

Recently Published Papers in the Field of Molecular Evolution

acta endocrinologica

75 No. 1 (January) 1974

Biological activity of synthetic human corticotrophin with revised amino acid sequence. Schenkel-Hulliger, L., *et al.* (Research Laboratories of the Pharmaceuticals Division of Ciba-Geigy Ltd., Basle, Switzerland) — p. 24

American Journal of Physical Anthropology

40 No. 1 (January) 1974

Multiple fetal and adult hemoglobins in Malaysian *Macaca nemestrina*: Consequences of α -chain variation. Nute, P. E., Pataryas, H. A. (Regional Primate Research Center and Depts. of Medicine (Division of Medical Genetics) and Anthropology, University of Washington, Seattle, Washington, USA; and Dept. of Biology, University of Athens, Athens, Greece) — p. 17

Amino acid compositions of the tryptic peptides comprising the β -hemoglobin chain of *Macaca nemestrina*. Nute, P. E., Pataryas, H. A. (Regional Primate Research Center and Depts. of Medicine (Division of Medical Genetics) and Anthropology, University of Washington, Seattle, Washington, USA; and Dept. of Biology, University of Athens, Athens, Greece) — p. 75

Biochemical and Biophysical Research Communications

56 No. 2 (January) 1974

Neurospora crassa and *Humicola lanuginosa* cytochromes *c*: More homology in the heme region. Lederer, F., Simon, A. M. (Centre de Génétique Moléculaire du C.N.R.S., F-91 Gif-sur-Yvette, France) — p. 317

56 No. 3 (February) 1974

On the frequency of arginine in proteins and its implications for molecular evolution. Wallis, M. (School of Biological Sciences, University of Sussex, Falmer, Brighton, BN1 9QG, Sussex, Great Britain) — p. 711

Biochemistry

12 No. 24 (November) 1973

The complete amino acid sequence of β_2 -microglobulin. Cunningham, B. A., *et al.* (Rockefeller University, New York, New York 10021, USA; and The University of Lund, Lund, Sweden) — p. 4811

Purification and partial sequencing of cyanogen bromide peptides from L-asparaginase of *Escherichia coli* B. Gumprecht, J. G., Wriston, Jr., J. C. (Dept. of Chemistry, University of Delaware, Newark, Delaware 19711, USA) — p. 4869

12 No. 25 (December) 1973

Characterization of two complementary polypeptide chains obtained by proteolysis of rabbit muscle phosphorylase. Raibaud, O., Goldberg, M. E. (Service de Biochimie Cellulaire, Institut Pasteur, F-75015 Paris, France) — p. 5154

12 No. 26 (December) 1973

- Cyanogen bromide peptides of rabbit muscle glycogen phosphorylase. Saari, J. C., Fischer, E. H. (Dept. of Biochemistry, University of Washington, Seattle, Washington 98195, USA) — p. 5225
- Comparative study of dogfish and rabbit muscle phosphorylase. Cohen, P., *et al.* (Dept. of Biochemistry, University of Washington, Seattle, Washington 98195, USA) — p. 5233
- Direct sequence determination of ovine luteinizing hormone releasing factor by mass spectrometry. Ling, N., *et al.* (Salk Institute, La Jolla, California 92037, USA) — p. 5305
- Amino acid sequence of the light chain of a mouse myeloma protein (MOPC-315). Schulenburg Dugan, E., *et al.* (Depts. of Microbiology and Biological Chemistry, Washington University, School of Medicine, St. Louis, Missouri 63110, USA) — p. 5400

Biochimica et Biophysica Acta (P)
Protein Structure

328 No. 2 (December) 1973

- Proton magnetic resonances in cytochrome b_2 core structural similarities with cytochrome b_5 . Keller, R., *et al.* (Institut für Molekularbiologie und Biophysik, Eidgenössische Technische Hochschule, Zürich-Hönggerberg, Switzerland; and Centre de Génétique Moléculaire du Centre National de la Recherche Scientifique, F-91 Gif-sur-Yvette, France) — p. 233
- A comparison of the conformational stabilities of homologous hemoproteins. Myoglobin from several species, human hemoglobin and subunits. Puett, D., *et al.* (Dept. of Biochemistry, Vanderbilt University, Nashville, Tennessee 37232, USA) — p. 261
- Snake venom toxins. The amino acid sequences of two toxins from *Dendroaspis jamesoni kaimosae* (Jameson's mamba) venom. Strydom, A. J. C. (The National Chemical Research Laboratory, Council for Scientific and Industrial Research, P.O. Box 395, Pretoria, Republic of South Africa) — p. 491

