.: Glycans are involved in RANTES binding to CCR5 positive as well as to CCR5 negative cells. *Biochim. Biophys. Acta*, 1510 (2001) 354-366.

631 Rozenberg, G.I., Espada, J., de Cidre, L.L., Eijan, A.M., Calvo, J.C. and Bertolesi, G.E.: Heparan sulfate, heparin and heparinase activity detection on polyacrylamide gel electrophoresis using the fluorochrome tris(2,2'-bipyridine) ruthenium (II). *Electrophoresis (Weinheim)*, 22 (2001) 3-11.

## 10c. Glycoproteins and their constituents

632 Bulgakov, A.A., Nazarenko, E.L., Petrova, I.Y., Eliseikina, M.G., Vakhrusheva, N.M. and Zubkov, V.A.: (Isolation and properties of the mannan-binding lectin from the coelomic fluid of the holothurian *Cucumaria japonica*). *Biokhimiya (Moscow)*, 65 (2000) 1099-1106.

633 Ciopraga, J., Ångström, J., Bergström, J., Larsson, T., Karlsson, N., Motas, C., Gozia, O. and Teneberg, S.: Isolectins from *Solanum tuberosum* with different detailed carbohydrate binding specificities: unexpected recognition of lactosylceramide by N-acetyllactosamine-binding lectins. *J. Biochem. (Tokyo)*, 128 (2000) 855-867.

634 Cochet, S., Volet, G., Cartron, J.-P. and Bertrand, O.: New procedures for glycophorin A purification with high yield and high purity. *J. Chromatogr. B*, 750 (2001) 109-119.

635 Huang, M.-Ch., Zöllner, O., Moll, T., Maly, P., Thall, A.D., Lowe, J.B. and Vestweber, D.: P-selectin glycoprotein ligand-1 and E-selectin ligand-1 are differentially modified by fucosyltransferases Fuc-TIV and Fuc-TVII in mouse neutrophils. *J. Biol. Chem.*, 275 (2000) 31353-31360.

636 Itoh, Y., Inuzuka, K., Kohno, I., Wada, H., Shiku, H., Ohkura, N. and Kato, H.: Highly increased plasma concentrations of the nicked form of  $\beta_2$  glycoprotein I in patients with leukemia and with lupus anticoagulant: measurement with a monoclonal antibody specific for a nicked form of domain V. *J. Biochem. (Tokyo)*, 128 (2000) 1017-1024.

637 Pasquet, J.-M., Quek, L., Pasquet, S., Poole, A., Matthews, J.R., Lowell, C. and Watson, S.P.: Evidence of a role for SHP-1 in platelet activation by the collagen receptor glycoprotein VI. *J. Biol. Chem.*, 275 (2000) 28526-28531.

638 Rapoport, E.M., Necrasov, M.V., Khaidukov, S.V., Svirshchetskaya, E.V., Zhisig, L.S., Kozlov, L.V., Batalova, T.N., Zubov, V.P. and Bovin, N.V.: (Study of cell localization of galactose-binding lectin from human serum). *Biokhimiya (Moscow)*, 65 (2000) 1558-1563.

639 Tasheva, E.S., Maki, C.G., Conrad, A.H. and Conrad, G.W.: Transcriptional activation of bovine mimecan by p53 through an intronic DNA-binding site. *Biochim. Biophys. Acta*, 1517 (2001) 333-338.

640 Thornton, D.J., Khan, N. and Sheehan, J.K.: Separation and identification of mucins and their glycoforms. *Methods Mol. Biol. (Totowa)*, 125(Glycoprotein Methods and Protocols) (2000) 77-85; C.A., 133 (2000) 278321b.

641 Urbatsch, I.L., Julien, M., Carrier, I., Rousseau, M.-E., Cayrol, R. and Gros, P.: Mutational analysis of conserved carboxylate residues in the nucleotide binding sites of P-glycoprotein. *Biochemistry*, 39 (2000) 14138-14149.

642 Van Klinken, B.J.-W., Buller, H.A., Einerhand, A.W.C. and Dekker, J.: Identification of mucins using metabolic labelling, immunoprecipitation, and gel electrophoresis. *Methods Mol. Biol. (Totowa)*, 125(Glycoprotein Methods and Protocols) (2000) 239-247; C.A., 133 (2000) 292971v - a review with 23 refs.

See also 660, 858, 1170, 1214.

## 11. ORGANIC ACIDS AND LIPIDS

## 11d. Lipoproteins and their constituents

643 Abe, A., Yamada, S., Kraft, H.G. and Utermann, G.: Kringle-4 number-based apo(a) phenotypes analyzed by SDS-agarose electrophoresis in healthy unrelated populations. *Seibutsu Shinyo Bunseki*, 23, No.3 (2000) 233-238; C.A., 133 (2000) 250242c.

644 Cho, K.-H. and Jonas, A.: A key point mutation (V156E) affects the structure and functions of human apolipoprotein A-1. *J. Biol. Chem.*, 275 (2000) 26821-26827.

- 645 Fielding, P.E., Nagao, H., Chimini, G. and Fielding, Ch.J.: A two-step mechanism for free cholesterol and phospholipid efflux from human vascular cells to apolipoprotein A-1. *Biochemistry*, 39 (2000) 14113-14120.
- 646 Hoffmann, M.M., Scharnagl, H., Köster, W., Winkler, K., Wieland, H. and März, W.: Apolipoprotein E1 Baden (Arg<sup>180</sup>→Cys). A new apolipoprotein E variant associated with hypertriglyceridemia. *Clin. Chim. Acta*, 303 (2001) 41-48.
- 647 Tailleux, A., Labbe, J., Mallet, C., Percevault, F., Fruchart, J.-C. and Fievet, C.: Measurement of rabbit apolipoprotein B by use of electroimmunodiffusion and immunonephelometric assays. *Comp. Med.*, 50 (2000) 309-313; *C.A.*, 133 (2000) 249233u.
- 648 Yasuhara, M., Moriwaki, T., Fujita, S., Katayama, Y., Takagi, Y. and Gomi, K.: (*In vitro* stability of serum lipoprotein). *Seibutsu Shiryō Bunseki*, 22 (1999) 331-342; *C.A.*, 133 (2000) 248648w.
- 649 Zhang, L.-Y., Ito, J.-i., Kato, T. and Yokoyama, S.: Cholesterol homeostasis in rat astrocytoma cells GA-1. *J. Biochem. (Tokyo)*, 128 (2000) 837-845.
- See also 825.
13. STEROIDS
- 13d. Sterols
- See 648.
17. AMINES, AMIDES AND RELATED NITROGEN COMPOUNDS
- 17d. Other amine derivatives and amides (excl. peptides)
- 650 Chiang, S.-Y., Bürli, R.W., Benz, Ch.C., Gawron, L., Scott, G.K., Dervan, P.B. and Beerman, T.A.: Targeting the Ets binding site of the HER2/neu promoter with pyrrole-imidazole polyamides. *J. Biol. Chem.*, 275 (2000) 24246-24254.
18. AMINO ACIDS AND PEPTIDES; CHEMICAL STRUCTURE OF PROTEINS
- 18a. Amino acids and their derivatives
- See 738.
- 18b. Peptides, peptidic and proteinous hormones, growth factors
- 651 Driksen, W.P., Li, X., Mayeda, A., Kraisner, A.R. and Rottman, F.M.: Mapping the SF2/ASF binding sites in the bovine growth hormone exonic splicing enhancer. *J. Biol. Chem.*, 275 (2000) 29170-29177.
- 652 Harris, V.K., Cotichia, Ch.M., List, H.-J., Wellstein, A. and Riegel, A.T.: Mitogen-induced expression of the fibroblast growth factor-binding protein is transcriptionally repressed through a non-canonical E-box element. *J. Biol. Chem.*, 275 (2000) 28539-28548.
- 653 Hidalgo, F.J., Alaiz, M. and Zamora, R.: Determination of peptides and proteins in fats and oils. *Anal. Chem.*, 73 (2001) 698-702.
- 654 Hyder, S.M., Nawaz, Z., Chiappetta, C. and Stancel, G.M.: Identification of functional estrogen response elements in the gene coding for the potent angiogenic factor vascular endothelial growth factor. *Cancer Res.*, 60 (2000) 3183-3190.
- 655 Li, W., Hyun, T., Heller, M., Yam, A., Flechner, L., Pierce, J.H. and Rudikoff, S.: Activation of insulin-like growth factor/receptor signaling pathway is critical for mouse plasma cell tumor growth. *Cancer Res.*, 60 (2000) 3909-3915.
- 656 Muniruzzaman, M., Tabata, Y. and Ikada, Y.: Physicochemical properties of basic fibroblast growth factor-gelatin complex. *J. Bioact. Compat. Polym.*, 15 (2000) 365-375; *C.A.*, 134 (2001) 32845f.
- 657 Ohniski, K., Shimidzu, T., Karasuyama, H. and Melchers, F.: The identification of a nonclassical cadherin expressed during B cell development and its interaction with surrogate light chain. *J. Biol. Chem.*, 275 (2000) 31134-31144.
- 658 Potter, L.R. and Hunter, T.: Activation of protein kinase C stimulates the dephosphorylation of natriuretic peptide receptor-B at a single serine residue. *J. Biol. Chem.*, 275 (2000) 31099-31106.
- 659 Taguchi, S., Kuwasako, K., Suenaga, A., Okada, M. and Mose, H.: Functional mapping against *Escherichia coli* for the broad-spectrum antimicrobial peptide, thanatin, based on an *in vivo* monitoring assay system. *J. Biochem. (Tokyo)*, 128 (2000) 745-754.
- 660 Toyoda, T., Itai, T., Arakawa, T., Aoki, K.H. and Yamaguchi, H.: Stabilization of human recombinant erythropoietin through interactions with the highly branched N-glycans. *J. Biochem. (Tokyo)*, 128 (2000) 731-737.
- 661 Tribble, G., Ahn, Y.-T., Lee, J., Dandekar, T. and Jayaram, M.: DNA recognition, strand selectivity, and cleavage mode during integrase family site-specific recombination. *J. Biol. Chem.*, 275 (2000) 22255-22267.
- 662 Vacca, F., Bagnato, A., Cott, K.J. and Tecce, R.: Transactivation of the epidermal growth factor receptor in endothelin-1-induced mitogenic signaling in human ovarian carcinoma cells. *Cancer Res.*, 60 (2000) 5310-5317.
- 663 Xia, C.Q., Wang, J. and Shen, W.-C.: Hypoglycemic effect of insulin-transferrin conjugate in streptozotocin-induced diabetic rats. *J. Pharm. Exp. Ther.*, 295 (2000) 594-600.
- 664 Yano, S., Shinohara, H., Herbst, R.S., Kuniyasu, H., Bucana, C.D., Ellis, L.M., Davis, D.W., McConkey, D.J. and Fidler, I.J.: Expression of vascular endothelial growth factor is necessary but not sufficient for production and growth of brain metastasis. *Cancer Res.*, 60 (2000) 4959-4967.
- 665 Yu, J. and Mulder, K.M.: Requirement of Ras-MAPK pathway activation by transforming growth factor  $\beta$  for transforming growth factor  $\beta_1$  production in a Smad-dependent pathway. *J. Biol. Chem.*, 275 (2000) 30765-30773.
- See also 675, 676, 680, 895, 903, 957.

18c. *Elucidation of structure of proteins and enzymes*

- 666 Bingham, R., Ekunwe, S.I.N., Falk, S., Snyder, L. and Kleanthous, C.: The mayor head protein of bacteriophage T4 binds specifically to elongation factor Tu. *J. Biol. Chem.*, 275 (2000) 23219-23226.
- 667 Cabsicol, E., Piulats, E., Echave, P., Herrezo, E. and Ros, J.: Oxidative stress promotes specific protein damage in *Saccharomyces cerevisiae*. *J. Biol. Chem.*, 275 (2000) 27393-27398.
- 668 Chen, H., Deere, M., Hecht, J.T. and Lawler, J.: Cartilage oligomeric matrix protein is a calcium-binding protein, and a mutation in its type 3 repeats causes conformational changes. *J. Biol. Chem.*, 275 (2000) 26538-26544.
- 669 Daoud, R., Kast, Ch., Gros, P. and Georges, E.: Rhodamine 123 binds to multiple sites in the multidrug resistance protein (MRP1). *Biochemistry*, 39 (2000) 15344-15352.
- 670 De Andrade, E.V., de Albuquerque, F.C., de Moraes, L.M.P., Brigido, M.M. and Santos-Silva, M.A.: Single-chain Fv with Fc fragment of the human IgG1 tag: construction, *Pichia pastoris* expression and antigen binding characterization. *J. Biochem. (Tokyo)*, 128 (2000) 891-895.
- 671 Dubnovitsky, A.P., Kravchuk, Z.I., Chumanovich, A.A., Cozzi, A., Arosio, P. and Martsev, S.P.: (Expression, refolding and ferritin-binding activity of isolated VL-domain of monoclonal antibody F11). *Biokhimiya (Moscow)*, 65 (2000) 1196-1204.
- 672 Gamper, H.B., Hou, Y.-M. and Kmiec, E.B.: Evidence for a four-strand exchange catalysed by the RecA protein. *Biochemistry*, 39 (2000) 15272-15281.
- 673 Li, Y., Salter-Cid, L., Vitiello, A., Preckel, T., Lee, J.-D., Angulo, A., Cai, Z., Peterson, P.A. and Yang, Y.: Regulation of transporter associatee with antigen processing by phosphorylation. *J. Biol. Chem.*, 275 (2000) 24130-24135.
- 674 Lin, K.M., Mejillano, M. and Yin, H.L.: Ca<sup>2+</sup> regulation of gelsolin by its C-terminal tail. *J. Biol. Chem.*, 275 (2000) 27746-27752.
- 675 Ludhakar, A., Ramachandran, A., Ghosh, S., Hasnain, S.E., Kaufman, R.J. and Ramaiah, K.V.A.: Phosphorylation of serine 51 in initiation factor 2 $\alpha$  (eIF2 $\alpha$ ) promotes complex formation between eIF2 $\alpha$ (P) and eIF2B and causes inhibition in the granine nucleotide exchange activity of eIF2B. *Biochemistry*, 39 (2000) 12929-12938.
- 676 Van der Geer, P., Luo, K., Sefton, B.M. and Hunter, T.: Phosphopeptide mapping and phosphoamino acid analysis on cellulose thin-layer plates. In: Hardie, D. (Editor), *Protein Phosphorylation (2nd Ed.)*, Oxford University Press, Oxford, 1999, pp. 97-126; *C.A.*, 133 (2000) 307278a.
- See also 615, 632, 688, 720, 729, 752, 784, 785, 806, 859, 915.
19. PROTEINS
- 19a. *General techniques*
- 677 Alba, F.J., Bermudez, A. and Daban, J.-R.: Green-light transilluminator for the detection without photodamage of proteins and DNA labeled with different fluorescent dyes. *Electrophoresis (Weinheim)*, 22 (2001) 399-403.
- 678 Anderson, N.L., Matheson, A.D. and Steiner, S.: Proteomics: applications in basic and applied biology. *Curr. Opin. Biotechnol.*, 11 (2000) 408-412; *C.A.*, 133 (2000) 292958w - a review with 37 refs.
- 679 Boggon, T.J. and Shapiro, L.: Screening for phasing atoms in protein crystallography. *Structure (London)*, 8, No. 7 (2000) R143-R149; *C.A.*, 133 (2000) 249070p - a review with 36 refs.
- 680 Bordini, E., Hamdan, M. and Righetti, P.G.: Assessment of the kinetics and sites of reaction of some immobiline chemicals with proteins and peptides by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry. *Rapid Commun. Mass Spectrom.*, 14 (2000) 1141-1148; *C.A.*, 133 (2000) 234597s.
- 681 Brancia, F.L., Butt, A., Beynon, R.J., Hubbard, S.J., Gaskell, S.J. and Oliver, S.G.: A combination of chemical derivatisation and improved bioinformatic tools optimises protein identification for proteomics. *Electrophoresis (Weinheim)*, 22 (2001) 552-559.
- 682 Chang, H.-T., Yergey, A.L. and Chrambach, A.: Electroelution of proteins from bands in gel electrophoresis without gel sectioning for the purpose of protein transfer into mass spectrometry: Elements of a new procedure. *Electrophoresis (Weinheim)*, 22 (2001) 394-398.
- 683 Gevaert, K., Houthaeve, T. and Vandekerckhove, J.: Techniques for sample preparation including methods for concentrating peptide samples. *EXS*, 88(Proteomics in Functional Genomics) (2000) 29-42; *C.A.*, 134 (2001) 2155p - a review with 42 refs.
- 684 Gygi, S.P., Rist, B. and Aebersold, R.: Measuring gene expression by quantitative proteome analysis. *Curr. Opin. Biotechnol.*, 11 (2000) 396-401; *C.A.*, 133 (2000) 292956u - a review with 26 refs.
- 685 Haynes, P.A. and Yates, J.R., III: Proteome profiling-pitfalls and progress. *Yeasu*, 17, No. 2 (2000) 81-87; *C.A.*, 133 (2000) 249085x - a review with 51 refs.
- 686 Hellman, U.: Sample preparation by SDS/PAGE and in-gel digestion. *EXS*, 88(Proteomics in Functional Genomics) (2000) 43-54; *C.A.*, 134 (2001) 27154a.
- 687 Kang, B. and Tong, Z.: (A fast staining-destaining method for SDS-PAGE recovery of protein). *Shengwu Huaxue Yu Shengwu Wuli Jinzhan*, 27 (2000) 210-211; *C.A.*, 133 (2000) 293097b.
- 688 Kawakami, T., Nishimura, T. and Usui, F.: (A system for on-line highly sensitive analysis of expression proteome using nanoLC-nanoES/MS/MS and two-dimensional electrophoresis: Towards large-scale analysis and identification of disease-related proteins). *Seibutsu Butsuri Kagaku*, 44, No.3 (2000) 185-190; *C.A.*, 133 (200) 234702x.
- 689 Li, J. and Assmann, S.M.: Mass spectrometry. An essential tool in proteome analysis. *Plant Physiol.*, 123 (2000) 807-809; *C.A.*, 133 (2000) 249283k.
- 690 Patterson, S.D.: Proteomics: the industrialization of protein chemistry. *Curr. Opin. Biotechnol.*, 11 (2000) 413-418; *C.A.*, 133 (2000) 306735k - a review with 47 refs.
- 691 Takahashi, K., Nakazawa, M., Watanabe, Y. and Konagaya, A.: PiKA<sup>2</sup>: a WWW based system for automated analysis of protein 2D-PAGE images. *Front. Sci. Ser.*, 30(Currents in Computational Molecular Biology), *C.A.*, 133 (2000) 330939a - a review with 4 refs.

- 692 Whitehouse, D.B., Neale, E.H., Paton, A. and Hopkinson, D.A.: Protein profiling with allele-specific antibodies. *Int. Congr. Ser.*, 1193(Progress in Forensic Genetics 8) (2000) 412-415; *C.A.*, 134 (2001) 14088g.
- See also 780, 1078, 1221.
- 19b. *Proteins of cells, viruses and subcellular particles*
- 693 Adamo, H.P., Grimaldi, M.E. and Arguinzois, M.I.G.: Deletion in the N-terminal segment of the plasma membrane  $Ca^{2+}$  pump impair the expression of a correctly folded functional enzyme. *Biochemistry*, 39 (2000) 14893-14899.
- 694 Ayala-Sanmartin, J., Henry, J.-P. and Pradel, L.-A.: Cholesterol regulates membrane binding and aggregation by annexin 2 at submicromolar  $Ca^{2+}$  concentration. *Biochim. Biophys. Acta*, 1510 (2001) 18-28.
- 695 Bouvier, M. and Stafford, W.E.: Probing the three-dimensional structure of human calreticulin. *Biochemistry*, 39 (2000) 14950-14959.
- 696 Brucato, S., Fagnen, G., Villers, C., Bonnamy, P.-J., Langris, M. and Bocquet, J.: Biochemical characterization of integral membrane heparan sulfate proteoglycans in Sertoli cells from immature rat testis. *Biochim. Biophys. Acta*, 1510 (2001) 474-487.
- 697 Cho, J.-W., Baek, W.-K., Yang, S.-H., Chang, J., Sung, Y.C. and Suh, M.-H.: HCV core protein modulates Rb pathway through pRb down-regulation and E2F-1 up-regulation. *Biochim. Biophys. Acta*, 1538 (2001) 59-66.
- 698 El Hamel, C., Freulet, M.-A., Jaquinod, M., Dé, E., Molle, G. and Orange, N.: Involvement of the C-terminal part of *Pseudomonas fluorescens* OprF in the modulation of its pore-forming properties. *Biochim. Biophys. Acta*, 1509 (2000) 237-244.
- 699 Furukawa, T. and Tanese, N.: Assembly of partial TFIID complexes in mammalian cells reveals distinct activities associated with individual TATA box-binding protein-associated factors. *J. Biol. Chem.*, 275 (2000) 29847-29856.
- 700 Futatsumori, M., Kasai, K., Takatsu, H., Shin, H.-W. and Nakayama, K.: Identification and characterization of novel isoforms of COP I subunits. *J. Biochem. (Tokyo)*, 128 (2000) 793-801.
- 701 Galan, A., Troyano, A., Vilaboa, N.E., Fernandez, C., de Blas, E. and Aller, P.: Modulation of the stress response during apoptosis and necrosis induction in cadmium-treated U-937 human promonocytic cells. *Biochim. Biophys. Acta*, 1538 (2001) 38-46.
- 702 Geng, L., Burrow, C.R., Li, H.-P. and Wilson, P.D.: Modification of the composition of polycystin-1 multiprotein complexes by calcium and tyrosine phosphorylation. *Biochim. Biophys. Acta*, 1535 (2000) 21-35.
- 703 Gil, J., Esteban, M. and Roth, D.: *In vivo* regulation of the dsRNA-dependent protein kinase PKR by the cellular glycoprotein P67. *Biochemistry*, 39 (2000) 16016-16025.
- 704 Harrison-Findik, D., Misra, S., Jain, S.K., Keeler, M.L., Powell, K.A., Malladi, C.S., Varticovski, L. and Robinson, P.J.: Dynamin inhibits phosphatidylinositol 3-kinase in hematopoietic cells. *Biochim. Biophys. Acta*, 1538 (2001) 10-19.
- 705 Jakabsons, M.B. and Horwitz, B.A.: Nucleotide effects on liver and muscle mitochondrial non-phosphorylating respiration and membrane potential. *Biochim. Biophys. Acta*, 1503 (2001) 314-328.
- 706 Jung, C., Higgins, C.M.J. and Xu, Z.: Measuring the quantity and activity of mitochondrial electron transport chain complexes in tissues of control nervous system using blue native polyacrylamide gel electrophoresis. *Anal. Biochem.*, 286 (2000) 214-223.
- 707 Kawahara, M., Asai, T., Sato, K., Shinbo, I., Terada, Y., Marumo, F. and Sasaki, S.: Functional characterization of a water channel of the nematode *Caenorhabditis elegans*. *Biochim. Biophys. Acta*, 1517 (2000) 107-112.
- 708 Kmita, H. and Budzinska, M.: Involvement of the TOM complex in external NADH transport into yeast mitochondria depleted of mitochondrial porin1. *Biochim. Biophys. Acta*, 1509 (2000) 86-94.
- 709 Krasikova, I.N., Bakholdina, S.I. and Solov'eva, T.F.: (Lipopolysaccharide synthesis in *Yersinia pseudotuberculosis* O:1b serovar: influence of 82-megadalton plasmid and bacterial growth temperature). *Biokhimiya (Moscow)*, 65 (2000) 1507-1515.
- 710 Liu, S.C.H., Lane, W.S. and Lienhard, G.E.: Cloning and preliminary characterization of a 105 kDa protein with an N-terminal kinase-like domain. *Biochim. Biophys. Acta*, 1517 (2000) 148-152.
- 711 Manna, S.K., Sah, N.K., Newman, R.A., Cisneros, A. and Aggarwal, B.B.: Oleandrin suppresses activation of nuclear transcription factor- $\kappa$ B, activator Protein-1, and c-Jun NH<sub>2</sub>-terminal kinase. *Cancer Res.*, 60 (2000) 3838-3849.
- 712 Masutomi, K., Kaneko, S., Hayashi, N., Yamashita, T., Shirota, Y., Kobayashi, K. and Murakami, S.: Telomerase activity reconstituted *in vitro* with purified human telomerase reverse transcriptase and human telomerase RNA component. *J. Biol. Chem.*, 275 (2000) 22568-22573.
- 713 Mattagajasingh, S.N., Huang, S.-Ch., Hartenstein, J.S. and Benz, E.J., Jr.: Characterization of the interaction between protein 4.1R and ZO-2. *J. Biol. Chem.*, 275 (2000) 30573-30585.
- 714 McGrath-Morrow, S.A. and Stahl, J.: Growth arrest in A549 cells during hyperoxic stress is associated with decreased cyclin B1 and increased p21<sup>Waf1/Cip1/Ink4</sup> levels. *Biochim. Biophys. Acta*, 1538 (2001) 90-97.
- 715 Morrow, G., Inaguma, Y., Kato, K. and Tanguay, R.M.: The small heat shock protein Hsp22 of *Drosophila melanogaster* is a mitochondrial protein displaying oligomeric organization. *J. Biol. Chem.*, 275 (2000) 31204-31210.
- 716 Paul, M.-F., Barrientos, A. and Tzagoloff, A.: A single amino acid change in subunit 6 of the yeast mitochondrial ATPase suppresses a null mutation in ATP10. *J. Biol. Chem.*, 275 (2000) 29238-29243.
- 717 Riess, F.G. and Benz, R.: Discovery of a novel channel-forming protein in the cell wall of the non-pathogenic *Nocardia corynebacteroides*. *Biochim. Biophys. Acta*, 1509 (2000) 485-495.
- 718 Sakaguchi, M., Miyazaki, M., Kondo, T., Tsuji, T., Kouchi, H. and Namba, M.: Identification of a phosphoprotein that is down-regulated in immortalized human fibroblasts. *Electrophoresis (Weinheim)*, 22 (2001) 155-160.
- 719 Sbrissa, D., Ikonomov, O.C. and Shisheva, A.: PIK fyve lipid kinase is a protein kinase: downregulation of 5'-phosphoinositide product formation by autophosphorylation. *Biochemistry*, 39 (2000) 15980-15989.

- 720 Schwanbeck, R., Gerharz, M., Drung, A., Rogalla, P., Piekielek, A., Blank, C., Bullerdiek, J. and Wisniewski, J.R.: Point mutations within AT-hook domains of the HMGI homologue HMDIYL1 affect binding to gene promoter but not to four-way junction DNA. *Biochemistry*, 39 (2000) 14419-13325.
- 721 Shearwin, K.E. and Egan, J.B.: Establishment of lysogeny in bacteriophage 186. *J. Biol. Chem.*, 275 (2000) 29113-29122.
- 722 Shintani, N., Hashimoto, H., Kunugi, A., Koyama, Y., Yamamoto, K., Tomimoto, S., Mori, W., Matsuda, T. and Baba, A.: Desensitization, surface expression, and glycosylation of a functional, epitope-tagged type I PACAP (PAC<sub>1</sub>) receptor. *Biochim. Biophys. Acta*, 1509 (2000) 195-202.
- 723 Siddiqui, R.A., Jensi, L.J., Neff, K., Harvey, K., Kovacs, R.J. and Stillwell, W.: Docosahexaenoic acid induces apoptosis in Jurkat cells by a protein phosphatase-mediated process. *Biochim. Biophys. Acta*, 1499 (2001) 265-275.
- 724 Simeonova, P.P., Wang, S., Toriuma, W., Kommineni, V., Matheson, J., Unimye, N., Kayama, F., Harki, D., Ding, M., Vallyathan, V. and Luster, M.I.: Arsenic mediates cell proliferation and gene expression in the bladder epithelium: Association with activating Protein-1 transactivation. *Cancer Res.*, 60 (2000) 3445-3453.
- 725 Singer-Lahat, D., Dascal, N., Mittelman, L., Peleg, S. and Lotan, I.: Imaging plasma membrane proteins in large membrane patches of *Xenopus* oocytes. *Pfluegers Arch.*, 440 (2000) 627-633; *C.A.*, 133 (2000) 278173e.
- 726 Takai, T., Okumura, K., Ra, C., Yokota, T. and Okumura, Y.: Expression of humanized Fab fragments that recognize the IgE-binding domain of human FcεR1α in COS and CHO cells. *J. Biochem. (Tokyo)*, 129 (2001) 5-12.
- 727 Tosteson, M.T., Kim, J.B., Goldstein, D.J. and Tosteson, D.C.: Ion channels formed by transcription factors recognize consensus DNA sequences. *Biochim. Biophys. Acta*, 78011 (2001) 209-218.
- 728 Tsvion, G., Luo, Z.-J. and Avruch, J.: Calyculin A-induced vimentin phosphorylation sequesters 14-3-3 and displaces other 14-3-3 partners *in vivo*. *J. Biol. Chem.*, 275 (2000) 29772-29778.
- 729 Van de Water, B., Tijdens, I.B., Verbrugge, A., Huigsloot, M., Dihal, A.A., Stevens, J.L., Jaken, S. and Mulder, G.J.: Cleavage of the actin-capping protein α-adducin at Asp-Ser-Asp<sup>633</sup>-Ala by caspase-3 is preceded by its phosphorylation on serine 726 in cisplatin-induced apoptosis of renal epithelial cells. *J. Biol. Chem.*, 275 (2000) 25805-25813.
- 730 Walles-Granberg, A., Schnell, R., Isaksson, L.A. and Ryden-Aulin, M.: Ribosomes with large synthetic N-terminal extensions of protein S15 are active *in vivo*. *Biochim. Biophys. Acta*, 1544 (2001) 378-385.
- 731 Xagorari, A., Papapetropoulos, A., Mauromatis, A., Economou, M., Fotsis, T. and Roussos, C.: Luteolin inhibits an endotoxin-stimulated phosphorylation cascade and proinflammatory cytokine production in macrophages. *J. Pharmacol. Exp. Ther.*, 296 (2001) 181-187.
- 732 Xu, T. and Forgacs, M.: Subunit D (Vma8p) of the yeast vacuolar H<sup>+</sup>-ATPase plays a role in coupling of proton transport and ATP hydrolysis. *J. Biol. Chem.*, 275 (2000) 22075-22081.
- 733 Yelin, R. and Schuldiner, S.: Vesicular monoamine transporters heterologously expressed in the yeast *Saccharomyces cerevisiae* display high-affinity tetrabenazine binding. *Biochim. Biophys. Acta*, 1510 (2001) 426-441.
- 734 Zhemaeva, L.V., Sykilinda, N.N., Navruzbekov, G.A., Kurochkina, L.P. and Mesyanzhinov, V.V.: (Structure and folding of bacteriophage T4 gene product 9 triggering infection. II. A study of conformational changes of gene product 9 deletion derivatives by using monoclonal antibodies). *Biokhimiya (Moscow)*, 65 (2000) 1262-1269.

See also 666, 737, 747, 805, 819, 849, 894, 900, 940, 1080.

19c. *Proteins synthesized by genetic manipulation, monoclonal antibodies*

- 735 Bailer, S.M., Baldof, C., Katahira, J., Podtelejnikov, A., Rollenhagen, Ch., Mann, M., Pante, N. and Hurt, E.: Nup116p associates with the Nup82p-NSp1p-Nup159p nucleoporin complex. *J. Biol. Chem.*, 275 (2000) 23540-23548.
- 736 Bussow, K., Nordhoff, F., Lubbert, C., Lehrach, H. and Walter, G.: A human cDNA library for high-throughput protein expression screening. *Genomics*, 65 (2000) 1-8; *C.A.*, 133 (2000) 247762s.
- 737 Davydov, I.V. and Varshavsky, A.: RGS4 is arginylated and degraded by the N-end rule pathway *in vitro*. *J. Biol. Chem.*, 275 (2000) 22931-22941.
- 738 Jakubowski, H.: Translation incorporation of S-nitrosohomocysteine into protein. *J. Biol. Chem.*, 275 (2000) 21813-21816.
- 739 Komiyama, T. and Fuller, R.S.: Engineered eglin c variants inhibit yeast and human proprotein processing proteases, Kex 2 and furin. *Biochemistry*, 39 (2000) 15156-15165.
- 740 Piatibratov, M., Hou, S., Brooun, A., Yang, J., Chen, H. and Alam, M.: Expression and fast-flow purification of a polyhistidine-tagged myoglobin-like aerotaxis transducer. *Biochim. Biophys. Acta*, 1524 (2000) 149-154.
- 741 Stevens, K., Cirillo, L. and Zaret, K.S.: Creating temperature-sensitive winged helix transcription factor. *J. Biol. Chem.*, 275 (2000) 30471-30477.
- 742 Yoshida, K., Yamashita, Y., Miyazato, A., Ohya, K., Kitanaka, A., Ikeda, U., Shimada, K., Yamanaka, T., Ozawa, K. and Mano, H.: Mediation by the protein-tyrosine kinase Tec of signaling between the B cell antigen receptor and Dok-1. *J. Biol. Chem.*, 275 (2000) 24945-24952.

See also 692, 703, 722, 726, 730, 745, 756, 771, 785, 791, 823, 881, 882, 897, 935, 993, 1022, 1194.

19d. *Microbial and plant proteins*

- 743 Bricker, T.M., Prevost, M., Vu, V., Laborde, S., Womack, J. and Frankel, L.K.: Isolation of luminal proteins from spinach thylakoid membranes by Triton X-114 phase partitioning. *Biochim. Biophys. Acta*, 1503 (2001) 350-356.
- 744 Brun, G.O. and Navrots'ka, I.L.: (Soluble proteins of lichens of genus *Nephroma* Ach., (Nephromataceae)). *Ukr. Bot. Zh.*, 57, No. 2 (2000) 190-194; *C.A.*, 133 (2000) 278424n.
- 745 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. *J. Biochem. (Tokyo)*, 129 (2001) 119-124.

- 746 Haider, A.S., El-Shanshoury, A.R. and Haider, A.: Variation of storage proteins and isozymes within maize inbred lines. *Biol. Plant.*, 43 (2000) 199-203; *C.A.*, 133 (2001) 360894z.
- 747 Hebert, E.M., Raya, R.R. and de Giori, G.S.: Use of SDS-PAGE of cell-wall proteins for rapid differentiation of *Lactobacillus delbrueckii* subsp. *lactis* and *Lactobacillus helveticus*. *Biotechnol. Lett.*, 22 (2000) 1003-1006; *C.A.*, 133 (2000) 249213n.
- 748 Jiang, P., Atkinson, M.R., Srisawat, Ch., Sun, Q. and Ninfa, A.J.: Functional dissection of the dimerization and enzymatic activities of *Escherichia coli* nitrogen regulator II and their regulation by the PII protein. *Biochemistry*, 39 (2000) 13433-13449.
- 749 Kim, D., Nakamura, A., Okamoto, T., Komatsu, N., Oda, T., Iida, T., Ishimatsu, A. and Muramatsu, T.: Mechanism of superoxide anion generation in the toxic red tide phytoplankton *Chattonella marina*: possible involvement of NAD(P)H oxidase. *Biochim. Biophys. Acta*, 1524 (2000) 220-227.
- 750 Kushnirov, V.V.: Rapid and reliable protein extraction from yeast. *Yeast*, 16 (2000) 857-860; *C.A.*, 133 (2000) 249209r.
- 751 Lee, J.G., Cho, S.P., Lee, H.S., Lee, C.H., Bae, K.S. and Maeng, P.J.: Identification of a cryptic N-terminal signal in *Saccharomyces cerevisiae* peroxisomal citrate synthase that functions in both peroxisomal and mitochondrial targeting. *J. Biochem. (Tokyo)*, 128 (2000) 1059-1072.
- 752 Margiotta, B., Urbano, M., Turchetta, T. and Colaprico, G.: Electrophoretic and chromatographic characterization of Glu-A1 encoded high  $M_r$  glutenin subunits. *Spec. Publ. - R. Soc. Chem.*, 212(Wheat Structure, Biochemistry and Functionality) (2000) 134-138; *C.A.*, 133 (2001) 347260v.
- 753 Melkova, R., Kleinova, D. and Ciznar, I.: Immunoelectrophoretic analysis of medium-derived antigens bound to the surface of *Mycoplasma hominis*, *Mycoplasma fermentans* and *Ureaplasma urealyticum*. *Folia Microbiol. (Prague)*, 45 (2000) 57-60; *C.A.*, 133 (2001) 361701w.
- 754 Morris, A.C. and Djordjevic, M.A.: Proteome analysis of cultivar-specific interactions between *Rhizobium leguminosarum* biovar *trifolii* and subterranean clover cultivar Woogenellup. *Electrophoresis (Weinheim)*, 22 (2001) 586-598.
- 755 Motlagh, S., Ravines, P., Ma, Q. and Jaksch, F.: Identification of gum arabic using PAGE and IEF. *Spec. Publ.-R. Soc. Chem.*, 251(Gums and Stabilisers for the Food Industry 10) (2000) 53-58; *C.A.*, 133 (2000) 239622f.
- 756 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<sup>+</sup> antiporter of *Escherichia coli*. *J. Biochem. (Tokyo)*, 129 (2001) 87-91.
- 757 Perrin, C., Poirson, C., Bracquart, P., Gaillard, J.-L. and Guimont, C.: Determination by 2D-PAGE of the protein fingerprint of *Streptococcus thermophilus*. *Sci. Aliments*, 20 (2000) 97-104; *C.A.*, 133 (2001) 346821s.
- 758 Sacilik, S.C., Osmanagaoglu, O., Kisa, O., Basustaoglu, A. and Cokmus, C.: Protein profiles and prevalence of methicillin-resistant *Staphylococcus aureus* (MRSA) in Gulhane Military Academy hospital in Turkey. *Turk. J. Biol.*, 24 (2000) 809-816; *C.A.*, 133 (2000) 332003q.
- 759 Sass-Kiss, A. and Sass, M.: Immunoanalytical method for quality control of orange juice products. *J. Agric. Food Chem.*, 48 (2000) 4027-4031.
- 760 Siderius, M., Kolen, C.P.A.M., van Heerikhuizen, H. and Mager, W.H.: Candidate osmosensors from *Candida utilis* and *Kluyveromyces lactis*: structural and functional homology to the Sho1p putative osmosensor from *Saccharomyces cerevisiae*. *Biochim. Biophys. Acta*, 1517 (2000) 143-147.
- 761 Steglich, C., Behrenfeld, M., Koblizek, M., Claustre, H., Penno, S., Prasil, O., Partensky, F. and Hess, W.R.: Nitrogen deprivation strongly affects Photosystem II but not phycoerythrin level in the divinyl-chlorophyll *b*-containing cyanobacterium *Prochlorococcus marinus*. *Biochim. Biophys. Acta*, 1503 (2001) 341-349.
- 762 Varghese, S., Katsumura, Y., Makuuchi, K. and Yoshii, F.: Production of soluble protein-free latex by radiation process. *Rubber Chem. Technol.*, 73 (2000) 80-88; *C.A.*, 133 (2000) 239179s.
- 763 Wang, Z.-n., Guo, B.-h., Li, H.-j., Zhang, Y.-m. and Wen, Z.-y.: (SDS-PAGE for the detection of Wx protein in polyploid wheats). *Yichuan*, 22 (2000) 169-171; *C.A.*, 133 (2000) 307227h.
- 764 Wolkers, W.F., McCreedy, S., Brandt, W.F., Lindsey, G.G. and Hoekstra, F.A.: Isolation and characterization of a D-7 LEA protein from pollen that stabilizes glasses *in vitro*. *Biochim. Biophys. Acta*, 1544 (2001) 196-206.
- 765 Xu, D. and Chen, Y.: (Indirect ELISA for detection of verticillium wilt of cotton and its application). *Nanjing Nongye Daxue Xuebao*, 23 (2000) 105-108; *C.A.*, 133 (2000) 265368x.
- 766 Yu, E.Y., Kim, S.E., Kim, J.H., Ko, J.H., Cho, M.H. and Chung, I.K.: Sequence-specific DNA recognition by the Myb-like domain of plant telomeric protein RTBP1. *J. Biol. Chem.*, 275 (2000) 24208-24214.
- See also 633, 653, 667, 689, 698, 717, 735, 875, 880, 888, 1085, 1107.
- 19e. *Proteins of blood, serum and blood cells*
- 767 Benlakehal, M., le Bricon, T., Feugeas, J.-P. and Bousquet, B.: (Influence of hemolysis on the determination and electrophoresis of serum total protein). *Ann. Biol. Clin.*, 58 (2000) 367-371; *C.A.*, 133 (2000) 263407k.
- 768 Caudie, C., Allauzen, O., Bancel, J. and Later, R.: (Diagnostic usefulness of oligoclonal immunoglobulin G bands in cerebrospinal fluid using isoelectric focusing in the early diagnosis of multiple sclerosis). *Ann. Biol. Clin.*, 58 (2000) 187-193; *C.A.*, 133 (2000) 265377z.
- 769 Denton, G., Murray, A., Price, M.R. and Levison, P.R.: Direct isolation of monoclonal antibodies from tissue culture supernatant using the cation-exchange cellulose Express-Ion S. *J. Chromatogr. A*, 908 (2001) 223-234.
- 770 Gessner, A., Olbrich, C., Kayser, O. and Muller, R.H.: Serum protein adsorption on lipid drug conjugate-nanoparticles (LDC-NP): Evaluation by two-dimensional electrophoresis. *Proc. Int. Symp. Controlled Release Bioact. Mater.*, 27th (2000) 301-302; *C.A.*, 133 (2000) 340063z.
- 771 Gibson, A.D. and Peterson, C.B.: Full-length and truncated forms of vitronectin provide insight into effects of proteolytic processing on function. *Biochim. Biophys. Acta*, 1545 (2001) 289-304.
- 772 Grippa, E., Pavone, F., Gatto, M.T., Petrucci, R., Marrosu, G., Silvestrini, B. and Saso, L.: *In vitro* evaluation of antioxidant activity by electrophoresis and high performance liquid chromatography. *Biochim. Biophys. Acta*, 1524 (2000) 171-177.