336 No. 1 (January) 1974

- Haemoglobin Ottawa: α_215 (A13) Gly \rightarrow Arg β_2 . Vella, F., *et al.* (Dept. of Biochemistry, University of Saskatchewan, Saskatoon, Sask., and Dept. of Laboratory Medicine, Ottawa Civic Hospital, Ottawa, Ontario, Canada; and MRC Abnormal Haemoglobin Unit, University Dept. of Biochemistry, Addenbrooke's Hospital, Cambridge CB2 2QR, Great Britain) — p. 25
- Studies on Phytohemagglutinins. XVI. Subunit structure of the pea isohytohemagglutinins. Mařík, T., *et al.* (Dept. of Biochemistry, Charles University, Albertov 2030, Praha 2, Czechoslovakia) — p. 53
- Flagellin from *Escherichia coli* K12: Polymerization and molecular weight in comparison with *Salmonella* flagellins. Kondoh, H., Hotani, H. (Dept. of Biophysics, Faculty of Science, Kyoto University, Kyoto, Japan) — p. 117

336 No. 2 (February) 1974

- Residue 122 of sperm whale and horse myoglobin. Romero Herrera, A. E., Lehmann, H. (Medical Research Council Abnormal Haemoglobin Unit, University Dept. of Biochemistry, Addenbrooke's Hospital, Cambridge CB2 2QR, Great Britain) — p. 318
- Structural characterizations of hemoglobins J-Buda [α 61 (E 10) Lys \rightarrow Asn] and G-Pest [α 74 (EF 3) Asp \rightarrow Asn]. Brimhall, B., *et al.* (Dept. of Biochemistry, University of Oregon Medical School, Portland, Oregon 97201, USA; and National Institute of Haematology and Blood Transfusion, Budapest, Hungary) — p. 344

- The isolation and characterization of bovine corneal collagen. Katzman, R. L., *et al.* (Laboratory of Connective Tissue Research, Veterans Administration Hospital, and Depts. of Biochemistry and Medicine, University of Tennessee Medical Unit, Memphis, Tennessee 38104, USA) — p. 367
- Studies on β -crystallin. I. Isolation and partial characterization of the principal polypeptide chain. Herbrink, P., Bloemendahl, H. (Dept. of Biochemistry, University of Nijmegen, Nijmegen, The Netherlands) — p. 370
- Snake venom toxins. The isolation and purification of three cytotoxin homologues from the venom of the forest cobra (*Naja melanoleuca*) and the complete amino acid sequence of toxin. Carlsson, F. H. H., Joubert, F. J. (National Chemical Research Laboratory, Council for Scientific and Industrial Research, P.O. Box 395, Pretoria, South Africa) — p. 453
- Snake venom toxins. The purification and properties of five non-neurotoxic polypeptides from *Naja mossambica mossambica* venom. Louw, A. I. (National Chemical Research Laboratory, Council for Scientific and Industrial Research, Pretoria, South Africa) — p. 470

Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences

278 No. 1 (January) 1974

- Biochimie — La composition des protéines anciennes. Wyckoff, R. W. G. (Dept. of Physics, University of Arizona, Tucson, Arizona 85721, USA) — p. 147

Computer programs in biomedicine

3 No. 4 (December) 1973

- Computer approaches to protein structure. VI. A multiple option model building program. Tometsko, A. M. (Dept. of Biochemistry, University of Rochester Medical Center, Rochester, New York 14642, USA) — p. 191

European Journal of Biochemistry

40 No. 1 (December) 1973

- Structure primaire de la caséine α_{s1} et de la caséine β bovines. Correctif. Grosclaude, F., *et al.* (Laboratoire de Génétique Biochimique et Laboratoire de Recherches sur les Protéines, Centre National de Recherches Zootechniques, Jouy-en-Josas, France) — p. 323

41 No. 3 (February) 1974

- A sequence of 54 nucleotides from the A-protein cistron of coliphage-R17 RNA. Rensing, U. F. E., *et al.* (Medical Research Council Laboratory of Molecular Biology, Cambridge, Great Britain; and Laboratory of Molecular Biology, University of Nijmegen, Nijmegen, The Netherlands) — p. 431