- 773 Laich, A. and Sim, R.B.: Complement C4bC2 complex formation: an investigation by surface plasmon resonance. *Biochim. Biophys. Acta*, 1544 (2001) 96-112.
- 774 Matsumoto, A., Kojima, N., Takeuchi, F. and Mizuochi, T.: Kinetic analysis of interaction of different types of rheumatoid factors with immobilized IgG using surface plasmon resonance. *J. Biochem. (Tokyo)*, 128 (2000) 1009-1016.
- 775 Minchiotti, L., Campagnoli, M., Rossi, A., Cosulich, M.E., Monti, M., Pucci, P., Kragh-Hansen, U., Granel, B., Disdier, P., Weiler, P.-J. and Galliano, M.: A nucleotide insertion and frameshift cause albumin Kenitra, an extended and O-glycosylated mutant of human serum albumin with two additional disulfide bridges. *Eur. J. Biochem.*, 268 (2001) 344-352.
- 776 Ritchie, H., Lawrie, L.C., Crombie, P.W., Mosesson, M.W. and Booth, N.A.: Cross-linking of plasminogen activator inhibitor 2 and  $\alpha_2$ -antiplasmin to fibrin(ogen). *J. Biol. Chem.*, 275 (2000) 24915-24920.
- 777 Schwartz, W., Judd, D., Wysocki, M., Guerrier, L., Birck-Wilson, E. and Boschetti, E.: Comparison of hydrophobic charge induction chromatography with affinity chromatography on protein A for harvest and purification of antibodies. *J. Chromatogr. A*, 908 (2001) 251-263.
- 778 Yigzaw, Y., Gielens, C. and Preaux, G.: Isolation and characterization of an  $\alpha$ -macroglobulin from the gastropod mollusc *Helix pomatia* with tetrameric structure and preserved activity after methylamine treatment. *Biochim. Biophys. Acta*, 1545 (2001) 104-113.
- See also 637, 646, 670, 671, 756, 1214.
- 19f. *Structural and muscle proteins*
- 779 Amano, S., Scott, I.C., Takahara, K., Koch, M., Champlaud, M.-F., Gerecke, D.R., Keene, D.R., Hudson, D.L., Nishiyama, T., Lee, S., Greenspan, D.S. and Burgeson, R.E.: Bone morphogenetic protein 1 is an extracellular processing enzyme of the Lamini 5  $\gamma_2$  chain. *J. Biol. Chem.*, 275 (2000) 22728-22735.
- 780 Arun, O. and Ugur, M.: Animal species determination in sausages using an SDS-PAGE technique. *Arch. Lebensmittelhyg.*, 51, No. 2 (2000) 49-53; *C.A.*, 133 (2000) 251389t.
- 781 Chung, L., Shimokawa, K., Dinakarandian, D., Grams, F., Fields, G.B. and Nagase, H.: Identification of the <sup>183</sup>RWTNNFREY<sup>191</sup> region as a critical segment of matrix metalloproteinase 1 for expression of collagenolytic activity. *J. Biol. Chem.*, 275 (2000) 29610-29617.
- 782 Cluzel, C., Lethias, C., Garrone, R. and Exposito, J.-Y.: Production in mammalian cells of chimeric human/sea urchin procollagen molecules displaying distinct versions of the minor triple helix. *J. Biochem. (Tokyo)*, 128 (2000) 957-963.
- 783 Hasegawa, Y.: Isolation of a cDNA encoding the motor domain of nonmuscle myosin which is specifically expressed in the mantle pallial cell layer of scallop (*Patinopecten yessoensis*). *J. Biochem. (Tokyo)*, 128 (2000) 983-988.
- 784 Luo, Y., Leszyk, J., Li, B., Gergely, J. and Tao, T.: Proximity relationships between residue 6 of troponin I and residues in troponin C: further evidence for extended conformation of troponin C in the troponin complex. *Biochemistry*, 39 (2000) 15306-15315.
- 785 Mongiat, M., Mungiguerra, G., Bot, S., Mucignat, M.T., Giacomello, E., Doliana, R. and Colombatti, A.: Self-assembly and supramolecular organization of EMILIN. *J. Biol. Chem.*, 275 (2000) 25471-25480.
- 786 Murata-Hori, M., Fumoto, K., Fukuta, Y., Iwasaki, T., Kikuchi, A., Tatsuka, M. and Hosoya, H.: Myosin II regulatory light chain as a novel substrate for AIM-1, an Aurora/Ipl1p-related kinase from rat. *J. Biochem. (Tokyo)*, 128 (2000) 903-907.
- 787 Ng, D.C., Shafae, S., Lee, D. and Bikle, D.D.: Requirement of an AP-1 site in the calcium response region of the involution promoter. *J. Biol. Chem.*, 275 (2000) 24080-24088.
- 788 Ojima, T., Koizumi, N., Ueyama, K., Inoue, A. and Nishita, K.: Functional role of Ca<sup>2+</sup>-binding site IV of scallop troponin C. *J. Biochem. (Tokyo)*, 128 (2000) 803-809.
- See also 656, 668, 702, 740, 821, 867, 1004.
- 19g. *Protamines, histones and other nuclear proteins*
- 789 Dynlacht, J.R.: Flow cytometric measurement of nuclear matrix proteins. In: Diamond, R.A. and Demaggio, E. (Editors), *In Living Color*. Springer-Verlag, Berlin, 2000, pp. 532-538; *C.A.*, 134 (2001) 27048u - a review with 23 refs.
- 790 Eckerich, C., Fackelmayer, F.O. and Knippers, R.: Zinc affects the conformation of nucleoprotein filaments formed by replication protein A (RPA) and long natural DNA molecules. *Biochim. Biophys. Acta*, 1538 (2001) 67-75.
- 791 Fontoura, B.M.A., Blobel, G. and Yascen, N.R.: The nucleoporin Nup98 is a site for GDP/GTP exchange on Ran and termination of karyopherin  $\beta$ -mediated nuclear import. *J. Biol. Chem.*, 275 (2000) 31289-31296.
- 792 He, Y., Crouch, E.C., Rust, K., Spaite, E. and Brody, S.L.: Proximal promoter of the surfactant protein D gene. *J. Biol. Chem.*, 275 (2000) 31051-31060.
- 793 Hebbes, T.R. and Allen, S.C.H.: Multiple histone acetyltransferases are associated with a chicken erythrocyte chromatin fraction enriched in active genes. *J. Biol. Chem.*, 275 (2000) 31347-31352.
- 794 Hellin, A.-C., Bentires-Alj, M., Verlaet, M., Benoit, V., Gielen, J., Bours, V. and Merville, M.-P.: Roles of nuclear factor- $\kappa$ B, p53, and p21/WAF1 in daunomycin-induced cell cycle arrest and apoptosis. *J. Pharmacol. Exp. Ther.*, 295 (2000) 870-878.
- 795 Herzig, S., Fűzesi, L. and Knepel, W.: Heterodimeric Pbx-Prep 1 homeodomain protein binding to the glucagon gene restricting transcription in cell type-dependent manner. *J. Biol. Chem.*, 275 (2000) 27989-27999.
- 796 Mora-García, P. and Sakamoto, K.M.: Granulocyte colony-stimulating factor induces egr-1 up-regulation through interaction of serum response element-binding proteins. *J. Biol. Chem.*, 275 (2000) 22418-22426.
- 797 Seidl, R., Labudova, O., Krapfenbauer, K., Henriksson, E.W., Craft, J., Turhani-Schatzmann, D., Achsel, T., Bidmon, B., Pruijn, G.J.M., Cairns, N. and Lubec, G.: Deficient brain snRNP70K in patients with Down syndrome. *Electrophoresis (Weinheim)*, 22 (2001) 43-48.
- 798 Sulentic, C.E.W., Holsapple, M.P. and Kaminski, N.E.: Putative link between transcriptional regulation of IgM expression by 2,3,7,8-tetrachlorodibenzo-p-dioxin and the aryl hydrocarbon receptor/dioxin-responsive enhancer signaling pathway. *J. Pharmacol. Exp. Ther.*, 295 (2000) 705-716.

See also 998, 1084, 1094, 1110.

19h. *Chromoproteins and metalloproteins*

- 799 Ferjani, A., Abe, S., Ishikawa, Y., Henmi, T., Tomokawa, Y., Nishi, Y., Tamura, N. and Yamamoto, Y.: Characterization of the stromal protease(s) degrading the cross-linked products of the D1 protein generated by photoinhibition of photosystem II. *Biochim. Biophys. Acta*, 1503 (2001) 385-395.
- 800 Goosen, T.C., Mills, D.E. and Hollenberg, P.F.: Effects of benzyl isothiocyanate on rat and human cytochromes P450: identification of metabolites formed by P450 2B1. *J. Pharmacol. Exp. Ther.*, 296 (2001) 198-206.
- 801 Kovaleva, I.E., Grivennikov, S.I. and Luzikov, V.N.: (On the effect of cholesterol on CYP11A1 imported into yeast mitochondria *in vivo*). *Biokhimiya (Moscow)*, 65 (2000) 1425-1431.
- 802 Kuriyama-Matsumura, K., Sato, H., Suzuki, M. and Bannai, S.: Effects of hyperoxia and iron on iron regulatory protein-1 activity and the ferritin synthesis in mouse peritoneal macrophages. *Biochim. Biophys. Acta*, 1544 (2001) 370-377.
- 803 Rai, D.K., Alvelius, G., Landin, B. and Griffiths, W.J.: Electrospray tandem mass spectrometry in the rapid identification of  $\alpha$ -chain hemoglobin variants. *Rapid Commun. Mass Spectrom.*, 14 (2000) 1184-1194; *C.A.*, 133 (2000) 278199t.
- 804 Raucyh, S.D.: Transferrin microheterogeneity in human perilymph. *Laryngoscope*, 110 (2000) 545-552; *C.A.*, 133 (2000) 307233g.
- 805 Sone, N., Nagata, K., Kojima, H., Tajima, J., Kodera, Y., Kanamaru, T., Noguchi, S. and Sakamoto, J.: A novel hydrophobic diheme c-type cytochrome. Purification from *Corynebacterium glutamicum* and analysis of the QcrCBA operon encoding three subunit proteins of a putative cytochrome reductase complex. *Biochim. Biophys. Acta*, 1503 (2001) 279-290.
- 806 Uria, J.A. and Lopez-Otin, C.: Matrilysin-2, a new matrix metalloproteinase expressed in human tumors and showing the minimal domain organization required for secretion, latency, and activity. *Cancer Res.*, 60 (2000) 4645-4651.
- 807 Yamada, H., Matsunaga, H., Tsuji, K., Matsumoto, S., Yamamoto, M., Ishii, Y., Omiecinski, C.J. and Oguri, K.: Sequence analyses of CYP2B genes and catalytic profiles for P450s in Odj:Sprague-Dawley rats that lack response to the phenobarbital-mediated induction of CYP2B2. *J. Pharmacol. Exp. Ther.*, 295 (2000) 986-993.
- 808 Zhou, Y., Li, L. and Ru, B.: Expression, purification and characterization of  $\beta$  domain and  $\beta$  domain dimer of metallothionein. *Biochim. Biophys. Acta*, 1524 (2000) 87-93.
- See also 663, 884, 1082, 1117, 1214.
- 19i. *Proteins of glands, gland products, various zymogens (incl. milk proteins)*
- 809 Castagnola, M., Congiu, D., Denotti, G., di Nuncio, A., Fadda, M.B., Melis, S., Messana, I., Misiti, F., Murtas, R., Olanas, A., Piras, V., Pittau, A. and Puddu, G.: Determination of the human salivary peptides histatins 1, 3, 5 and statherin by high-performance liquid chromatography and by diode-array detection. *J. Chromatogr. A*, 751 (2001) 153-160.
- 810 Cavagnari, B.M., Sterin-Speziale, N., Affanni, J.M., Knudsen, J. and Santome, J.A.: Acyl-CoA-binding protein in the armadillo Harderian gland: its primary structure and possible role in lipid secretion. *Biochim. Biophys. Acta*, 1545 (2001) 314-325.
- 811 Francischetti, I.M.B., Gombarovits, M.E.C., Valenzuela, J.G., Carlini, C.R. and Guimaraes, J.A.: Intraspecific variation in the venoms of the South American rattlesnake (*Crotalus durissus terrificus*). *Comp. Biochem. Physiol., Part C: Toxicol. Pharmacol.*, 127C (2000) 23-36; *C.A.*, 133 (2000) 330760k.
- 812 Iype, T., Jayasree, K. and Sudhakaran, P.R.: Modulation of  $\alpha_2\beta_1$  integrin changes during mammary gland development by  $\beta$ -oestradiol. *Biochim. Biophys. Acta*, 1499 (2001) 232-241.
- 813 Michalet, S., Teixeira, F., Gilquin, B., Mourier, G., Servent, D., Drevet, P., Binder, P., Tzartos, S., Menez, A. and Kessler, P.: Relative spatial position of a snake neurotoxin and the reduced disulfide bond  $\alpha$ (Cys<sup>192</sup>-Cys<sup>193</sup>) at the  $\alpha$  interface of the nicotinic acetylcholine receptor. *J. Biol. Chem.*, 275 (2000) 25608-25615.
- 814 Nikai, T., Suzuki, Y., Komori, Y. and Sugihara, H.: Edema factor from the venom of *Trimeresurus elegans* (Sakishimahabu). *J. Nat. Toxins*, 9, No.2 (2000) 147-158; *C.A.*, 133 (2000) 233757g.
- 815 Rannics, C.A., Hector, M.P. and Proctor, G.B.: Precipitation of specific proteins by freeze-thawing of human saliva. *Arch. Oral Biol.*, 45 (2000) 601-606; *C.A.*, 133 (2000) 331658v.
- 816 Rosendal, A. and Barkholt, V.: Detection of potentially allergenic material in 12 hydrolyzed milk formulas. *J. Dairy Sci.*, 83 (2000) 2200-2210; *C.A.*, 134 (2001) 41279b.
- 817 Verdoliva, A., Basile, G. and Fassina, G.: Affinity purification of immunoglobulins from chicken egg yolk using a new synthetic ligand. *J. Chromatogr. B*, 749 (2000) 233-242.
- See also 722.
- 19j. *Proteins of brain, cerebrospinal fluid and eye*
- 818 Boelens, W.C., Croes, Y. and de Jong, W.W.: Interaction between  $\alpha$ B-crystallin and the human 20S proteasomal subunit C8/ $\alpha$ 7. *Biochim. Biophys. Acta*, 1544 (2001) 311-319.
- 819 Cheon, M.S., Bajo, M., Gulesserian, T., Cairns, N. and Lubec, G.: Evidence for the relation of herpes simplex virus type 1 to Down syndrome and Alzheimer's disease. *Electrophoresis (Weinheim)*, 22 (2001) 445-448.
- 820 Cohen, G.B., Rangan, V.S., Chen, B.K., Smith, S. and Baltimore, D.: The human thioesterase II protein binds to a site on HIV-1 Nef critical for CD4 down-regulation. *J. Biol. Chem.*, 275 (2000) 23097-23105.
- 821 Ford, H.L., Landesmen-Bollag, E., Dacwag, C.S., Stukenberg, P.T., Pardee, A.B. and Seldin, D.C.: Cell cycle-regulated phosphorylation of the human SIX1 homeodomain protein. *J. Biol. Chem.*, 275 (2000) 22245-22254.
- 822 Inomata, M., Hayashi, M., Shumiya, S., Kawashima, S. and Ito, Y.: Aminoguanidine-treatment results in the inhibition of lens opacification and calpain-mediated proteolysis in Shumiya cataract. *J. Biochem. (Tokyo)*, 128 (2000) 771-776.
- 823 Kikuchi, T., Ichikawa, M., Arai, J., Tateiwa, H., Fu, L., Higuchi, K. and Yoshimura, N.: Molecular cloning and characterization of a new neuron-specific homologue of rat polypyrimidine tract binding protein. *J. Biochem. (Tokyo)*, 128 (2000) 811-821.

- 824 Lehman, T.D. and Ortwerth, B.J.: Inhibitors of advanced glycation end product-associated protein cross-linking. *Biochim. Biophys. Acta*, 1535 (2001) 110-119.
- 825 Munson, G.W., Roher, A.E., Kuo, Y.-M., Gilligan, S.M., Reardon, C.A., Getz, G.S. and LaDu, M.J.: SDS-stable complex formation between native apolipoprotein E3 and  $\beta$ -amyloid peptides. *Biochemistry*, 39 (2000) 16119-16124.
- 826 Takaki, Y., Iwata, N., Tsubuki, S., Taniguchi, S., Toyoshima, S., Lu, B., Gerard, N.P., Gerard, C., Lee, H.-J., Shirotani, K. and Saido, T.C.: Biochemical identification of the neutral endopeptidase family member responsible for the catabolism of amyloid  $\beta$  peptide in the brain. *J. Biochem. (Tokyo)*, 128 (2000) 897-902.
- 827 Tanaka, T.: Electrophoretic analyses of glutamate decarboxylase 67 kDa isoform and extracellular regulated kinase isozyme-2 in brains of senescence accelerated mice, SAM-P8. *Seibutsu Butsuru Kagaku*, 44, No. 3 (2000) 211-216; *C.A.*, 133 (2000) 236310s.
- 828 Yoo, B.C., Fountoulakis, M., Cairns, N. and Lubec, G.: Changes of voltage-dependent anion-selective channel proteins VDAC1 and VDAC2 brain levels in patients with Alzheimer's disease and Down Syndrome. *Electrophoresis (Weinheim)*, 22 (2001) 172-179.
- See also 649, 837, 1008.
- 19k. *Proteins of neoplastic tissue and transformed cells*
- 829 Cockman, M.E., Masson, N., Mole, D.R., Jaakhola, P., Chang, G.-W., Cifford, S.C., Maher, E.R., Pugh, Ch.W., Ratcliffe, P.J. and Maxwell, P.H.: Hypoxia inducible factor- $\alpha$  binding and ubiquitylation by the von Hippel-Lindau tumor suppressor protein. *J. Biol. Chem.*, 275 (2000) 25733-25741.
- 830 Dannull, J., Diener, P.A., Prikler, L., Fürstenberger, G., Cerny, T., Schmid, U., Ackermann, D.K. and Groettrup, M.: Prostate stem cell antigen is a promising candidate for immunotherapy of advanced prostate cancer. *Cancer Res.*, 60 (2000) 5522-5528.
- 831 Decaussin, G., Sbih-Lammali, F., de Turenne-Tessier, M., Bouguermouth, A. and Ooka, T.: Expression of BAF1 gene encoded by Epstein-Barr virus in nasopharyngeal carcinoma biopsies. *Cancer Res.*, 60 (2000) 5584-5588.
- 832 Fulda, S., Meyer, E. and Debatin, K.-M.: Metabolic inhibitors sensitive for CD95 (APO-1/Fas)-induced apoptosis by down-regulating Fas-associated death domain-like interleukin 1-converting enzyme inhibitory protein expression. *Cancer Res.*, 60 (2000) 3947-3956.
- 836 Shaw, D.M., Embleton, M.J., Westwater, C., Ryan, M.G., Myers, K.A., Kingsman, S.M., Carroll, M.W. and Stern, P.L.: Isolation of a high affinity scFv from a monoclonal antibody recognising the oncofoetal antigen 5T4. *Biochim. Biophys. Acta*, 1524 (2000) 238-246.
- 837 Shoji-Kasai, Y., Morishima, M., Kuwahara, R., Kondo, S., Itakura, M. and Takahashi, M.: Establishment of variant PC12 subclones deficient in stimulation-secretion coupling. *Biochim. Biophys. Acta*, 1499 (2001) 180-190.
- 838 Solorzano, L., Rieber, M.S. and Rieber, M.: Lower cyclin H and culin-dependent kinase-activating kinase activity in cell cycle arrest induced by lack of adhesion to substratum. *Cancer Res.*, 60 (2000) 7114-7118.
- 839 Stoner, M., Wang, F., Wormke, M., Nguyen, T., Samudio, I., Vyhldal, C., Marme, D., Finkenzeller, G. and Safe, S.: Inhibition of vascular endothelial growth factor expression in HEC1A endometrial cancer cells interactions of estrogen receptor  $\alpha$  and Sp3 proteins. *J. Biol. Chem.*, 275 (2000) 22769-22779.
- 840 Strano, S., Munarriz, E., Rossi, M., Cristofanelli, B., Shaul, Y., Castagnoli, L., Levine, A.J., Sacchi, A., Cesaceni, G., Oren, M. and Blandino, G.: Physical and functional interaction between p53 mutants and different isoforms of p73. *J. Biol. Chem.*, 275 (2000) 29503-29512.
- 841 Sturba, L.-M., Westwood, G., Selby, P.J., Lewis, I.J. and Burchill, S.A.: Induction of cell death by basic fibroblast growth factor in Ewing's sarcoma. *Cancer Res.*, 60 (2000) 6160-6170.
- 842 Sun, S.-Y., Yue, P., Hong, W.K. and Lotan, R.: Induction of Fas expression and augmentation of Fas/Fas ligand-mediated apoptosis by the synthetic retinoid CD437 in human lung cancer cells. *Cancer Res.*, 60 (2000) 6537-6543.
- 843 Vierboom, M.P.M., Zwaveling, S., Bos, G.M.J., Ooms, M., Krietemlijer, G.M., Melief, C.J.M. and Offringa, R.: High steady-state levels of p53 are not a prerequisite for tumor readiction by wild-type p53-specific cytotoxic T lymphocytes. *Cancer Res.*, 60 (2000) 5508-5513.
- 844 Zhao, H., Jin, S., Fan, F., SFan, W., Tong, T. and Zhan, Q.: Activation of the transcription factor Oct-1 in response to DNA damage. *Cancer Res.*, 60 (2000) 6276-6280.
- 845 Zuzarte, P.C., Farrance, I.K.G., Simpson, P.C. and Wildeman, A.G.: Tumor cell splice variants of the transcription factor TEF-1 induced by SV40 T-antigen transformation. *Biochim. Biophys. Acta*, 1517 (2000) 82-90.
- See also 655, 664, 711, 729, 796, 821, 963, 1023, 1064, 1133, 1165, 1166, 1193.
- 834 Nawata, S., Suminami, Y., Hirakawa, H., Murakami, A., Ogata, H., Numa, F., Fujimoto, M., Tanaka, T., Nakamura, K. and Kato, H.: Nondenaturing two-dimensional electrophoretic analysis of loop-sheet polymerization of serpin, squamous cell carcinoma antigen-2. *Electrophoresis (Weinheim)*, 22 (2001) 161-164.
- 835 Schwamborn, K., Weil, R., Courtois, G., Whiteside, S.T. and Israel, A.: Phorbol esters and cytokines regulate the expression of the NEMO-regulated protein, a molecule involved in a NF- $\kappa$ -independent pathway. *J. Biol. Chem.*, 275 (2000) 22780-22789.
- 847 Bao, J., Alroy, I., Waterman, H., Schejter, E.D., Brodie, Ch., Gruenberg, J. and Yarden, Y.: Threonine phosphorylation diverts internalized epidermal growth factor receptors from a degradative pathway to the recycling endosome. *J. Biol. Chem.*, 275 (2000) 26178-26186.
- 848 Bastien, J., Adam-Stitah, S., Riedl, T., Egly, J.M., Chambon, P. and Rochette-Egly, C.: TFIIH interacts with the retinoic acid receptor  $\gamma$  and phosphorylates its AF-1-activating domain through cdk7. *J. Biol. Chem.*, 275 (2000) 21896-21904.

- 849 Besnard, V., Corroyer, S., Trugnan, G., Chadelat, K., Nabeyrat, E., Cazals, V. and Clement, A.: Distinct patterns of insulin-like growth factor binding protein (IGFBP)-2 and IGFBP-3 expression in oxidant exposed lung epithelial cells. *Biochim. Biophys. Acta*, 1538 (2001) 47-58.
- 850 Bordt, S.L., McKeon, R.M., Li, P.-K., Witt-Enderby, P.A. and Melan, M.A.: N1E-115 mouse neuroblastoma cells express mt<sub>1</sub> melatonin receptors and produce neurites in response to melatonin. *Biochim. Biophys. Acta*, 1499 (2001) 257-264.
- 851 Corbett, E.F., Michalak, K.M., Oikawa, K., Johnson, S., Campbell, I.D., Eggleton, P., Kay, C. and Michalak, M.: The conformation of calreticulin is influenced by the endoplasmic reticulum luminal environment. *J. Biol. Chem.*, 275 (2000) 27177-27185.
- 852 Corvera, S., DiBonaventura, C. and Shpetner, H.S.: Cell confluence-dependent remodeling of endothelial membranes mediated by cholesterol. *J. Biol. Chem.*, 275 (2000) 31414-31421.
- 853 Fan, Q.R., Long, E.O. and Wiley, D.C.: Cobalt-mediated dimerization of the human natural killer cell inhibitory receptor. *J. Biol. Chem.*, 275 (2000) 23700-23706.
- 854 Good, P.J., Chen, Q., Warner, S.J. and Herring, D.C.: A family of human RNA-binding proteins related to the Drosophila Bruno translational regulator. *J. Biochem. Chem.*, 275 (2000) 28583-28592.
- 855 Jaya, P., Premkumar, M. and Thampan, R.V.: Free leucine dissociates homo- and heterodimers formed between proteins containing leucine heptad repeats. *Biochim. Biophys. Acta*, 1499 (2001) 171-179.
- 856 Kim, T.D., Ryu, H.J., Ch, H.I., Yang, Ch.-H. and Kim, J.: Thermal behavior of proteins: heat-resistant proteins and their heat-induced secondary structural changes. *Biochemistry*, 39 (2000) 14839-14846.
- 857 Ling, L. and Goeddel, D.V.: MIP-T3 a novel protein linking tumor necrosis factor receptor-associated Factor 3 to the microtubule network. *J. Biol. Chem.*, 275 (2000) 23852-23860.
- 858 Matsui, T., Hamako, J., Ozeki, Y. and Titani, K.: Comparative study of blood group-recognizing lectins toward ABO blood group antigens on neoglycoproteins, glycoproteins and complex-type oligosaccharides. *Biochim. Biophys. Acta*, 1525 (2001) 50-57.
- 859 Matsuo, M., Tanate, K., Kioka, N., Amachi, T. and Ueda, K.: Different binding properties and affinities for ATP and ADP among sulfonyleurea receptor subtypes, SUR1, SUR2A and SUR2b. *J. Biol. Chem.*, 275 (2000) 28757-28763.
- 860 Wang, Y., Robledo, O., Kinzie, E., Blanchard, F., Richards, C., Miyajima, A. and Baumann, H.: Receptor subunit-specific action of Oncostatin M in hepatic cells and its modulation by leukemia inhibitory factor. *J. Biol. Chem.*, 275 (2000) 25273-25285.
- 861 Prather, P.L., Song, L., Piros, E.T., Law, P.Y. and Hales, T.G.:  $\delta$ -Opioid receptors are more efficiently coupled to adenylyl cyclase than to L-type Ca<sup>2+</sup> channels in transfected rat pituitary cells. *J. Pharmacol. Exp. Ther.*, 295 (2000) 552-562.
- 862 Tyulmenkov, V.V. and Klinge, C.M.: Selectivity of antibodies to estrogen receptors  $\alpha$  and  $\beta$  (ER $\alpha$  and ER $\beta$ ) for detecting DNA-bound ER $\alpha$  and ER $\beta$  *in vitro*. *Steroids*, 65 (2000) 505-512; C.A., 133 (2000) 276477h.
- 863 Verhagen, A.M., Ekert, P.G., Pakusch, M., Silke, J., Connolly, L.M., Reid, G.E., Moritz, R.L., Simpson, R.J. and Vaux, D.L.: Identification of DIABLO, a mammalian protein that promotes apoptosis by binding to and antagonizing IAP proteins. *Cell (Cambridge)*, 102 (2000) 43-53; C.A., 133 (2000) 249274h.
- 864 Wang, Y., Robledo, O., Kinzie, E., Blanchard, F., Richards, C., Miyajima, A. and Baumann, H.: Receptor subunit-specific action of Oncostatin M in hepatic cells and its modulation by leukemia inhibitory factor. *J. Biol. Chem.*, 275 (2000) 25273-25285.
- 865 Wassenberg, J.J., Reed, R.C. and Nicchitta, Ch.V.: Ligand interactions in the adenosine nucleotide-binding domain of the Hsp90 chaperone, GRP94. *J. Biol. Chem.*, 275 (2000) 22806-22814.
- 866 Yamaguchi, H., Yamashita, H., Mori, H., Okazaki, I., Nomizu, M., Beck, K. and Kitagawa, Y.: High and low affinity heparin-binding sites in the G-domain of the mouse laminin  $\alpha$  chain. *J. Biol. Chem.*, 275 (2000) 29368-29376.
- 867 Yoshimoto, R., Hori, M., Ozaki, H. and Karaki, H.: Proteolysis of acidic calponin by  $\mu$ -calpain. *J. Biochem. (Tokyo)*, 128 (2000) 1045-1049.
- 868 Zhu, M.-Y., Shamburger, S., Li, J. and Ordway, G.A.: Regulation of the human norepinephrine transporter by cocaine and amphetamine. *J. Pharmacol. Exp. Ther.*, 295 (2000) 951-959.
- See also 632, 654, 655, 668, 715, 843, 898, 963, 965, 1022, 1198.
- 19n. Other proteins (incl. proteinous inhibitors of enzymic activity)
- 869 Griese, M., von Bredow, C. and Birrer, P.: Reduced proteolysis of surfactant protein A and changes of the bronchoalveolar lavage fluid proteome by inhaled  $\alpha_1$ -protease inhibitor in cystic fibrosis. *Electrophoresis (Weinheim)*, 22 (2001) 166-171.
- 870 Hårdahl, U., Kokke, B.P.A., Gustavsson, N., Linse, S., Berggren, K., Tjerneld, F., Boelens, W.C. and Sundby, C.: The chaperone-like activity of a small heat shock protein is lost after sulfoxidation of conserved methionines in a surface-exposed amphipathic  $\alpha$ -helix. *Biochim. Biophys. Acta*, 1545 (2001) 227-237.
- 871 Kajihara, M., Kawachi, S., Kobayashi, M., Ogino, H., Takahashi, S. and Yasuda, K.: Isolation, characterization and expression analysis of zebrafish large Mafs. *J. Biochem. (Tokyo)*, 129 (2001) 139-146.
- 872 Li, Y., Agrawal, A., Sakon, J. and Beitle, R.R.: Characterization of metal affinity of green fluorescent protein and its purification through salt promoted, immobilized metal affinity chromatography. *J. Chromatogr. A*, 909 (2001) 183-190.
- 873 Olivieri, E., Herbert, B. and Righetti, P.G.: The effect of protease inhibitors of the transmembrane channel proteins on the fluidity of cell membranes. *Electrophoresis (Weinheim)*, 22 (2001) 560-565.
- 874 Phelps, Ch.B., Sengchanthalangsy, L.L., Huxford, T. and Ghosh, G.: Mechanism of I $\kappa$ B $\beta$  binding to NF- $\kappa$ B dimers. *J. Biol. Chem.*, 275 (2000) 29840-29846.
- 875 Pioszak, A.A., Jiang, P. and Ninfa, A.J.: The *Escherichia coli* PII signal transduction protein regulates the activities of the two-component system transmitter protein NRII by directed interaction with the kinase domain of the transmitter module. *Biochemistry*, 39 (2000) 13450-13461.
- 876 Robyr, D., Geggion, A., Wolffe, A.P. and Wahli, W.: Determinants of bitelogenin B1 promoter architecture. *J. Biol. Chem.*, 275 (2000) 2891-28300.

- 877 Schleaf, R.R. and Chuang, T.L.: Protease inhibitor 10 inhibits tumor necrosis factor  $\alpha$ -induced cell death. *J. Biol. Chem.*, 275 (2000) 26385-26389.
- 878 Uretschlager, A., Einhauer, A. and Jungbauer, A.: Continuous separation of green fluorescent protein by annular chromatography. *J. Chromatogr. A*, 908 (2001) 243-250.
- 879 Yang, C.-Y., Wu, J.-D. and Wu, C.-H.: Sequence analysis of the first complete cDNA clone encoding an American cockroach Per a 1 allergen. *Biochim. Biophys. Acta*, 1517 (2000) 153-158.
- 880 Yoshikawa, H., Tanaka, C., Kotaru, M. and Taguchi, K.: Isoelectric separation of  $\alpha$ -amylase inhibitors from *Phaseolus vulgaris* cultivar tora and their characteristics. *Nippon Kasei Gakkaishi*, 51 (2000) 209-213; C.A., 133 (2000) 263052r.

See also 712, 739, 893, 894.

## 20. ENZYMES AND ENZYME ACTIVITY ESTIMATION

### 20a. Oxidoreductases

- 881 Coughlan, S., Wang, X.-G., Britton, K.L., Stillman, T.J., Rice, D.W., Chiaraluce, R., Consalvi, V., Scandurra, R. and Engel, P.C.: Contribution of an aspartate residue, D114, in the active site of clostridial glutamate dehydrogenase to the enzyme's unusual pH dependence. *Biochim. Biophys. Acta*, 1544 (2001) 10-17.
- 882 Fujii, T., Narita, T., Agematu, H., Agata, N. and Isshiki, K.: Cloning and characterization of *pcd* encoding  $\Delta'$ -piperidine-6-carboxylate dehydrogenase from *Flavobacterium lutescens* IFO3084. *J. Biochem. (Tokyo)*, 128 (2000) 975-982.
- 883 Jacques, S.L., Nieman, C., Bareich, D., Broadhead, G., Kinach, R., Honek, J.F. and Wright, G.D.: Characterization of yeast homoserine dehydrogenase, an antifungal target: the invariant histidine 309 is important for enzyme integrity. *Biochim. Biophys. Acta*, 1544 (2001) 28-41.
- 884 Kang, J.H. and Eum, W.S.: Enhanced oxidative damage by the familial amyotrophic lateral sclerosis-associated Cu,Zn-superoxide dismutase mutants. *Biochim. Biophys. Acta*, 1524 (2000) 162-170.
- 885 Tanji, K., Imaizumi, T., Matsumiya, T., Itaya, H., Fujimoto, K., Cui, X.-f., Toki, T., Ito, E., Yoshida, H., Wakabayashi, K. and Satoh, K.: Desferrioxamine, an iron chelator, upregulates cyclooxygenase-2 expression and prostaglandin production in a human macrophage cell line. *Biochim. Biophys. Acta*, 1530 (2001) 227-235.
- 886 Tsunawaki, S. and Yoshikawa, K.: Relationships of p40<sup>phox</sup> with p67<sup>phox</sup> in the activation and expression of the human respiratory burst NADPH oxidase. *J. Biochem. (Tokyo)*, 128 (2000) 777-783.
- 887 Wilcke, M. and Alexson, S.E.H.: Differential induction of peroxisomal populations in subcellular fractions of rat liver. *Biochim. Biophys. Acta*, 1544 (2001) 358-369.
- 888 Wunschiers, R., Senger, H. and Schulz, R.: Electron pathways involved in H<sub>2</sub>-metabolism in the green alga *Scenedesmus obliquus*. *Biochim. Biophys. Acta*, 1503 (2001) 271-278.
- 889 Yasykova, M.Yu., Petukhov, S.P. and Muronetz, V.I.: (Phosphorylation of lactate dehydrogenase by protein kinases). *Biochimiya (Moscow)*, 65 (2000) 1409-1414.
- See also 911, 918.

### 20b. Transferases (excl. E.C. 2.7.-.-)

- 890 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. *J. Biochem. (Tokyo)*, 129 (2001) 13-17.

### 20c. Transferases transferring phosphorus containing groups (E.C. 2.7.-.-)

- 891 Chan, A.S.L. and Wong, Y.H.: Regulation of cJun N-terminal kinase by the ORL1 receptor through multiple G proteins. *J. Pharmacol. Exp. Ther.*, 295 (2000) 1094-1100.
- 892 Koga, S., Yoshioka, I., Sakuraba, H., Takahashi, M., Sakasegawa, S., Shimizu, S. and Ohshima, T.: Biochemical characterization, cloning, and sequencing of ADP-dependent (AMP-forming) glucokinase from two hyperthermophilic archaea, *Pyrococcus furiosus* and *Thermococcus litoralis*. *J. Biochem. (Tokyo)*, 128 (2000) 1079-1085.
- 893 Krappmann, D., Hatada, E.N., Tegethoff, S., Li, J., Klippel, A., Giese, K., Bauerle, P.A. and Scheidereit, C.: The I $\kappa$ B kinase (IKK) complex is tripartite and contains IKK $\gamma$  but not IKAP a regular component. *J. Biol. Chem.*, 275 (2000) 29779-29787.
- 894 Lorimer, I.A.J. and Lavictoire, S.J.: Activation of extracellular-regulated kinases by normal and mutant EGF receptors. *Biochim. Biophys. Acta*, 1538 (2001) 1-9.
- 895 Masai, H., Matsui, E., You, Z., Ishimi, Y., Tamai, K. and Arai, K.: Human Cdc7-related kinase complex. *J. Biol. Chem.*, 275 (2000) 29042-29052.
- 896 Mather, M. and Rottenberg, H.: Polycations induce the release of soluble intermembrane mitochondrial proteins. *Biochim. Biophys. Acta*, 1503 (2001) 357-368.
- 897 Nosaka, K., Onozuka, M., Kakazu, N., Hibi, S., Nishimura, H., Nishino, H. and Abe, T.: Isolation and characterization of a human thiamine pyrophosphokinase cDNA. *Biochim. Biophys. Acta*, 1517 (2001) 293-297.
- 898 Shinohara, Y., Hino, M., Ishida, T., Yamanaka, Y. and Terada, H.: Growth condition-dependent synchronized changes in transcript levels of type II hexokinase and type 1 glucose transporter in tumor cells. *Biochim. Biophys. Acta*, 1499 (2001) 242-248.
- 899 Sukhodolets, M.V. and Jin, D.J.: Interaction between RNA polymerase and RapA, a bacterial homolog of the SWI/SNF protein family. *J. Biol. Chem.*, 275 (2000) 22090-22097.
- 900 Tacchini, L., Dansi, P., Matteucci, E., Bernelli-Zazzera, A. and Desiderio, M.A.: Influence of proteasome and redox state on heat shock-induced activation of stress kinases, AP-1 and HSF. *Biochim. Biophys. Acta*, 1538 (2001) 76-89.
- 901 Takahashi, S., Keto, Y., Fujita, T., Uchiyama, T. and Yamamoto, A.: FR167653, a p38 mitogen-activated protein kinase inhibitor, prevents *Helicobacter pylori*-induced gastritis in Mongolian gerbils. *J. Pharmacol. Exp. Ther.*, 296 (2001) 48-56.
- 902 Tepperman, B.L., Chang, Q. and Soper, B.D.: Protein kinase C mediated lipopolysaccharide- and phorbol-induced nitric-oxide synthase activity and cellular injury in the rat colon. *J. Pharmacol. Exp. Ther.*, 295 (2000) 1249-1257.
- 903 Tikhomirov, O. and Carpenter, G.: Geldamycin induces ErbB-2 degradation by proteolytic fragmentation. *J. Biol. Chem.*, 275 (2000) 26625-26631.