42 No. 1 (February) 1974

- The separation of a neurotoxin from the venom of *Naja melanoleuca* and the primary sequence determination. Shipolini, R. A., *et al.* (Depts. of Chemistry and Physiology, University College, London, Great Britain) — p. 203
- The molecular weight and subunit structure of human erythrocyte 6-phosphogluconate dehydrogenase. Pearse, B. M. F., Rosemeyer, M. A. (Dept. of Biochemistry, University College, London, Great Britain) — p. 225

42 No. 2 (March) 1974

Purification and some physical properties of a chymotrypsin-like protease of the larva of the hornet, *Vespa orientalis*. Jany, K.-D., *et al.* (Ruhr-Universität Bochum, Abt. Chemie, Lehrstuhl Biochemie, and Abt. Biologie, Lehrstuhl Allgemeine Botanik, Postfach 2148, D-4630 Bochum-Querenburg, Federal Republic of Germany) — p. 419

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38 No. 2 (January) 1974

Primary structure of proteinase inhibitor II isolated from the venom of Russell's viper (*Vipera russelli*). Takahashi, H., *et al.* (Division of Plasma Proteins, Institute for Protein Research, Osaka University, Suita, Osaka-565, Japan) — p. 217

The primary structure of aspartate aminotransferase from pig heart muscle determined in part using a protease with specificity for lysine. Doonan, S., *et al.* (The Christopher Ingold Laboratories, Dept. of Chemistry, University College London, 20 Gordon Street, London WC1H 0AJ, Great Britain; Istituto di Chimica Biologica e Centro di Biologia Molecolare del Consiglio nazionale delle Ricerche, Università di Roma, Città Universitaria, I-00185 Roma, Italy; and Dept. of Biochemistry, Pharmaceuticals Division, I.C.I. Ltd., Alderley Park, Macclesfield, Cheshire, SK 10 4TG, Great Britain) — p. 229

38 No. 3 (January) 1974

Amino acid sequence of the N-terminal 158 residues of rabbit muscle aldolase. Sajgó, M., Hajós, Gy. (Enzymology Dept., Institute of Biochemistry, Hungarian Academy of Sciences, H-1502 Budapest, P.O. Box 7, Hungary) — p. 341

39 No. 2 (February) 1974

Hb J Sicilia: β 65 (E9) Lys \rightarrow Asn, a beta homologue of Hb Zambia. Ricco, G., *et al.* (Dept. of Special Medical Pathology and Clinical Methodology, University of Turin, Via Genova 3, I-10100 Turin, Italy) — p. 200

Hoppe-Seyler's Zeitschrift für Physiologische Chemie

354 No. 10/11 (October/November) 1973

Snake venom toxins. The purification of toxins V^{II}₂, two cytotoxin homologues from banded Egyptian cobra (*Naja haje annulifera*) venom, and the complete amino acid sequence of toxin V^{II}₁. Weise, K. H. K., *et al.* (National Chemical Research Laboratory, Council for Scientific and Industrial Research, P.O. Box 395, Pretoria, South Africa) — p. 1317

Die Primärstruktur eines monoklonalen IgM-Immunglobulins (Makroglobulin Gal.). I. Die Aminosäuresequenz der L-Kette, α -Typ, Subgruppe I. Laure, C. J., *et al.* (Max-Planck-Institut für experimentelle Medizin, Hermann-Rein-Str. 3, D-3400 Göttingen, Federal Republic of Germany) — p. 1503

Die Primärstruktur eines monoklonalen IgM-Immunglobulins (Makroglobulin Gal.). II. Die Aminosäuresequenz der H-Kette (μ -Typ, Subgruppe HIII). Struktur des gesamten IgM-Moleküls. Watanabe, S., *et al.* (Max-Planck-Institut für experimentelle Medizin, Hermann-Rein-Str. 3, D-3400 Göttingen, Federal Republic of Germany) — p. 1505

The amino acid sequences of the α and β polypeptide chains of adult hemoglobin of the capuchin monkey (*Cebus apella*). Matsuda, G., *et al.* (Dept. of Biochemistry, Nagasaki University School of Medicine, Nagasaki, Japan) — p. 1513

Studies on the primary structures of α and β polypeptide chains of adult hemoglobin of the spider monkey (*Ateles geoffroyi*). Matsuda, G., *et al.* (Dept. of Biochemistry, Nagasaki University School of Medicine, Nagasaki, Japan; and Dept. of Anatomy, Wayne State University, Detroit, Michigan, USA) — 1517