- 904 Wooddell, Ch.I. and Burgess, R.R.: Topology of yeast RNA polymerase II subunits in transcription elongation complexes studied by photoaffinity cross-linking. *Biochemistry*, 39 (2000) 13405-13421.
- 905 Xue, Y., Hogan, B.P. and Erie, D.A.: Purification and initial characterization of DNA polymerase from *Thermus thermophilus* strain HB8. *Biochemistry*, 39 (2000) 14356-14362.
- 906 Zhu, L., Fan, Y.-X. and Zhou, J.-M.: Identification of equilibrium and kinetic intermediates involved in folding of urea-denatured creatine kinase. *Biochim. Biophys. Acta*, 1544 (2001) 320-332.
- See also 710, 827, 1088, 1092.
- 20d. *Hydrolases, acting on ester bonds (E.C. 3.1.-.-)*
- 907 Belguith, H., El Khil, H.K., Fattouch, S., Jridi, T. and Ben Hamida, J.: Contribution of blotting techniques to the study of rapeseeds (*Brassica napus* L.) lipases. *Electrophoresis (Weinheim)*, 22 (2001) 18-22.
- 908 Gao, Y. and Mehta, K.: Interchain disulfide bonds promote protein cross-linking during protein folding. *J. Biochem. (Tokyo)*, 129 (2001) 179-183.
- 909 Golovastov, V.V., Mikhaleva, N.I., Kadyrova, L.Yu. and Nesmeyanova, M.A.: (The major phospholipid of *Escherichia coli* phosphatidylethanolamine is required for efficient production and secretion of alkaline phosphatase). *Biokhimiya (Moscow)*, 65 (2000) 1295-1304.
- 910 Horn, J.M., Lehman, J.A., Alter, G., Horwitz, J. and Gomez-Cambronero, J.: Presence of a phospholipase D (PLD) distinct from PLD1 or PLD2 in human neutrophils: immunobiochemical characterization and initial purification. *Biochim. Biophys. Acta*, 1530 (2001) 97-110.
- 911 Itoh, N., Kawanami, T., Liu, J.-Q., Dairi, T., Miyakoshi, M., Nitta, C. and Kimoto, Y.: Cloning and biochemical characterization of Co<sup>2+</sup>-activated bromoperoxidase-esterase (perhydrolase) from *Pseudomonas putida* IF-3 strain. *Biochim. Biophys. Acta*, 1545 (2001) 53-66.
- 912 Jancikla, A.J., Takahashi, K., Sun, S.Z. and Yam, L.T.: Tartrate-resistant acid phosphatase isoform 5b as serum marker for osteoclastic activity. *Clin. Chem. (Washington)*, 47 (2001) 74-80.
- 913 Kononova, S.V., Zolov, S.N., Krupyanko, V.I. and Nesmeyanova, M.A.: (The primary structure of the N-terminal region of mature alkaline phosphatase is important for secretion and functioning of the enzyme). *Biokhimiya (Moscow)*, 65 (2000) 1270-1277.
- 914 Labrie, V., Harel, J. and Dubreuil, J.D.: Oligomerization of *Escherichia coli* enterotoxin b through its C-terminal hydrophobic  $\alpha$ -helix. *Biochim. Biophys. Acta*, 1535 (2001) 128-133.
- 915 Le Petit-Thevenin, J., Verine, A., Nganga, A., Nobili, O., Lombardo, D. and Bruneau, N.: Impairment of bile salt-dependent lipase secretion in AR4-2J rat pancreatic cells induces its degradation by the proteasome. *Biochim. Biophys. Acta*, 1530 (2001) 184-198.
- 916 Lein, W. and Saalbach, G.: Cloning and direct G-protein regulation of phospholipase D from tobacco. *Biochim. Biophys. Acta*, 1530 (2001) 172-183.
- 917 Löthgren, A., McCartney, M., Thureson, E.R. and James, S.R.: A model activation of the protein tyrosine phosphatase SHP-2 by the human leptin receptor. *Biochim. Biophys. Acta*, 1545 (2001) 20-29.
- 918 Markova, M., Kruleva, M. and Kraptchev, B.: Comparative study of esterase and peroxidase patterns of high percentage of haploids inducing maize lines. *Dokl. Bulg. Akad. Nauk*, 52, No. 7-8 (1999) 85-88; C.A., 133 (2000) 235130w.
- 919 Mizuno, M. and Kuboki, Y.: Osteoblast-related gene expression of bone marrow cells during the osteoblastic differentiation induced by type I collagen. *J. Biochem. (Tokyo)*, 129 (2001) 133-138.
- 920 Modesti, A., Bini, L., Carraresi, L., Magherini, F., Liberatori, S., Pallini, V., Manao, G., Pinna, L.A., Raugei, G. and Ramponi, G.: Expression of the small tyrosine phosphatase (Stp1) in *Saccharomyces cerevisiae*: A study on protein tyrosine phosphorylation. *Electrophoresis (Weinheim)*, 22 (2001) 576-585.
- 921 Nenci, A., Gotte, G., Maras, B. and Libonati, M.: Different susceptibility of the two dimers of ribonuclease A to subtilisin. Implications for their structure. *Biochim. Biophys. Acta*, 1545 (2001) 255-262.
- 922 Ogino, C., Negi, Y., Daido, H., Kanemasu, M., Kondo, A., Kuroda, S., Tanizawa, K., Shimizu, N. and Fukuda, H.: Identification of novel membrane-bound phospholipase D from *Streptovorticillium cinnamomeum*, possessing only hydrolytic activity. *Biochim. Biophys. Acta*, 1530 (2001) 23-31.
- 923 Skalski, V., Brown, K.R., Choi, B.Y., Lin, Z.-Y. and Chen, S.: A 3'-5' exonuclease in human leukemia cells. *J. Biol. Chem.*, 275 (2000) 25814-25819.
- 924 Taes, Y.E., Louagie, H., Yvergnaux, J.-P., de Buyaere, M.L., de Puydt, H., Delanghe, J.R. and Lott, J.A.: Prolonged hyperlipasemia attributable to a novel type of macrolipase. *Clin. Chem. (Washington)*, 46 (2000) 2008-2013.
- 925 Yusupova, R.A., Gulevich, A.Yu. and Drygin, Yu.F.: (Isolation of an unlinking enzyme, which hydrolyzes the covalent bond between picornavirus RNA and VPg, from ascites carcinoma Krebs II cells). *Biokhimiya (Moscow)*, 65 (2000) 1440-1449.
- See also 1091.
- 20e. *Hydrolases, acting on glycosyl compounds (E.C. 3.2.-.-)*
- 926 Koyama, I., Komine, S.-i., Hokari, S., Yakushijin, M., Matsunaga, T. and Komoda, T.: Expression of  $\alpha$ -amylase gene in rat liver: Liver-specific amylase has a high affinity to glycogen. *Electrophoresis (Weinheim)*, 22 (2001) 12-17.
- 927 Nicolas, E., Beggs, J.M. and Taraschi, T.F.: Gelonin is an unusual DNA glycosylase that removes adenine from single-stranded DNA, normal base pairs and mismatches. *J. Biol. Chem.*, 275 (2000) 31399-31406.
- 928 Takesue, Y., Yokota, T., Oda, S.-i. and Takesue, S.: Comparison of sucrase-free isomaltase with sucrase-isomaltase purified from the house musk shrew *Suncus murinus*. *Biochim. Biophys. Acta*, 1544 (2001) 341-349.
- 929 Wallis, G.L.F., Hemming, F.W. and Pderdy, J.F.: An extracellular  $\beta$ -galactofuranosidase from *Aspergillus niger* and its use as a tool for glycoconjugate analysis. *Biochim. Biophys. Acta*, 1525 (2001) 19-28.

## 20f. Other hydrolases

- 930 Benrezzak, O., Grondin, G., Proulx, J., Rousseau, E., O'Orléans-Juste, P. and Beaudoin, A.R.: Characterization and immunohistochemical localization of nucleoside triphosphate diphosphohydrolase (NTPDase) in pig adrenal glands (presence of a non-sedimentable isoform). *Biochim. Biophys. Acta*, 1524 (2000) 94-101.
- 931 Ding, J., Wu, Z., Crider, B.P., Ma, Y., Li, X., Slaughter, C., Gong, L. and Xie, X.-S.: Identification and functional expression of four isoforms of ATPase II, the putative aminophospholipid translocase. *J. Biol. Chem.*, 275 (2000) 23378-23386.
- 932 Flood, J., Mayne, J. and Robinson, J.J.: Identification and characterization of gelatin-cleavage activities in the apically located extracellular matrix of the sea urchin embryo. *Biochem. Cell Biol.*, 78 (2000) 455-462.
- 933 Gayatri, R., Rajaram, R. and Ramasami, T.: Inhibition of collagenase by Cr(III): its relevance to stabilization of collagen. *Biochim. Biophys. Acta*, 1524 (2000) 2288-237.
- 934 Hamatake, M., Iguchi, K., Hirano, K. and Ishida, R.: Zinc induces mixed types of cell death, necrosis, and apoptosis, in Molt-4 cells. *J. Biochem. (Tokyo)*, 128 (2000) 933-939.
- 935 Hattori, A., Kitatani, K., Matsumoto, H., Miyazawa, S., Rogi, T., Tsuruoka, N., Mizutani, S., Natori, Y. and Tsujimoto, M.: Characterization of recombinant human adipocyte-derived leucine aminopeptidase expressed in Chinese hamster ovary cells. *J. Biochem. (Tokyo)*, 128 (2000) 755-762.
- 936 Huang, H., Joazeiro, C.A.P., Bonfoco, E., Kamada, S., Levenson, J.D. and Hunter, T.: The inhibitor of apoptosis, cIAP2, functions as a ubiquitin-protein ligase and promotes *in vitro* monoubiquitination of caspases 3 and 7. *J. Biol. Chem.*, 275 (2000) 26661-26664.
- 937 Ikari, A., Tachihara, Y., Kawano, K. and Suketa, Y.: Differential regulation of Na<sup>+</sup>, K<sup>+</sup>-ATPase and the Na<sup>+</sup>-coupled glucose transporter in hypertensive rat kidney. *Biochim. Biophys. Acta*, 1510 (2001) 118-124.
- 938 Ikuzawa, M., Inokuchi, T., Kobayashi, K.-i. and Yasumasu, S.: Amphibian pepsinogens: purification and characterization of *Xenopus* pepsinogens, and molecular cloning of *Xenopus* and bullfrog pepsinogens. *J. Biochem. (Tokyo)*, 129 (2001) 147-153.
- 939 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. *J. Biochem. (Tokyo)*, 129 (2001) 35-41.
- 940 Kadota, N., Suzuki, A., Nakagami, Y., Izumi, T. and Endo, T.: Endogenous meltrin  $\alpha$  is ubiquitously expressed and associated with the plasma membrane but exogenous meltrin  $\alpha$  is retained in the endoplasmic reticulum. *J. Biochem. (Tokyo)*, 128 (2000) 941-949.
- 941 Kitada, S. and Ito, A.: Electrostatic recognition of matrix targeting signal by mitochondrial processing peptidase. *J. Biochem. (Tokyo)*, 129 (2001) 155-161.
- 942 Lorenzo, K., Ton, P., Clark, J.L., Coulibaly, S. and Mach, L.: Invasive properties of murine squamous carcinoma cells: Secretion of matrix-degrading cathepsins in attributable to a deficiency in the mannose 6-phosphate-insulin-like growth factor II receptor. *Cancer Res.*, 60 (2000) 4070-4076.
- 943 Machida, Y., Murai, K., Miyake, K. and Iijima, S.: Expression of chromatin remodeling factors during neural differentiation. *J. Biochem. (Tokyo)*, 129 (2001) 43-49.
- 944 Martynova, O.M., Tiourina, O.P., Selischeva, A.A., Sorokoumova, G.M., Shvets, V.I. and Larionova, N.I.: (Interaction of trypsin with multilamellar vesicles of soybean lipids). *Bio-khimiya (Moscow)*, 65 (2000) 1240-1246.
- 945 Moldoveanu, T., Hosfield, C.M., Jia, Z., Elce, J.S. and Davies, P.L.: Ca<sup>2+</sup>-induced structural changes in rat *m*-calpain revealed by partial proteolysis. *Biochim. Biophys. Acta*, 1545 (2001) 245-254.
- 946 Nakanishi, M., Iwata, A., Yatome, C. and Kitade, Y.: Purification and properties of recombinant *Plasmodium falciparum* S-adenosyl-L-homocysteine hydrolase. *J. Biochem. (Tokyo)*, 129 (2001) 101-105.
- 947 Seo, S.-b., Tan-Wilson, A. and Wilson, K.A.: Protease C2, a cysteine endopeptidase involved in the continuing mobilization of soybean  $\beta$ -conglycinin seed proteins. *Biochim. Biophys. Acta*, 1545 (2001) 192-206.
- 948 Takahashi, Y., Mizoi, J., Toh-e, A. and Kikuchi, Y.: Yeast Ulp1, an Smt3-specific protease, associates with nucleoporins. *J. Biochem. (Tokyo)*, 128 (2000) 723-725.
- 949 Takao, K., Takai, S., Ishihara, T., Mita, S. and Miyazaki, M.: Isolation of chymase complexed with physiological inhibitor similar to secretory leukocyte protease inhibitor (SLPI) from hamster cheek pouch tissues. *Biochim. Biophys. Acta*, 1545 (2001) 146-152.
- 950 Tzelepi, E., Arvanitidou, M., Tzouveleki, L.S., Mavroidi, A. and Tsakris, A.: The isoelectric focusing patterns of  $\beta$ -lactamases of *Yersinia intermedia* isolates from aquatic environments. *J. Antimicrob. Chemother.*, 46 (2000) 513-515; C.A., 133 (2001) 360761d.

See also 732, 781, 799, 1192.

## 20g. Lyases

- 951 Hoenke, S., Wild, M.R. and Dimroth, P.: Biosynthesis of triphosphoriboxyl-dephospho-coenzyme A, the precursor of the prosthetic group of malonate decarboxylase. *Biochemistry*, 39 (2000) 13223-13232.
- 952 Larsen, M.R., Larsen, P.M., Fey, S.J. and Roepstorff, P.: Characterization of differently processed forms of enolase 2 from *Saccharomyces cerevisiae* by two-dimensional gel electrophoresis and mass spectrometry. *Electrophoresis (Weinheim)*, 22 (2001) 566-575.

See also 827.

## 20h. Isomerases

- 953 Chatterji, M., Unniraman, S., Maxwell, A. and Nagaraja, V.: The additional 165 amino acids in the B protein of *Escherichia coli* DNA gyrase have an important role in DNA binding. *J. Biol. Chem.*, 275 (2000) 22888-22894.
- 954 Ireton, G.C., Stewart, L., Parker, L.H. and Champoux, J.J.: Expression of human topoisomerase I with a partial deletion of the linker region yields monomeric and dimeric enzymes that respond differently to camptothecin. *J. Biol. Chem.*, 275 (2000) 25820-25830.

- 955 Mao, Y., Desai, S.D. and Liu, L.F.: SUMO-1 conjugation to human DNA topoisomerase II isoenzymes. *J. Biol. Chem.*, 275 (2000) 26066-26073.
- 956 Shaikh, A.C. and Sadowski, P.D.: *Trans* complementation of variant Cre proteins for defects in cleavage and synapsis. *J. Biol. Chem.*, 275 (2000) 30186-30195.
- 20i. *Ligases*
- 957 Chen, L., Trujillo, K., Sung, P. and Tomkinson, A.E.: Interactions of the DNA ligase IV-XRCC4 complex with DNA ends and the DNA-dependent protein kinase. *J. Biol. Chem.*, 275 (2000) 26196-26205.
- 958 McAllister, K.A., Peery, R.B., Meier, T.I., Fischl, A.S. and Zhao, G.: Biochemical and molecular analyses of the *Streptococcus pneumoniae* acyl carrier protein synthase, an enzyme essential for fatty acid biosynthesis. *J. Biol. Chem.*, 275 (2000) 30864-30872.
- See also 1028.
- 20j. *Complex mixtures and incompletely identified enzymes*
- 959 Laday, M., Bagi, F., Mesterhazy, A. and Szecsi, A.: Isozyme evidence for two groups of *Fusarium graminearum*. *Mycol. Res.*, 104 (2000) 788-793; C.A., 134 (2001) 39339c.
- 960 Yamamoto, M., Götz, M.E., Ozawa, H., Luckhaus, C., Saito, T., Rösler, M. and Riederer, P.: Hippocampal level of neural specific adenylyl cyclase type I is decreased in Alzheimer's disease. *Biochim. Biophys. Acta*, 1535 (2000) 60-68.
- See also 1010.
21. PURINES, PYRIMIDINES, NUCLEIC ACIDS AND THEIR CONSTITUENTS
- 21a. *Purines, pyrimidines, nucleosides, nucleotides*
- 961 Asagoshi, K., Yamada, T., Okada, Y., Terato, H., Ohyama, Y., Seki, S. and Ide, H.: Recognition of formamidopyrimidine by *Escherichia coli* and mammalian thymine glycol glycosylases. *J. Biol. Chem.*, 275 (2000) 24781-24786.
- 962 Colton, C.A., Czapiga, M., Snell-Callanan, J., Chernyshev, O.N. and Vitek, M.P.: Apolipoprotein E acts to increase nitric oxide production in macrophages by stimulating arginine transport. *Biochim. Biophys. Acta*, 1535 (2001) 134-144.
- 963 Demoulin, J.-B., Uyttenhove, C., Lejeune, D., Mui, A., Groner, B. and Renaud, J.-Ch.: STAT5 activation is required for interleukin-9-dependent growth and transformation of lymphoid cells. *Cancer Res.*, 60 (2000) 3971-3977.
- 964 Driller, L., Wellinger, R.J., Larrinvee, M., Kremmer, E., Jaklin, S. and Feldmann, H.M.: A short C-terminal domain of Yku70p is essential for telomere maintenance. *J. Biol. Chem.*, 275 (2000) 24921-24927.
- 965 Elberg, G., Gimble, J.M. and Tsai, S.Y.: Modulation of the murine peroxisome proliferator-activated receptor  $\gamma$ 2 promoter activity by CCAAT/enhancer-binding proteins. *J. Biol. Chem.*, 275 (2000) 27815-27822.
- 966 Fang, P., Wang, Z. and Sachs, M.S.: Evolutionarily conserved features of the arginine attenuator peptide provide the necessary requirements for its function in translation regulation. *J. Biol. Chem.*, 275 (2000) 26710-26719.
- 967 Griffoni, C., Laktionov, P.P., Rykova, E.Y., Spisni, E., Riccio, M., Santi, S., Bryksin, A., Volodko, N., Kraft, R., Vlassov, V. and Tomasi, V.: The Rossmann fold of glyceraldehyde-3-phosphate dehydrogenase (GAPDH) is a nuclear docking site for antisense oligonucleotides containing a TAAAT motif. *Biochim. Biophys. Acta*, 1530 (2001) 32-46.
- 968 Huang, Y., Horvath, C.M. and Waxman, S.: Regrowth of 5-fluorouracil-treated human colon cancer cells is prevented by the combination of interferon  $\gamma$ , indomethacin, and phenylbutyrate. *Cancer Res.*, 60 (2000) 3200-3206.
- 969 Jones, Ch.E., Mueser, T.C. and Noss, N.G.: Interaction of the bacteriophage T4 gene 59 helicase loading protein and gene 41 helicase with each other and with fork, flap, and cruciform DNA. *J. Biol. Chem.*, 275 (2000) 27145-27154.
- 970 Junghans, M., Kreuter, J. and Zimmer, A.: Phosphodiester and phosphorothioate oligonucleotide condensation and preparation of antisense nanoparticles. *Biochim. Biophys. Acta*, 1544 (2001) 177-188.
- 971 Lok, Ch.N. and Ponka, P.: Identification of an erythroid active element in the transferrin receptor gene. *J. Biol. Chem.*, 275 (2000) 24185-24190.
- 972 Martin, A.G. and Fresno, M.: Tumor necrosis factor- $\alpha$  activation of NF- $\kappa$ B requires the phosphorylation of Ser-471 in the transactivation domain of c-Rel. *J. Biol. Chem.*, 275 (2000) 24383-24391.
- 973 McDonough, J., Francis, N., Miller, T. and Deneris, E.S.: Regulation of transcription in the neuronal nicotinic receptor gene cluster by a neuron-selective enhancer and ETS domain factors. *J. Biol. Chem.*, 275 (2000) 28962-28970.
- 974 McGuffie, E.M., Pacheco, D., Carbone, G.M.R. and Catapano, C.V.: Antigenic and antiproliferative effects of a c-myc-targeting phosphorothioate triple helix-forming oligonucleotide in human leukemia cells. *Cancer Res.*, 60 (2000) 3790-3799.
- 975 Moon, Y.-A., Lee, J.-J., Park, S.-W., Ahn, Y.-H. and Kim, K.-S.: The roles of sterol regulatory element-binding proteins in the transactivation of the rat ATP citrate-lyase promoter. *J. Biol. Chem.*, 275 (2000) 30280-30286.
- 976 Morales, J.C. and Kool, E.T.: Functional hydrogen-bonding map of the minor groove binding tracks of six DMA polymerase. *Biochemistry*, 39 (2000) 12979-12988.
- 977 Münsterkötter, M., Barbari, S. and Hörz, W.: Transcriptional regulation of the yeast PHO8 promoter in comparison to the coregulated PHO5 promoter. *J. Biol. Chem.*, 275 (2000) 22678-22685.
- 978 Oci, S.L. and Zeigler, M.: ATP for the DNA ligation step in base excision repair is generated from poly(ADP-ribose). *J. Biol. Chem.*, 275 (2000) 23234-23239.
- 979 Ozaki, I., Mizuta, T., Zhao, G., Yotsumoto, H., Hara, T., Kajihara, S., Hisatomi, A., Sakai, T. and Yamamoto, K.: Involvement of the Ets-1 gene in overexpression of matrilysin in human hepatocellular carcinoma. *Cancer Res.*, 60 (2000) 6519-6525.
- 980 Reddy, M.S., Vaze, M.B., Madhusudan, K. and Muniyappa, K.: Binding of SSP and Rec A protein to DNA-containing stem loop structures: SSB ensures the polarity of RecA polymerization on single-stranded DNA. *Biochemistry*, 39 (2000) 14250-14262.

- 981 Savinkova, L.K., Sokolenko, A.A., Rau, V.A., Arshinova, T.V., Gerassimova, Y.V., Kudryashova, N.V. and Godovikova, T.S.: (Affinity modification of RNA polymerase II by an initiation substrate analog in a transcriptionally active complex). *Biokhimiya (Moscow)*, 65 (2000) 1334-1340.
- 982 Semple, S.C., Klimuk, S.K., Harasym, T.O., Dos Santos, N., Ansell, S.M., Wong, K.F., Maurer, N., Stark, H., Cullis, P.R., Hope, M.J. and Scherrer, P.: Efficient encapsulation of antisense oligonucleotides in lipid vesicles using ionizable aminolipids: formation of novel small multilamellar vesicle structures. *Biochim. Biophys. Acta*, 1510 (2001) 152-166.
- 983 Trainor, C.D., Ghirlando, R. and Simpson, M.A.: GATA zinc finger interactions modulate DNA binding and transactivation. *J. Biol. Chem.*, 275 (2000) 28157-28166.
- 984 Vastmans, K., Pochet, S., Peys, A., Kerremans, L., van Aerschot, A., Hendrix, Ch., Marliere, P. and Herdewijn, P.: Enzymatic incorporation in DNA of 1,5-anhydrohexitol nucleotides. *Biochemistry*, 39 (2000) 12757-12765.
- 985 Vorachek, W.R., Steppan, C.M., Lima, M., Black, H., Bhattacharya, R., Wen, P., Kajiyama, Y. and Locker, J.: Distant enhancers stimulate the albumin promoter through complex proximal binding sites. *J. Biol. Chem.*, 275 (2000) 29031-29041.
- 986 Zhuang, Y., Wendt, Ch. and Gick, G.: Regulation of Na,K-ATPase  $\beta$ 1 subunit gene transcription by low external potassium in cardiac myocytes. *J. Biol. Chem.*, 275 (2000) 24173-24184.
- See also 616, 651, 672, 796, 830, 1084, 1103, 1105, 1111, 1113, 1123, 1144, 1146, 1160, 1169.
- 21b. *Nucleic acids, RNA*
- 987 Aizenman, E., Sinor, J.D., Brimecombe, J.C. and Herin, G.A.: Alterations of N-methyl-D-aspartate receptor properties after chemical ischemia. *J. Pharmacol. Exp. Ther.*, 295 (2000) 572-577.
- 988 Asakawa, J., Kodaira, M., Nogataki, S., Ishikawa, N., Itoh, K. and Itoh, K.: (Analysis of gene expression in thyroid cancer by using a novel two-dimensional display method of cDNA). *Seibutsu Butsuri Kagaku*, 44, No.3 (2000) 177-180; *C.A.*, 133 (2000) 233355z.
- 989 Benkusly, N.A., Fergus, D.J., Zuccherro, T.M. and England, S.K.: Regulation of the  $Ca^{2+}$ -sensitive domains of the maxi-K channel in the mouse myometrium during gestation. *J. Biol. Chem.*, 275 (2000) 27712-27719.
- 990 Boon, N., Marle, C., Top, E.M. and Verstraete, W.: Comparison of the spatial homogeneity of physico-chemical parameters and bacterial 16S rRNA genes in sediment samples from a dumping site for dredging sludge. *Appl. Microbiol. Biotechnol.*, 53 (2000) 742-747; *C.A.*, 133 (2001) 365872a.
- 991 Busquets, S., Alvarez, B., van Royen, M., Figueras, M.T., Lopez-Figueroa, E., del Real, J.M.: Increased uncoupling protein 2  
1499 (2001) 249-256.
- 992 Carim-Todd, L., Escarceller, M., Estivill, X. and Sumoy, L.: Identification and characterization of UBXD1, a novel UBX domain-containing gene on human chromosome 19p13, and its mouse ortholog. *Biochim. Biophys. Acta*, 1517 (2001) 298-301.
- 993 Caspersen, C., Pedersen, P.S. and Treiman, M.: The srco-endoplasmic reticulum calcium-ATPase 2b is an endoplasmic reticulum stress-inducible protein. *J. Biol. Chem.*, 275 (2000) 22363-22372.
- 994 Chan, J.Y. and Kwong, M.: Impaired expression of glutathione synthetic enzyme genes in mice with targeted deletion of the Nrf2 basic-leucine zipper protein. *Biochim. Biophys. Acta*, 1517 (2000) 19-26.
- 995 Charbonneau, A. and The, V.-L.: Genomic organization of a human 5 $\beta$ -reductase and its pseudogene and substrate selectivity of the expressed enzyme. *Biochim. Biophys. Acta*, 1517 (2001) 228-235.
- 996 Cui, X., Imaizumi, T., Yoshida, H., Tanji, K., Matsumiya, T. and Satoh, K.: Lipopolysaccharide induces the expression of cellular inhibitor of apoptosis protein-2 in human macrophages. *Biochim. Biophys. Acta*, 1524 (2000) 178-182.
- 997 Diener, J.I. and Wilson, Ch.: Role of SRP19 in assembly of the *Archaeoglobus fulgidus* signal recognition particle. *Biochemistry*, 39 (2000) 12862-12874.
- 998 Echarrri, A., Gonzalez, M.E., Ventoso, I. and Carrasco, L.: Nonradioactive methods for the detection of RNA-protein interaction. In: Rapley, R. (Editor), *Nucleic Acid Protoc. Handb.*, Humana Press Inc., Totowa, 2000, pp. 783-791; *C.A.*, 133 (2000) 293155u.
- 999 Esperet, C., Sabatie, S., Deville, M.-A., Ouazana, R., Bouhassira, E.E., Godet, J., Morli, F. and Bernet, A.: Non-erythroid genes inserted on either side of human HS-40 impair the activation of its natural  $\alpha$ -globin gene targets without being themselves preferentially activated. *J. Biol. Chem.*, 275 (2000) 25831-25839.
- 1000 Felaco, M., Grilli, A., Gorbunov, N., di Napoli, P., de Lutiis, M.A., di Giulio, C., Taccardi, A.A., Barsotti, A., Barbacane, R.C., Reale, M. and Conti, P.: Endothelial NOS expression and ischemia-reperfusion in isolated working rat heart from hypoxic and hyperoxic conditions. *Biochim. Biophys. Acta*, 1524 (2000) 203-211.
- 1001 Futai, E., Kubo, T., Sorimachi, H., Suzuki, K. and Maeda, T.: Molecular cloning of Pa1BH, a mammalian homologue of the *Aspergillus* atypical calpain Pa1B. *Biochim. Biophys. Acta*, 1517 (2001) 316-319.
- 1002 Gamage, S.D., Bischoff, E.D., Burroughs, K.D., Lamph, W.W., Gottardis, M.M., Walker, C.L. and Fuchs-Young, R.: Efficacy of LGD1069 (Targretin), a retinoid X receptor-selective ligand, for treatment of uterine leiomyoma. *J. Pharmacol. Exp. Ther.*, 295 (2000) 677-681.
- 1003 Geffrotin, C., Horak, V., Cr chet, F., Tricaud, Y., Lethias, C., Vincent-Naulleau, S. and Vielh, P.: Opposite regulation of tenascin-C and tenascin-X in MeLiM swine heritable cutaneous malignant melanoma. *Biochim. Biophys. Acta*, 1524 (2000) 196-202.
- 1004 Ghayor, Ch., Herrouin, J.-F., Chadjichristos, Ch., Ala-Kokko, L., Takigawa, M., Pujol, J.-P. and Galera, P.: Regulation of human  
genase-2-mediated angiogenesis in carrageenin-induced granulation tissue in rats. *J. Pharmacol. Exp. Ther.*, 295 (2000) 802-809.

- 1006 Hatanaka, T., Huang, W., Ling, R., Prasad, P.D., Sugawara, M., Leibach, F.H. and Ganapathy, V.: Evidence for the transport of neutral as well as cationic amino acids by ATA3, a novel and liver-specific subtype of amino acid transport system A. *Biochim. Biophys. Acta*, 1510 (2001) 10-17.
- 1007 Honer, C., Chen, P., Toth, M.J. and Schumacher, C.: Identification of SCAN dimerization domains in four gene families. *Biochim. Biophys. Acta*, 1517 (2001) 441-448.
- 1008 Imamura, L., Hasegawa, H., Kurashina, K., Hamanishi, A., Tabuchi, A. and Tsuda, M.: Repression of activity-dependent c-fos and brain-derived neurotrophic factor mRNA expression by pyrethroid insecticides accompanying a decrease in Ca<sup>2+</sup> influx into neurons. *J. Pharmacol. Exp. Ther.*, 295 (2000) 1175-1182.
- 1009 Kim, J.T., Kim, M.-S., Bae, M.-K., Song, H.S., Ahn, M.-Y., Kim, Y.-J., Lee, S.-J. and Kim, K.-W.: Cloning and characterization of tissue inhibitor of metalloproteinase-3 (TIMP-3) from shark, *Scyliorhinus torazame*. *Biochim. Biophys. Acta*, 1517 (2001) 311-315.
- 1010 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. *J. Biochem. (Tokyo)*, 129 (2001) 77-86.
- 1011 Lee, D.W., Zhang, K., Ning, Z.-Q., Raabe, E.H., Tintner, S., Wieland, R., Wilkins, B.J., Kim, J.M., Blough, R.I. and Arceci, R.J.: Proliferation-associated SNF2-like gene (PASG): A SNF2 family member altered in leukemia. *Cancer Res.*, 60 (2000) 3612-3622.
- 1012 Mair, G., Ullu, E. and Tschudi, Ch.: Cotranscriptional Cap 4 formation on the *Trypanosoma brucei* spliced leader RNA. *J. Biol. Chem.*, 275 (2000) 28994-28999.
- 1013 Murase, T., Kondo, H., Hase, T., Tokimitsu, I. and Saito, M.: Abundant expression of uncoupling protein-2 in the small intestine: up-regulation by dietary fish oil and fibrates. *Biochim. Biophys. Acta*, 1530 (2001) 15-22.
- 1014 Norman, R.A., Poh, Ch. I., Peard, L.H., O'Hara, B.P. and Drew, 30667.
- 1015 Oberkofler, H., Neschen, S., Esterbauer, H., Waldhäusl, W., Patsch, W. and Fürnsinn, C.: UCP3 gene expression does not correlate with muscle oxidation rates in troglitazone-treated Zucker fatty rats. *Biochim. Biophys. Acta*, 1517 (2000) 113-118.
- 1016 Okuda, T., Mita, S., Yamauchi, S., Matsubara, T., Yagi, F., Yamamori, D., Fukuta, M., Kuroiwa, A., Matsuda, Y. and Habuchi, O.: Molecular cloning, expression, and chromosomal mapping of human chondroitin 4-sulfotransferase, whose expression pattern in human tissues is different from that of chondroitin 6-sulfotransferase. *J. Biochem. (Tokyo)*, 128 (2000) 763-770.
- 1017 Outten, F.W., Outten, C.E., Hale, J. and O'halloran, T.V.: Transcriptional activation of an *Escherichia coli* copper efflux regulon by the chromosomal MerR homologue, CueR. *J. Biol. Chem.*, 275 (2000) 31024-31029.
- 1018 Pastorian, K.E., Hawel, L., III and Byus, C.V.: Identification of putrescine-responsive mRNAs in Chinese hamster ovary cells using representational difference analysis. *Biochim. Biophys. Acta*, 1524 (2000) 131-142.
- 1019 Rowlands, J.C., Wang, H., Hakkak, R., Ronis, M.J.J., Strobel, H.W. and Badger, T.M.: Chronic intragastric infusion of ethanol-containing diets induces CYP3A9 while decreasing CYP3A2 in male rats. *J. Pharmacol. Exp. Ther.*, 295 (2000) 747-752.
- 1020 Ruiz, A., Pujana, M.A. and Estivill, X.: Isolation and characterisation of a novel human gene (C9orf11) on chromosome 9p21, a region frequently deleted in human cancer. *Biochim. Biophys. Acta*, 1517 (2000) 128-134.
- 1021 Runge, S., Nielsen, F.C., Nielsen, J., Lyhke-Andersen, J., Wewer, U.M. and Christiansen, J.: H19 RNA binds four molecules of insulin-like growth factor II mRNA-binding protein. *J. Biol. Chem.*, 275 (2000) 29562-29569.
- 1022 Scott, J.C., Kennedy, M.W. and McManus, D.P.: Molecular and immunological characterisation of a polymorphic cytosolic fatty acid binding protein from the human blood fluke of humans, *Schistosoma japonicum*. *Biochim. Biophys. Acta*, 1517 (2000) 53-62.
- 1023 Smith, C.Ch., Yu, Y.X., Kulka, M. and Aurelian, L.: A novel human gene similar to the protein kinase (PK) coding domain of the large subunit of herpes simplex virus type 2 ribonucleotide reductase (ICP10) codes for a serine-threonine PK and is expressed in melanoma cells. *J. Biol. Chem.*, 275 (2000) 25690-25699.
- 1024 Stockklauser-Färber, K., Ballhausen, T., Laufer, A. and Rösen, P.: Influence of diabetes on cardiac nitric oxide synthase expression and activity. *Biochim. Biophys. Acta*, 1535 (2000) 10-20.
- 1025 Sugawara, M., Nakanishi, T., Fei, Y.-J., Martindale, R.G., Ganapathy, M.E., Leibach, F.H. and Ganapathy: Structure and function of ATA3, a new subtype of amino acid transport system A, primarily expressed in the liver and skeletal muscle. *Biochim. Biophys. Acta*, 1509 (2000) 7-13.
- 1026 Timofeeva, A.V., Skrypina, N.A., Savochkina, L.P. and Bealashvili, R.S.: Size distribution of the urokinase mRNA decay intermediates in different tissues and cell lines. *Biochim. Biophys. Acta*, 1517 (2000) 33-45.
- 1027 Touhata, K., Tanaka, H., Yokoyama, Y., Sakaguchi, M. and Toyohara, H.: Structure of a full-length cDNA clone for the pro-
- 1028 Vasil'eva, I.A., Ankilova, V.N., Lavrik, O.I. and Moor, N.A.: (Interaction of *T. thermophilus* phenylalanyl-tRNA synthetase with the tRNA<sup>Phe</sup> 3'-terminal nucleotide). *Biokhimiya (Moscow)*, 65 (2000) 1368-1379.
- 1029 Veau, B., Courtois, M., Oudin, A., Chénieux, J.-C., Rideau, M. and Clastre, M.: Cloning and expression of cDNAs encoding two enzymes of the MEP pathway in *Catharanthus roseus*. *Biochim. Biophys. Acta*, 1517 (2000) 159-163.
- 1030 Wakabayashi, N., Kageyama, R., Habu, T., Doi, T., Morita, T., Nozaki, M., Yamamoto, M. and Nishimune, Y.: A novel cis-acting element regulates *HES-1* gene expression in P19 embryonal carcinoma cells treated with retinoic acid. *J. Biochem. (Tokyo)*, 128 (2000) 1087-1095.
- 1031 Watanabe, Y., Kobayashi, H., Suzuki, K.-i., Kotani, K. and Yoshizato, K.: New epidermal keratin genes from *Xenopus laevis*: hormonal and regional regulation of their expression during anuran skin metamorphosis. *Biochim. Biophys. Acta*, 1517 (2001) 339-350.
- 1032 Xu, Y., Liu, L. and Michaeli, S.: Functional analyses of positions across the 5'splice site of the trypanosomatic spliced leader RNA. *J. Biol. Chem.*, 275 (2000) 27883-27892.

- 1033 Yakubovskaya, M.G., Neschastnova, A.A., Jumphyre, K.E., Babon, J.J., Popenko, V.I., Smith, M.J., Lambrinakos, A., Lipatova, Z.V., Dobrovolskaia, M.A., Cappai, R., Masters, C.L., Belitsky, G.A. and Cotton, R.G.: Interaction of linear homologous DNA duplexes via Holliday junction formation. *Eur. J. Biochem.*, 268 (2001) 7-14.
- 1034 Yamane, M. and Abe, A.:  $\omega$ -Hydroxylation activity toward leukotriene B<sub>4</sub> and polyunsaturated fatty acids in the human hepatoblastoma cell line, HepG2, and human lung adenocarcinoma cell line, A549. *J. Biochem. (Tokyo)*, 128 (2000) 827-835.
- 1035 Yin, L., Zhang, Y., Charron, T. and Hillgartner, F.B.: Thyroid hormone, glucagon, and medium-chain fatty acids regulate transcription initiated from promoter 1 and promoter 2 of the acetyl-CoA carboxylase- $\alpha$  gene in chick embryo hepatocytes. *Biochim. Biophys. Acta*, 1517 (2000) 91-99.
- 1036 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. *J. Biochem. (Tokyo)*, 129 (2001) 27-34.
- 1037 Yu, Z.-W., Buren, J., Enerbäck, S., Nilsson, E., Samuelsson, L. and Eriksson, J.W.: Insulin can enhance GLUT4 gene expression in 3T3-F442A cells and this effect is mimicked by vanadate but counteracted by cAMP and high glucose - potential implications for insulin resistance. *Biochim. Biophys. Acta*, 1535 (2001) 174-185.
- 1038 Zampolli, A., Basta, G., Lazzarini, G., Feelisch, M. and de Caterina, R.: Inhibition of endothelial cell activation by nitric oxide donors. *J. Pharmacol. Exp. Ther.*, 295 (2000) 818-823.
- See also 645, 701, 845, 885, 897, 900, 962, 1039, 1043, 1054, 1056, 1099, 1166, 1170, 1197, 1215.
- 21c. *Nucleic acids, DNA*
- 1039 Albet, S., Bentejac, M., Savary, S., Gondcaille, C., Netik, A., Berger, J., Szpirer, C., Troffer-Charlier, N. and Bugaut, M.: Rat adrenoleukodystrophy-related (ALDR) gene: full-length cDNA sequence and new insight in expression. *Biochim. Biophys. Acta*, 1517 (2001) 257-269.
- 1040 Assenberg, R. and Fox, K.R.: The electrophoretic mobility of DNA three-way junctions is affected by the sequence of overhanging single-stranded ends. *Electrophoresis (Weinheim)*, 22 (2001) 413-417.
- 1041 Barat, C., Barbeau, B., Delattre, O. and Rassart, E.: Presence of new alternative exons in human and mouse Fli-1 genes. *Biochim. Biophys. Acta*, 1517 (2000) 164-170.
- 1042 Behrens, B.: (Isolation of high-molecular-weight DNA from blood). *LaborPraxis*, 24, No.9 (2000) 98-102; *C.A.*, 133 (2000) 331649t.
- 1043 Campbell, J.L., Klueva, N.Y., Zheng, H.-g., Nieto-Sotelo, J., Ho, T.-H.D. and Nguyen, H.T.: Cloning of new members of heat shock protein HSP101 gene family in wheat (*Triticum aestivum*) (L.) Moench) inducible by heat, dehydration, and ABA. *Biochim. Biophys. Acta*, 1517 (2001) 270-277.
- 1044 Chaney, M., Pitt, M. and Buck, M.: Sequences within the DNA cross-linking patch of  $\sigma^{55}$  involved in promoter recognition,  $\sigma$  isomerization, and open complex formation. *J. Biol. Chem.*, 275 (2000) 22104-22113.
- 1045 Cheng, L., Jin, B., Chen, W. and Zhu, W.: (The protective effect of HTK and verapamil on primary culture of liver cell). *Hubei Yike Daxue Xuebao*, 21, No. 2 (2000) 96-98; *C.A.*, 133 (2000) 307241h.
- 1046 Cho, T., Sudoh, M., Tanaka, T., Nakashima, Y., Chibana, H. and Kaminishi, H.: Isolation and expression of a gene (CGR1) regulated during the yeast-hyphal transition in *Candida albicans*. *Biochim. Biophys. Acta*, 1517 (2001) 288-292.
- 1047 Clayton, S.J., Scott, F.M., Walker, J., Callaghan, K., Haque, K., Liloglou, T., Xinarianos, G., Shawcross, S., Ceuppens, P., Field, J.K. and Fox, J.C.:  $\kappa$ -ras Point mutation detection in lung cancer: comparison of two approaches to somatic mutation detection using ARMS allele-specific amplification. *Clin. Chem. (Washington)*, 46 (2000) 1929-1938.
- 1048 Davis, W.R., Tomsho, J., Nikam, S., Cook, E.M., Somand, D. and Peliska, J.A.: Inhibition of HIV-1 reverse transcriptase-catalyzed DNA strand transfer reactions by 4-chlorophenylhydrazone of mesoxalic acid. *Biochemistry*, 39 (2000) 14279-14291.
- 1049 Eerola, I., McIntyre, B. and Vikkula, M.: Identification of eight novel 5'-exons in cerebral capillary malformation gene-1 (CCM1) encoding KRIT1. *Biochim. Biophys. Acta*, 1517 (2001) 464-467.
- 1050 Even-Chen, S. and Barenholz, Y.: DOTAP cationic liposomes prefer relaxed over supercoiled plasmids. *Biochim. Biophys. Acta*, 1509 (2000) 176-188.
- 1051 Fang, W.-g., Wei, Y.-t. and Pei, Y.: (An effective silver staining protocol for DNA). *Yichuan*, 22, No.3 (2000) 167-168; *C.A.*, 133 (2000) 307247q.
- 1052 Fong, W.-F., Leung, C.-H., Lam, W., Wong, N.-S. and Cheng, S.-H.: Epidermal growth factor induces Gadd45 (growth arrest and DNA damage inducible protein) expression in A431 cells. *Biochim. Biophys. Acta*, 1517 (2001) 250-256.
- 1053 Gunduz, M., Ouchida, M., Fukushima, K., Hanafusa, H., Etani, T., Nishioka, S. and Shimidzu, K.: Genomic structure of the human INGI gene and tumor-specific mutations detected in head and neck squamous cell carcinomas. *Cancer Res.*, 60 (2000) 31134-3146.
- 1054 Guo, W., Okamoto, M., Lee, Y.-M., Baluda, M.A. and Park, N.-H.: Enhanced activity of cloned hamster TERT gene promoter in transformed cells. *Biochim. Biophys. Acta*, 1517 (2001) 398-409.
- 1055 Hamada, K., Tsuji, H., Shimada, K. and Hosoda, Y.: (Epidemiological analysis of *Salmonella serovar enteritidis* isolates from two food poisoning outbreaks in the Hyogo Prefecture by pulsed-field gel electrophoresis). *Hyogo-kenritsu Eisei Kenkyusho Nenpo*, 34 (1999) 113-117; *C.A.*, 133 (2001) 345739j.
- 1056 Hara, K., Sugita, M. and Aoki, S.: Cloning and characterization of the cDNA for a plastid  $\sigma$  factor from the moss *Physcomitrella patens*. *Biochim. Biophys. Acta*, 1517 (2001) 302-306.
- 1057 Huang, Y., Ying, K., Xie, Y., Zhou, Z., Wang, W., Tang, R., Zhao, W., Zhao, S., Wu, H., Gu, S. and Mao, Y.: Cloning and characterization of a novel human leptin receptor overlapping transcript-like 1 gene (LEPROTL1). *Biochim. Biophys. Acta*, 1517 (2001) 327-331.
- 1058 Hyvönen, Z., Plotniece, A., Reine, I., Chekavichus, B., Duburs, G. and Urtti, A.: Novel cationic amphiphilic 1,4-dihydropyridine derivatives for DNA delivery. *Biochim. Biophys. Acta*, 1509 (2000) 451-466.