International Journal of Peptide and Protein Research

5 No. 6 1973

The primary structures of α and β chains of adult hemoglobin of the Japanese monkey (*Macaca fuscata fuscata*). Biochemical studies on hemoglobins and myoglobins. XI. Matsuda, G., *et al.* (Dept. of Biochemistry, Nagasaki University School of Medicine, Nagasaki, Japan) — p. 405

The Journal of Biochemistry

74 No. 5 (November) 1973

Structural studies of cytochrome b_5 . Rashid, M. A., *et al.* (Dept. of Biochemistry II and Laboratory of Molecular Genetics, Medical School, University of Osaka, Kita-ku, Osaka, Japan) — p. 985

The Journal of Biological Chemistry

248 No. 22 (November) 1973

A study of the subunit structure of the extracellular hemoglobin of *Lumbricus terrestris*. Shlom, J. M., Vinogradov, S. N. (Dept. of Biochemistry, Wayne State University School of Medicine, Detroit, Michigan 48201, USA) — p. 7904

Journal of Molecular Biology

82 No. 3 (January) 1974

Three-dimensional pattern recognition: An approach to automated interpretation of electron density maps of proteins. Greer, J. (Dept. of Molecular Biophysics and Biochemistry, Yale University, New Haven, Connecticut 06520, USA) — p. 279

82 No. 4 (February) 1974

Preliminary X-ray data from well-ordered crystals of a human immunoglobulin G molecule. Palm, W., Colman, P. M. (Institut für Medizinische Biochemie der Universität, Universitätsplatz 2, A-8010 Graz, Austria; and Max-Planck-Institut für Biochemie, Abt. Strukturforchung II, D-8033 Martinsried bei München, Federal Republic of Germany) — p. 587

83 No. 2 (February) 1974

The structure of bovine trypsin: Electron density maps of the inhibited enzyme at 5 Å and at 2.7 Å resolution. Stroud, R. M., *et al.* (Norman W. Church Laboratory of Chemical Biology, California Institute of Technology, Pasadena, California 91109, USA) — p. 185

Structure and specific binding of trypsin: Comparison of inhibited derivatives and a model for substrate binding. Krieger, M., *et al.* (Norman W. Church Laboratory of Chemical Biology, California Institute of Technology, Pasadena, California 91109, USA) — p. 209

Journal of Theoretical Biology

43 No. 2 (February) 1974

Comparison of homologous tertiary structures of proteins. Nishikawa, K., Ooi, T. (Institute for Chemical Research, Kyoto University, Uji, Japan) — p. 351

Nature

247 No. 5439 (February) 1974

Evolution in action. Betz, J. L., *et al.* (Dept. of Biochemistry, University College, Gower Street, London WC1E 6BT, England) — p. 261

Proceedings of the National Academy of Sciences

70 No. 12 (December) 1973

- Sequence homologies among bacterial and mitochondrial superoxide dismutases. Steinman, H. M., Hill, R. L. (Dept. of Biochemistry, Duke University Medical Center, Durham, North Carolina 27710, USA) — p. 3725
- Structure of hemoglobin M Boston, a variant with a five-coordinated ferric heme. Pulsinelli, P. D., *et al.* (MRC Laboratory of Molecular Biology, Cambridge, Great Britain; and Dept. of Medicine, Albert Einstein College of Medicine of Yeshiva University, Bronx, New York 10461, USA) — p. 3870

Science

182 No. 4118 (December) 1973

- Evolution and the biosynthesis of ascorbic acid. Chatterjee, I. B. (Dept. of Biochemistry, University College of Science, Calcutta-700019, India) — p. 1271

Space Life Sciences

4 Nos. 3/4 (September/December) 1973

- Non-enzymic origin of the metabolism. Buvet, R., Le Port, L. (Université de Paris, Laboratoire d'Energétique Biochimique, Centre Universitaire, Avenue du Général de Gaulle, F-94 Créteil, France) — p. 434
- On evolution of the photosynthetic pigments. Evstigneev, V. B. (Institute of Photosynthesis, USSR Academy of Sciences, Moscow, USSR) — p. 448
- Ferredoxins in the evolution of photosynthetic systems from anaerobic bacteria to higher plants. Hall, D. O., *et al.* (Dept. of Botany, University of London, King's College, 68 Half Moon Lane, London SE24 9JF, England) — p. 455
- Cytochrome *c* and evolution of the energy acquiring system. Yamanaka, T. (Dept. of Biology, Faculty of Science, Osaka University, Toyonaka, Osaka, Japan) — p. 490