- 1059 Inbar, O., Liefshitz, B., Bitan, G. and Kupiec, M.: The relationship between homolog length and crossing over during the repair of a broken chromosome. *J. Biol. Chem.*, 275 (2000) 30833-30838.
- 1060 Jones, N.A., Hill, I.R.C., Stolnik, S., Bignotti, F., Davis, S.S. and Garnett, M.C.: Polymer chemical structure is a key determinant of physicochemical and colloidal properties of polymer-DNA complexes for gene delivery. *Biochim. Biophys. Acta*, 1517 (2000) 1-18.
- 1061 Kumar, R.A., Indulakshmi, R. and Mandayoor, S.: A single-step-friendly method to extract DNA from *Mycobacterium tuberculosis* for polymerase chain reaction. *Anal. Biochem.*, 286 (2000) 310-312.
- 1062 Lin, B., Short, S.A., Eskildsen, M., Klempner, M.S. and Hu, L.T.: Functional testing of putative oligopeptide permease (Opp) proteins of *Borrelia burgdorferi*: a complementation model in *opp*-*Escherichia coli*. *Biochim. Biophys. Acta*, 1499 (2001) 222-231.
- 1063 Ma, Y., Shortreed, M.R., Li, H., Huang, W. and Yeung, E.S.: Single-molecule immunoassay and DNA diagnosis. *Electrophoresis (Weinheim)*, 22 (2001) 421-426.
- 1064 Mc Gee, M.M., Campiani, G., Ramunno, A., Fattorusso, C., Nacci, V., Lawler, M., Williams, D.C. and Zisterer, D.M.: Pyrrolo-1,5-benzoxazepines induce apoptosis in chronic myelogenous leukemia (CML) cells by bypassing the apoptotic suppressor Bcr-Abl. *J. Pharmacol. Exp. Ther.*, 296 (2001) 31-40.
- 1065 Michibata, H., Yanaka, N., Kanoh, Y., Okumura, K. and Omori, K.: Human Ca<sup>2+</sup>/calmodulin-dependent phosphodiesterase PDE1A: novel splice variants, their specific expression, genomic organization, and chromosomal localization. *Biochim. Biophys. Acta*, 1517 (2001) 278-287.
- 1066 Millard, J.T. and Wilkes, E.E.: *cis*- And *trans*-diaminedichloroplatinum(II) interstrand cross-linking of a defined sequence nucleosomal core particle. *Biochemistry*, 39 (2000) 16046-16055.
- 1067 Mirza, S., Kairuki, S., Mamun, K.Z., Beeching, N.J. and Hart, C.A.: Analysis of plasmid and chromosomal DNA of multidrug-resistant *Salmonella enterica* serovar Typhi from Asia. *J. Clin. Microbiol.*, 38 (2000) 1449-1452; *C.A.*, 133 (2000) 293095z.
- 1068 Mücke, M., Lurz, R., Mackeldanz, P., Behlke, J., Krüger, D.H. and Reuter, M.: Imaging DNA loops induced by restriction endonuclease EcoRII. *J. Biol. Chem.*, 275 (2000) 30631-30637.
- 1069 Myhrstad, M.C.W., Husberg, C., Murphy, P., Nordström, O., Blomhoff, R., Moskaug, J.Ø. and Kolstø, A.-B.: TCF11/Nrf1 overexpression increases the intracellular glutathione level and can transactivate the  $\gamma$ -glutamylcysteine synthetase (GCS) heavy subunit promoter. *Biochim. Biophys. Acta*, 1517 (2001) 212-219.
- 1070 Nagasaki, T., Atarashi, K., Makino, K., Noguchi, A. and Tamagaki, S.: Synthesis of a novel water-soluble polyazobenzene dendrimer and photoregulation of affinity toward DNA. *Mol. Cryst. Liq. Cryst. Sci. Technol., Sect. A*, 345 (2000) 227-232; *C.A.*, 134 (2001) 42552x.
- 1071 Nakatake, Y., Hoshikawa, M., Asaki, T., Kassai, Y. and Itoh, N.: Identification of a novel fibroblast growth factor, FGF-22, preferentially expressed in the inner root sheath of the hair follicle. *Biochim. Biophys. Acta*, 1517 (2001) 460-463.
- 1072 Nguyen, V.T. and Benveniste, E.N.: Involvement of STAT-1 and Ets family members in interferon- $\gamma$  induction of CD40 transcription in microglia/macrophages. *J. Biol. Chem.*, 275 (2000) 23674-23684.
- 1073 Omasa, T., Chen, Y.-G., Mantalaris, A. and Wu, J.H.D.: A cDNA from human bone marrow encoding a protein exhibiting homology to the ATP1 $\gamma$ 1/PLM/MAT8 family of transmembrane proteins. *Biochim. Biophys. Acta*, 1517 (2001) 307-310.
- 1074 Rapp, A., Bock, C., Dittman, H. and Greulich, K.-O.: UV-A breakage sensitivity of human chromosomes as measured by COMET-FISH depends on gene density and not on the chromosome size. *J. Photochem. Photobiol., B*, 56 (2000) 109-117; *C.A.*, 134 (2001) 38878r.
- 1075 Slater, G.W., Desruisseaux, C., Hubert, S.J., Mercier, J.-F., Labrie, J., Boileau, J., Tessier, F. and Pepin, M.P.: Theory of DNA electrophoresis: A look at some current challenges. *Electrophoresis (Weinheim)*, 21 (2000) 3873-3887 - a review with 133 refs.
- 1076 Song, J., Sohn, K.-J., Medline, A., Ash, C., Gallinger, S. and Kim, Y.-I.: Chemopreventive effects of dietary folate on intestinal polyps in Acp<sup>+</sup>/Msh2<sup>-</sup> mice. *Cancer Res.*, 60 (2000) 3191-3199.
- 1077 Takashima, S., Kono, M., Kurosawa, N., Yoshida, Y., Tachida, Y., Inoue, M., Kanematsu, T. and Tsuji, S.: Genomic organization and transcriptional regulation of the mouse GD3 synthase gene (ST8Sia I): comparison of genomic organization of the mouse sialyltransferase genes. *J. Biochem. (Tokyo)*, 128 (2000) 1033-1043.
- 1078 Taylor, J.D., Ackroud, A.J. and Halford, S.E.: The gel shift assay for the analysis of DNA-protein interactions. In: Rapley, R. (Editor), *Nucleic Acid Protoc. Handb.*, Totowa, Humana Press Inc., Totowa, 2000, pp. 745-756; *C.A.*, 134 (2001) 2236r.
- 1079 Todorov, R., Starchev, K. and Stoylov, S.P.: Electric light scattering from single-stranded DNA in linear polyacrylamide solutions. *Electrophoresis (Weinheim)*, 22 (2001) 39-42.
- 1080 Tronov, V.A. and Konstantinov, E.M.: (DNA repair and death of resting human blood lymphocytes caused by hydrogen peroxide). *Biokhimiya (Moscow)*, 65 (2000) 1516-1524.
- 1081 Vigalsky, V., Antalik, M., Adamcik, J. and Podhradsky, D.: Early melting of supercoiled DNA topoisomers observed by TGGE. *Nucleic Acids Res.*, 28, No.11 (2000) e51, ii-v; *C.A.*, 133 (2000) 318661w.
- 1082 Watabe, M., Machida, K. and Osada, H.: MT-21 is a synthetic apoptosis inducer that directly induces cytochrome c release from mitochondria. *Cancer Res.*, 60 (2000) 5214-5222.
- 1083 Wetzel, C.C. and Berberich, S.J.: p53 Binds to cisplatin-damaged DNA. *Biochim. Biophys. Acta*, 1517 (2001) 392-397.
- 1084 Zhao, T., Heyduk, T., Allis, C.D. and Eisenberg, J.C.: Heterochromatin protein 1 binds to nucleosomes and DNA *in vitro*. *J. Biol. Chem.*, 275 (2000) 28332-28338.
- See also 623, 626, 677, 749, 766, 793, 862, 988, 1022, 1030, 1086, 1104, 1116, 1118, 1179, 1190.
- 21d. *Structural studies on RNA and RNA mapping*
- 1085 Blanco, G., Sanchez, C., Rodicio, M.R., Mendez, C. and Salas, J.A.: Identification of a growth phase-dependent promoter in the *rpII* operon of *Streptomyces coelicolor* A3(2). *Biochim. Biophys. Acta*, 1517 (2001) 243-249.
- 1086 Bralley, P. and Jones, G.H.: Transcriptional analysis and regulation of the sigma-E gene of *Streptomyces antibioticus*. *Biochim. Biophys. Acta*, 1517 (2001) 410-415.

- 1087 Brisse, S., Verduin, C.M., Milatovic, D., Fluit, A., Verhoef, J., Laevens, S., Vandamme, P., Tummler, B., Verbrugh, H.A. and van Belkum, A.: Distinguishing species of the *Burkholderia cepacia* complex and *Burkholderia gladioli* by automated ribotyping. *J. Clin. Microbiol.*, 38 (2000) 1876-1884; *C.A.*, 133 (2001) 346737u.
- 1088 Gardner, H.P., Ha, S.L., Reynolds, C. and Chodosh, L.A.: The CaM kinase, Pnck, is spatially and temporally regulated during murine mammary gland development and may identify an epithelial cell subtype involved in breast cancer. *Cancer Res.*, 60 (2000) 5571-5577.
- 1089 Hew, Y., Lan, C., Grzeczak, Z. and Keeley, F.W.: Identification of GA-rich sequence as a protein-binding site in the 3'-untranslated region of chicken elastin mRNA with a potential role in the developmental regulation of elastin in mRNA stability. *J. Biol. Chem.*, 275 (2000) 24857-24864.
- 1090 Müller, B., Link, J. and Smythe, C.: Assembly of U7 small nuclear ribonucleoprotein particle and histone RNA 3' processing in *Xenopus* egg extracts. *J. Biol. Chem.*, 275 (2000) 24284-24293.
- 1091 Nguyen, L.H., Erzberger, J.P., Root, J. and Wilson, D.M., III: The human homolog of *Escherichia coli* Orn degrades small single stranded RNA and DNA oligomers. *J. Biol. Chem.*, 275 (2000) 25900-25906.
- 1092 Wing, H.J., Green, J., Guest, J.R. and Busby, S.J.W.: Role of activating region 1 of *Escherichia coli* FNR protein in transcription activation at class II promoters. *J. Biol. Chem.*, 275 (2000) 29061-29065.
- 1093 Yang, Y., Sowden, M.P. and Smith, H.C.: Induction of cytidine to uridine editing on cytoplasmic apolipoprotein B mRNA by overexpressing APOBEC-1. *J. Biol. Chem.*, 275 (2000) 22663-22669.
- See also 651, 657, 712, 966, 989, 990, 995, 1009, 1012, 1021, 1048, 1124.
- 21e. *Structural studies on DNA and DNA mapping*
- 1094 Abril, A.M., Salas, M. and Hermoso, J.M.: Identification of residues within two regions involved in self-association of viral histone-like protein p6 from phage Ø29. *J. Biol. Chem.*, 275 (2000) 26404-26410.
- 1095 Ahmed, F.A., Jequier, A.M., Cummins, J.M. and Whelan, J.: Differentially expressed DNA sequences following recovery from unilateral testicular torsion in rat. *Biochim. Biophys. Acta*, 1535 (2001) 192-199.
- 1096 Ahnhudt, C., Muche, J.M., Dijkstra, K., Sterry, W. and Lukowsky, A.: An approach to the sensitivity of temperature-gradient gel electrophoresis in the detection of clonally expanded T-cells in cutaneous T-cell lymphoma. *Electrophoresis (Weinheim)*, 22 (2001) 33-38.
- 1097 Aizawa, K. and Hayashizaki, Y.: (Molecular sieving media for DNA sequencing). *Seibutsu Butsuri Kagaku*, 44, No. 3 (2000) 163-171; *C.A.*, 133 (2000) 247730e.
- 1098 Angelastro, J.M., Klimaschewski, L.P. and Vitolo, O.V.: Improved NlaIII digestion of PAGE-purified 102 bp ditags by addition of a single purification step in both the SAGE and microSAGE protocols. *Nucleic Acids Res.*, 28, No. 12 (2000) e62, ii-iii; *C.A.*, 133 (2000) 330121c.
- 1099 Badia, E., Duchesne, M.-J., Semlali, A., Fuentes, M., Giamarchi, C., Richard-Foy, H., Nicolas, J.C. and Pons, M.: Long-term hydroxytamoxifen treatment of an MFC-7-derived breast cancer cell line irreversibly inhibits the expression of estrogenic genes through chromatin remodeling. *Cancer Res.*, 60 (2000) 4130-4138.
- 1100 Baldwin, R.L., Nemeth, E., Tran, H., Shvartsman, H., Cass, I., Narod, S. and Karlan, B.Y.: BRCA1 promoter region hypermethylation in ovarian carcinoma: a population-based study. *Cancer Res.*, 60 (2000) 5329-5333.
- 1101 Barbieri, L., Valbonesi, P., Righi, F., Zuccheri, G., Monti, F., Gorini, P., Samori, B. and Stirpe, F.: Polynucleotide:adenosine glycosidase is the sole activity of ribosome-inactivating proteins on DNA. *J. Biochem. (Tokyo)*, 128 (2000) 883-889.
- 1102 Bearzatto, A., Szadkowski, M., Macpherson, P., Jiricny, J. and Karran, P.: Epigenetic regulation of the MGMT and hMSH6 DNA repair genes in cells resistant to methylating agents. *Cancer Res.*, 60 (2000) 3262-3270.
- 1103 Binaschi, M., Farinosi, R., Borgnetto, M.E. and Capranico, G.: *In vivo* site specificity and human isoenzyme selectivity of two topoisomerase II-poisoning anthracyclines. *Cancer Res.*, 60 (2000) 3770-3776.
- 1104 Bioenvenu, T., Carrie, A., de Roux, N., Vinet, M.-C., Jonveaux, P., Couvert, P., Villard, L., Arzimanoglou, A., Beddijord, C., Fontes, M., Tardieu, M. and Chelly, J.: MECP2 mutations account for most cases of typical forms of Rett syndrome. *Hum. Mol. Genet.*, 9 (2000) 1377-1384; *C.A.*, 133 (2000) 333411h.
- 1105 Bisgrove, D.A., Monckton, E.A., Packer, M. and Godbout, R.: Regulation of brain fatty acid-binding protein expression by differential phosphorylation of nuclear factor I malignant glioma cell lines. *J. Biol. Chem.*, 275 (2000) 30668-30676.
- 1106 Biyani, M. and Nishigaki, K.: Hundredfold productivity of genome analysis by introduction of microtemperature-gradient gel electrophoresis. *Electrophoresis (Weinheim)*, 22 (2001) 23-28.
- 1107 Bruck, I. and O'Donnell, M.: The DNA replication machine of a gram-positive organism. *J. Biol. Chem.*, 275 (2000) 28971-28983.
- 1108 Bryan, T.M., Goodrich, K.J. and Cech, T.R.: A mutant of Tetrahymena telomerase reverse transcriptase with increased processivity. *J. Biol. Chem.*, 275 (2000) 24199-24207.
- 1109 Chakrabarti, S., Price, B.D., Tetradis, S., Fox, E.A., Zhang, Y., Maulik, G. and Makrigiorgos, G.M.: Highly selective isolation of unknown mutations in diverse DNA fragments: Toward new multiplex screening in cancer. *Cancer Res.*, 60 (2000) 3732-3737.
- 1110 Chang, P. and Marians, K.J.: Identification of a region of *Escherichia coli* DnaB required for functional interaction with DnaG at the replication fork. *J. Biol. Chem.*, 275 (2000) 26187-26195.
- 1111 Chen, B., He, L., Savell, V.H., Jenkins, J.J. and Parham, D.M.: Inhibition of the interferon- $\gamma$ /signal transducers and activators of transcription (STAT) pathway by hypermethylation at a STAT-binding site in the p21<sup>WAF1</sup> promoter region. *Cancer Res.*, 60 (2000) 3290-3298.
- 1112 Cherepanov, A., Yildirim, E. and de Vries, S.: Joining of short DNA oligonucleotides with base pair mismatches by T4 DNA ligase. *J. Biochem. (Tokyo)*, 129 (2001) 61-68.

- 1113 Da Silva, E.F. and Reha-Krantz, L.J.: Dinucleotide repeat expansion catalyzed by bacteriophage T4 DNA polymerase *in vitro*. *J. Biol. Chem.*, 275 (2000) 31528-31535.
- 1114 De Boeck, M., Touil, N., de Visscher, G., Vande, P.A. and Kirschvolders, M.: Validation and implementation of an internal standard in Comet assay analysis. *Mutat. Res.*, 469, No. 2 (2000) 181-197; *C.A.*, 133 (2001) 345791v.
- 1115 Eggleston, A.K. and West, S.C.: Cleavage of Holliday junctions by the *Escherichia coli* RuvABC complex. *J. Biol. Chem.*, 275 (2000) 26467-26476.
- 1116 Eriksson, P., Alipour, H., Adler, L. and Blomberg, A.: Rap1p-binding sites in the *Saccharomyces cerevisiae* GPD1 promoter are involved in its response to NaCl. *J. Biol. Chem.*, 275 (2000) 29368-29376.
- 1117 Escolar, L., Perez-Martin, J. and de Lorenzo, V.: Evidence of an unusually long operator for the Fur repressor in the aerobactin promoter of *Escherichia coli*. *J. Biol. Chem.*, 275 (2000) 24709-24714.
- 1118 Estevez, M.C., Sineriz, F. and Abate, C.: Improved method for separation of high molecular weight DNA molecules from *Zygomonas mobilis*. *Biotechnol. Lett.*, 22 (2000) 1273-1276; *C.A.*, 133 (2001) 360550j.
- 1119 Gal, I., Varga, Y., Szilagyi, I., Balazs, M., Schlamadinger, J. and Szabo, G., Jr.: Protease-elicited TUNEL positivity of non-apoptotic fixed cells. *J. Histochem. Cytochem.*, 48 (2000) 963-969; *C.A.*, 133 (2000) 249267h.
- 1120 Geiger, A., Salazar, G., le Cam, A. and Kervran, A.: Characterization of an enhancer element in the proximal promoter of the mouse glucagon receptor gene. *Biochim. Biophys. Acta*, 1517 (2001) 236-242.
- 1121 Grzybowski, T.: Letters to the Editor: Controversies over heteroplasmy. *Electrophoresis (Weinheim)*, 22 (2001) 180-182.
- 1122 Gutierrez, J., Sierra, J., Medina, R., Puchi, M., Imschenetzky, M., van Wijnen, A., Lian, J., Stein, G., Stein, J. and Montecino, M.: Interaction of CBF $\alpha$ /AML/PEBP2 $\alpha$  transcription factors with nucleosomes containing promoter sequences requires flexibility in the translational positioning of the histone octamer and exposure of the CBF $\alpha$  site. *Biochemistry*, 39 (2000) 13565-13574.
- 1123 Hanakahi, L.A., Bu, Z. and Maizels, N.: The C-terminal domain of nucleolin accelerates nucleic acid annealing. *Biochemistry*, 39 (2000) 15493-15499.
- 1124 Harwood, A.J.: Native polyacrylamide gel electrophoresis. In: Rapley, R. (Editor), *Nucleic Acid Protoc. Handb.*, Humana Press Inc., Totowa, 2000, pp. 73-75; *C.A.*, 133 (2000) 249214p.
- 1125 He, J.L., Chen, W.L., Jin, L.F. and Jin, H.Y.: Comparative evaluation of the *in vitro* micronucleus test and the comet assay for the detection of genotoxic effects of X-ray radiation. *Mutat. Res.*, 469 (2000) 223-231; *C.A.*, 133 (2000) 331453z.
- 1126 Henningfeld, K.A., Rastegar, S., Adler, G. and Köchel, W.: Smad1 and Smad4 are components of the bone morphogenetic Protein-4 (BMP-4)-induced transcription complex of the Xvent-2B promoter. *J. Biol. Chem.*, 275 (2000) 21827-21835.
- 1127 Hsu, Ch.-T., Ting, Ch.-Y., Ting, Ch.-J., Chen, T.-Y., Lin, Ch.-P., Wang-Peng, J. and Hwang, J.: Vaccination against gonadotropin-releasing hormone (gnRH) using toxin receptor-binding domain-conjugated GnRH repeats. *Cancer Res.*, 60 (2000) 3701-3705.
- 1128 Hudson, C.R., Quist, C., Lee, M.D., Keyes, K., Dodson, S.V., Morales, C., Sanchez, S., White, D.G. and Maurer, J.J.: Genetic relatedness of *Salmonella* isolates from nondomestic birds in southeastern United States. *J. Clin. Microbiol.*, 38 (2000) 1860-1865; *C.A.*, 133 (2000) 278611w.
- 1129 Ichiyama, S.: (Molecular epidemiology - molecular typing of pathogenic bacteria using pulsed-field gel electrophoresis). *Nippon Saikingaku Zasshi*, 55 (2000) 21-27; *C.A.*, 133 (2000) 276813q - a review with 13 refs.
- 1130 Itaya, M., Nagata, T., Shiroishi, T., Fujita, K. and Tsuge, K.: Efficient cloning and engineering of giant DNAs in a novel *Bacillus subtilis* genome vector. *J. Biochem. (Tokyo)*, 128 (2000) 869-875.
- 1131 Kamei, S., Kazama, Y., Kuijper, J.L., Foster, D.C. and Kisiel, W.: Genomic structure and promoter activity of the human tissue factor pathway inhibitor-2 gene. *Biochim. Biophys. Acta*, 1517 (2001) 430-435.
- 1132 Kennedy, M.A. and Bard, M.: Positive and negative regulation of squalene synthase (ERG9), an ergosterol biosynthetic gene, in *Saccharomyces cerevisiae*. *Biochim. Biophys. Acta*, 1517 (2001) 177-189.
- 1133 Kratzmeier, M., Albig, W., Hänecke, K. and Doenecke, D.: Rapid dephosphorylation of H1 histones after apoptosis induction. *J. Biol. Chem.*, 275 (2000) 30478-30486.
- 1134 Kvaratskhelia, M., Wardleworth, B.N., Norman, D.G. and White, M.F.: A conserved nuclease domain in the archaeal Holliday junction resolving enzyme Hjc. *J. Biol. Chem.*, 275 (2000) 25540-25546.
- 1135 Li, Y., Schwager, C. and Ansoerge, W.: Using a neural network for lane-tracking of DNA sequencing slab gels. *J. Biochem. Biophys. Methods*, 45 (2000) 65-74; *C.A.*, 134 (2001) 37881z.
- 1136 Lin, L., Prescott, M.S., Zhu, Z., Singh, P., Chun, S.Y., Kuick, R.D., Hanash, S.M., Orringer, M.B., Glover, T.W. and Beer, D.G.: Identification and characterization of a 19g12 amplicon in esophageal adenocarcinomas reveals Cyclin E as the best candidate gene for this amplicon. *Cancer Res.*, 60 (2000) 7021-7027.
- 1137 Liu, X. and Smerdon, M.J.: Nucleotide excision repair of the 5 S ribosomal RNA gene assembled into a nucleosome. *J. Biol. Chem.*, 275 (2000) 23729-23735.
- 1138 Lorenzo, E., Collins, T., Fisher, E. and Herrera, R.J.: The use of *tat* and *env* sequences from human immunodeficiency virus 1 in phylogenetic epidemiological studies. *Electrophoresis (Weinheim)*, 22 (2001) 438-444.
- 1139 Malgeri, U., Baldini, L., Perfett, V., Fabris, S., Vignarelli, M.C., Colombo, G., Lotti, V., Compasso, S., Lombardi, L., Maiolo, A.T. and Neri, A.: Detection of t(4;14)(p16.3;q32) chromosomal translocation in multiple myeloma by reverse transcription-polymerase chain reaction analysis of IGH-MMSET fusion transcripts. *Cancer Res.*, 60 (2000) 4058-4061.
- 1140 Martelange, V., de Dmet, Ch., de Plaen, E., Lurquin, Ch. and Boon, T.: Identification on a human sarcoma of two new genes with tumor-specific expression. *Cancer Res.*, 60 (2000) 3848-3855.
- 1141 Meninghaus, M., Chapman, R.D., Horndasch, M. and Eick, D.: Conditional expression of RNA polymerase II in mammalian cells. *J. Biol. Chem.*, 275 (2000) 24375-24382.



- 1171 Zhang, H. and Gates, K.S.: DNA binding and alkylation by the "left half" of Azinomycin B. *Biochemistry*, 39 (2000) 14968-14975.
- 1172 Zhao, R., Gao, F. and Goldman, I.D.: Molecular cloning of human thiamin pyrophosphokinase. *Biochim. Biophys. Acta*, 1517 (2001) 320-322.
- See also 615, 621, 643, 661, 721, 807, 831, 876, 957, 964, 968, 971, 977, 978, 983, 993, 1030, 1035, 1044, 1052, 1053, 1054, 1059, 1062, 1067, 1068, 1072, 1074, 1091.
- 21f. *Complex mixtures of nucleic acids, their fragments and PCR products*
- 1173 Abiko, Y., Mitamura, J., Nishimura, M., Inoue, T., Shimono, M. and Kaku, T.: (Quantitative analysis of  $\beta$  defensin 2 mRNA in SCC-9 cells by Light Cycler using SYBR Green I). *Shika Gakuho*, 100 (2000) 277-282; C.A., 134 (2001) 25847e.
- 1174 Bevan, S. and Houlston, R.S.: Genotyping methodologies. *Methods Mol. Med.*, 41(Celiac Disease) (2000) 11-20; C.A., 133 (2000) 23324a.
- 1175 Bosshard, P.P., Stettler, R. and Bachofen, R.: Seasonal and spatial community dynamics in the meromictic Lake Cadagno. *Arch. Microbiol.*, 174, No. 3 (2000) 168-174; C.A., 133 (2001) 359580n.
- 1176 Bruggemann, J., Stephen, J.R., Cahng, Y.-J., Macnaughton, S.J., Kowalchuk, G.A., Kline, E. and White, D.C.: Competitive PCR-DGGE analysis of bacterial mixtures an internal standard and an appraisal of template enumeration accuracy. *J. Microbiol. Methods*, 40 (2000) 111-123; C.A., 133 (2000) 261989c.
- 1177 Caricasole, A., Sala, C., Roncarati, R., Formenti, E. and Terstapen, G.C.: Cloning and characterization of the human phosphoinositide-specific phospholipase C-beta 1 (PLC $\beta$ 1). *Biochim. Biophys. Acta*, 1517 (2000) 63-72.
- 1178 Dahllof, I., Bailie, H. and Kjelleberg, S.: rpoB-Based microbial community analysis avoids limitations inherent in 16S rRNA gene intraspecies heterogeneity. *Appl. Environ. Microbiol.*, 66 (2000) 3376-3380; C.A., 134 (2001) 13806c.
- 1179 Gasser, R.B., Zhu, X., Caccio, S., Chalmers, R., Widmer, G., Morgan, U.M., Thompson, R.C.A., Pozio, E. and Browning, G.F.: Genotyping *Cryptosporidium parvum* by single-strand conformation polymorphism analysis of ribosomal and heat shock gene regions. *Electrophoresis (Weinheim)*, 22 (2001) 433-437.
- 1180 Goth, L., Rass, P. and Madarasi, I.: A novel catalase mutation detected by polymerase chain reaction-single strand conformation polymorphism, nucleotide sequencing, and Western blot analyses is responsible for the type C of Hungarian acatalasemia. *Electrophoresis (Weinheim)*, 22 (2001) 49-51.
- 1181 Gunawardana, G.A., Townsend, K.M. and Frost, A.J.: Molecular characterization of avian *Pasteurella multocida* isolates from Australia and Vietnam by REP-PCR and PFGE. *Vet. Microbiol.*, 72 (2000) 97-109; C.A., 134 (2001) 13781r.
- 1182 Hidaka, K., Watanabe, Y., Tomita, M., Ueda, N., Higashi, M., Minatogawa, Y. and Iuchi, I.: Gene analysis of genomic DNA from stored serum by polymerase chain reaction: identification of three missense mutations in patients with cholinesterasemia and ABO genotyping. *Clin. Chim. Acta*, 303 (2001) 61-67.
- 1183 Honda, H., Miharu, N., Ohashi, Y. and Ohama, K.: Successful diagnosis of fetal gender using conventional PCR analysis of maternal serum. *Clin. Chem. (Washington)*, 47 (2001) 41-446.
- 1184 Huang, J. and Sun, M.: Fluorescein PAGE analysis of microsatellite-primed PCR: a fast and efficient approach for genomic fingerprinting. *BioTechniques*, 28 (2000) 1068-1072; C.A., 133 (2000) 306043h.
- 1185 Jensen, H., Rourke, I.J., Møller, M., Jønson, L. and Johnsen, A.H.: Identification and distribution of CCK-related peptides and mRNAs in the rainbow trout, *Oncorhynchus mykiss*. *Biochim. Biophys. Acta*, 1517 (2001) 190-201.
- 1186 Lai, C.-H., Chiu, J.-Y. and Lin, W.-c.: Identification of the human crooked neck gene by comparative gene identification. *Biochim. Biophys. Acta*, 1517 (2001) 449-454.
- 1187 Lampen, A., Meyer, S., Arnhold, T. and Nau, H.: Metabolism of vitamin A and its active metabolite all-trans-retinoic acid in small intestinal enterocytes. *J. Pharmacol. Exp. Ther.*, 295 (2000) 979-985.
- 1188 Lavrukhin, O.V. and Lloyd, R.S.: Involvement of phylogenetically conserved acidic amino acid residues in catalysis by an oxidative DNA damage enzyme formamidopyrimidine glycosylase. *Biochemistry*, 39 (2000) 4526-4534.
- 1189 Lorain, S., Lecluse, Y., Scamps, C., Mattei, M.-G. and Lipinski, M.: Identification of human and mouse HIRA-interacting protein-5 (HIRIP5), two mammalian representatives in a family of phylogenetically conserved proteins with a role in the biogenesis of Fe/S proteins. *Biochim. Biophys. Acta*, 1517 (2001) 376-383.
- 1190 Lu, J.-J., Wu, J.C.-C., Chieuh, T.-S., Perng, C.-L., Chi, W.-M. and Lee, W.-H.: Characterization of a highly glycopeptide-resistant *Enterococcus gallinarum* isolate. *J. Formosan Med. Assoc.*, 99 (2000) 305-310; C.A., 133 (2001) 346940e.
- 1191 Mahmood, J., Takita, H., Ojima, Y., Kobayashi, M., Kohgo, T. and Kuboki, Y.: Geometric effects of matrix upon cell differentiation: BMP-induced osteogenesis using a new bioglass with a feasible structure. *J. Biochem. (Tokyo)*, 129 (2001) 163-171.
- 1192 McCabe, M.J., Jr., Singh, K.P., Reddy, S.A., Chelladurai, B., Pounds, J.G., Reiners, J.J., Jr. and States, J.C.: Sensitivity of myelomonocytic leukemia cells to arsenite-induced cell cycle disruption, apoptosis, and enhanced differentiation is dependent on the inter-relationship between arsenic concentration, duration of treatment, and cell cycle phase. *J. Pharmacol. Exp. Ther.*, 295 (2000) 724-733.
- 1193 Mei, J.M., Hord, N.G., Winterstein, D.F., Donald, S.P. and Phang, J.M.: Differential formation of  $\beta$ -Catenin/lymphoic enhancer factor-1 DNA binding complex induced by nitric oxide in mouse colonic epithelial cells differing in adenomatous polyposis coli (Acp) genotype. *Cancer Res.*, 60 (2000) 3379-3283.
- 1194 Moon, N.S., Berube, G. and Nepven, A.: CCAAT displacement activity involves CUT repeats 1 and 2, not the CUT homeodomain. *J. Biol. Chem.*, 275 (2000) 31325-31334.
- 1195 Nishigaki, K., Saito, A., Takashi, H. and Naimuddin, M.: Whole genome sequence-enabled prediction of sequences performed for random PCR products of *Escherichia coli*. *Nucleic Acids Res.*, 28 (2000) 1879-1884; C.A., 133 (2000) 291609w.
- 1196 Philippot, L., Mirleau, P., Mazurier, S., Siblot, S., Hartmann, A., Lemanceau, P. and Germon, J.C.: Characterization and transcriptional analysis of *Pseudomonas fluorescens* denitrifying clusters containing the *nar*, *nir*, *nor* and *nos* genes. *Biochim. Biophys. Acta*, 1517 (2001) 436-440.

- 1197 Porta, H. and Rocha-Sosa, M.: A *Phaseolus vulgaris* lipoxygenase gene expressed in nodules and in *Rhizobium tropici* inoculated roots. *Biochim. Biophys. Acta*, 1517 (2000) 139-142.
- 1198 Preiksaitis, H.G., Krysiak, P.S., Chrones, T., Rajgopal, V. and Laurier, L.G.: Pharmacological and molecular characterization of muscarinic receptor subtypes in human esophageal smooth muscle. *J. Pharmacol. Exp. Ther.*, 295 (2000) 879-888.
- 1199 Saunders, G.C., Dukes, J., Parkes, H.C. and Cornett, J.H.: Inter-laboratory study on thermal cycler performance in controlled PCR and random amplified polymorphic DNA analyses. *Clin. Chem. (Washington)*, 47 (2001) 47-55.
- 1200 Schöttler, S., Wende, W. and Pingoud, A.: Identification of Asp218 and Asp326 as the principal Mg<sup>2+</sup> binding ligands of the homing endonuclease PI-SceI. *Biochemistry*, 39 (2000) 15895-15900.
- 1201 Simsek, M., Tanira, M.O.M., Al-Baloushi, K.A., Al-Barwani, H.S., Lawatia, K.M. and Bayoumi, R.A.L.: A precaution in the detection of heterozygotes by sequencing: comparison of automated DNA sequencing and PCR-restriction fragment length polymorphism methods. *Clin. Chem. (Washington)*, 47 (2001) 134-137.
- 1202 Suzuki, T., Ogata, A., Tashiro, K., Nagashima, K., Tamura, M., Yasui, K. and Nishihira, J.: Japanese encephalitis virus up-regulates expression of macrophage migration inhibitory factor (MIF) mRNA in the mouse brain. *Biochim. Biophys. Acta*, 1517 (2000) 100-106.
- 1203 Sylvia, V.L., Schwartz, Z., del Toro, F., DeVeau, P., Whetstone, R., Hardin, R.R., Dean, D.D. and Boyan, B.D.: Regulation of phospholipase D (PLD) in growth plate chondrocytes by 24R,25-(OH)<sub>2</sub>D<sub>3</sub> is dependent on cell maturation state (resting zone cells) and is specific to the PLD2 isoform. *Biochim. Biophys. Acta*, 1499 (2001) 209-221.
- 1204 Villemain, J.L., Ma, Y., Giedroc, D.P. and Morrical, S.W.: Mutations in the N-terminal cooperativity domain of gene 32 protein alter properties of the T4 DNA replication and recombination systems. *J. Biol. Chem.*, 275 (2000) 31496-31504.
- 1205 Watanabe, G., Umetsu, K., Yuasa, I., Sato, M., Sakabe, M., Naito, E., Yamanouchi, H. and Suzuki, T.: A novel technique for detecting single nucleotide polymorphism by analyzing consumed allele-specific primers. *Electrophoresis (Weinheim)*, 22 (2001) 418-420.
- 1206 Wong, D.L. and Reich, N.O.: Identification of tyrosine 204 as the photo-cross-linking site in the DNA-EcoRI DNA methyltransferase complex by electrospray ionization mass spectrometry. *Biochemistry*, 39 (2000) 15410-15417.
- 1207 Xin, Z., Soejima, H., Higashimoto, K., Yatsuki, H., Zhu, X., Satoh, Y., Masaki, Z., Kaneko, Y., Jinno, Y., Fukuzawa, R., Hata, J.-i. and Mukai, T.: A novel imprinted gene, KCNQ1DN, within the WT2 critical region of human chromosome 11p15.5 and its reduced expression in Wilms'. *J. Biochem. (Tokyo)*, 128 (2000) 847-853.
- See also 639, 646, 650, 705, 724, 798, 807, 845, 975, 980, 994, 1009, 1026, 1047, 1065, 1073, 1078, 1096, 1215.
25. ORGANIC PHOSPHORUS COMPOUNDS (INCL. SUGAR PHOSPHATES)  
See 645, 676, 718, 742, 984.
26. ORGANOMETALLIC AND RELATED COMPOUNDS  
26c. Coordination compounds  
1208 Tewari, B.B.: Ionophoretic studies on mixed metal-nitrilotriacetate-penicillamine complexes. *J. Chromatogr. A*, 910 (2001) 181-185.  
1209 Yadav, A., Sharma, K.K., Singh, R.K.P. and Yadav, K.L.: Study of stability constant of ternary complexes by ionophoretic technique. *Res. J. Chem. Environ.*, 4, No.2 (2000) 17-21; *C.A.*, 133 (2000) 287183k.
27. VITAMINS AND VARIOUS ANIMAL GROWTH FACTORS (NON-PEPTIDIC)  
1210 Chung, H.J., Kim, Y.-A., Kim, Y.J., Choi, Y.K., Hwang, Y.K. and Park, Y.S.: Purification and characterization of UDP-glucose:tetrahydrobiopterin glucosyltransferase from *Synechococcus* sp. PCC 7942. *Biochim. Biophys. Acta*, 1524 (2000) 183-188.
28. ANTIBIOTICS  
See 1103.
30. SYNTHETIC AND NATURAL DYES  
30b. Chloroplast and other natural pigments  
1211 Emry, R., Curtright, R.D., Wright, J. and Markwell, J.: Candies to dye for: cooperative, open-ended student activities to promote understanding of electrophoretic fractionation. *J. Chem. Educ.*, 77 (2000) 1323-1324; *C.A.*, 133 (2001) 349772n.
31. PLASTICS AND THEIR INTERMEDIATES  
1212 Gong, Y.-K., Nakashima, K. and Xu, R.: Characterization of polystyrene latex surfaces by conductometric titration, rhodamine 6G adsorption, and electrophoresis measurements. *Langmuir*, 16 (2000) 8546-8548; *C.A.*, 133 (2001) 363199n.  
See also 624, 1070.

## 32. DRUG ANALYSIS

32a. *Drug analysis, general techniques*

1213 Weiss, D.J., Saunders, K. and Lunte, C.E.: pH-Mediated field-amplified sample stacking of pharmaceutical cations in high-ionic strength samples. *Electrophoresis (Weinheim)*, 22 (2001) 59-65.

32f. *Cytostatics*

See 1066.

32h. *Toxicological and forensic applications*

See 914.

## 33. CLINICO-CHEMICAL APPLICATIONS

33b. *Complex mixtures and profiling (single compounds by cross-reference only)*

1214 Dupre, T., Cuer, M., Barrot, S., Barnier, A., Cormier-Daire, V., Munnich, A., Durand, G. and Seta, N.: Congenital disorder of glycosylation Ia with deficient phosphomannomutase activity but normal plasma glycoprotein pattern. *Clin. Chem. (Washington)*, 47 (2001) 132-134.

1215 Sorensen, B.S., Schmidt, H., von der Maase, H., Straten, P.T. and Neko, E.: Quantification of melanoma cell-specific MART-1 mRNA in peripheral blood by a calibrated competitive reverse transcription-PCR. *Clin. Chem. (Washington)*, 46 (2000) 1923-1928.

See also 646, 912, 924, 1047, 1182, 1183, 1201.

## 34. FOOD ANALYSIS

34b. *Complex mixtures (single compounds by cross-reference only)*

See 653, 759, 780.

## 37. CELLS, CELLULAR PARTICLES AND SUPRAMOLECULAR STRUCTURES

1216 Kumar, R. and Prasad, R.: Functional characterization of purified zinc transporter from renal brush border membrane of rat. *Biochim. Biophys. Acta*, 1509 (2000) 429-439.

1217 Lindner, R.: One-step separation of endocytic organelles, Golgi/trans-Golgi network and plasma membrane by density gradient electrophoresis. *Electrophoresis (Weinheim)*, 22 (2001) 386-393.

1218 Makino, K.: (Evaluation of interfacial electric properties of surface of electrolyte solution). *Maku*, 25 (2000) 308-311; *C.A.*, 134 (2001) 9800d - a review with 5 refs.

1219 Seaman, G.V.F. and Knox, R.J.: Particle electrophoresis for quality assurance and process control. *Electrophoresis (Weinheim)*, 22 (2001) 373-385.

1220 Zitzer, A., Harris, J.R., Kemminer, S.E., Zitzer, O., Bhakdi, S., Muething, J. and Palmer, M.: *Vibrio cholerae* cytolysin: assembly and membrane insertion of the oligomeric pore are tightly linked and are not detectably restricted by membrane fluidity. *Biochim. Biophys. Acta*, 1509 (2000) 264-274.

See also 930.

## 38. INORGANIC COMPOUNDS

38a. *Cations*

See 724.