Recently Published Papers in the Field of Molecular Evolution

Acta Biochimica Polonica

23 No.2-3 1976

Amino Acid Sequence of Human Muscle Glyceraldehyde-3-Phosphate Dehydrogenase. Isolation and Amino Acid Sequences of Tryptic Peptides. Nowak, Kornel, et al. (Department of Biochemistry, Institute of Biochemistry and Biophysics, Medical School, ul.Chalubińskiego 10, 50-368 Wrocław, Poland) - p. 127

Analytical Biochemistry

73 No.1 (May) 1976

Amino Acid Sequencing by Gas Chromatography - Mass Spectrometry Using Trifluoro - Dideuteroalkylated Peptide Derivatives. C. The Primary Structure of the Carboxypeptidase Inhibitor from Potatoes. Nau, H., Biemann, K. (Department of Chemistry, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139) - p. 175

Biochimica et Biophysica Acta (P) Protein Structure

439 No.1 (July) 1976

Structure of Light-Adapting Hormone from the Shrimp, *Pandalus borealis*. Fernlund, Per (Department of Clinical Chemistry, University of Lund, Malmö General Hospital, S-214 01 Malmö, Sweden) - p. 17

Investigations on the Primary Structure of Human Plasminogen. Further Evidence for Sequence Homology. Rickli, Egon E., et al. (Institute of Biochemistry and Theodor Kocher Institute, University of Berne, Postfach 99, CH-000 Berne 9; Diagnostic Research Department F. Hoffmann-La Roche & Co., Ltd. CH-4002 Basel, Switzerland) - p. 47

The Primary Structure of the Myoglobin of Rabbit (*Oryctolagus cuniculus*). Romero-Herrera, A.E., et al. (University Department of Clinical Biochemistry, Addenbrooke's Hospital, Hills Road, Cambridge CB2 2QR, U.K.) - p. 51

Comparison of the Amino Acid Sequence of Pig Heart Myoglobin with other Ungulate Myoglobins. Rousseaux, J., et al. (Laboratoire de Chimie Biologique, Faculté de Médecine de Lille, 59045 Lille Cédex, France) - p. 55

Hb-Volga or $\alpha_2\beta_2^{27(B9)Ala\rightarrow Asp}$. An Unstable Hemoglobin Variant in Three Generations of a Dutch Family. Kuis-Reerink, J.D., et al. (Department of Pediatrics, State University of Groningen, The Netherlands; Laboratory of Protein Chemistry and Comprehensive Sickle Cell Center, Medical Center of Georgia, Augusta, Ga. 30902, USA) - p. 63

Hemoglobin Athens-Georgia, or $\alpha_2\beta_2^{40(C6)Arg\rightarrow Lys}$, a Hemoglobin Variant with an Increased Oxygen Affinity. Brown, W.J., et al. (University of Health Services of the University of Georgia, Athens, Ga. 30601; Laboratory of Protein Chemistry, and Comprehensive Sickle Cell Center, Medical College of Georgia, Augusta, Ga. 30902, USA) - p. 70

439 No.2 (August) 1976

Hemoglobin A_2-Roosevelt: $\alpha_2\delta_2^{20Val\rightarrow Glu}$. Rieder, R.F., et al. (Department of Medicine, S.U.N.Y. Downstate Medical Center, Brooklyn, N.Y., USA) - p. 501

Biochemical and Biophysical Research Communications

71 No.1 (July) 1976

Species Variability of N-Terminal Sequence of Avian Erythrocyte-Specific Histone H5. Seligy, Verner, et al. (Divison of Biological Sciences, National Research Council, Ottawa, Ontario, Canada K1A OR6) - p. 196

Mass Spectrometic Sequencing of Proteins. The Structure of Subunit I of Monellin. Hudson, Gail, Biemann, K. (Department of Chemistry, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139) - p. 212

Partial Amino Acid Sequences of the Heavy Chains of Human HLA Histocompatibility Antigens. Appella, E., et al. (Laboratory of Cell Biology, National Cancer Institute and Molecular Diseases Branch, National Heart and Lung Institute, Bethesda, Maryland 20014, Department of Immunology Research, Roswell Park Memorial Institute, Buffalo, New York 14263) - p. 286

71 No.4 (August) 1976

The Amino Acid Sequence of "Heavy Chain Disease" Protein Zuc. Structure of the Fc Fragment of Immunoglobulin G3. Wolfenstein-Todel, C., et al. (Irvington House Institute, Department of Medicine and Pathology, New York University Medical Center, 550 First Avenue, New York, N.Y. 10016) - p. 907

Biochemistry

15 No.12 (June) 1976

Complete Primary Structure of the Major Component Myoglobin of California Gray Whale (*Eschrichtius gibbosus*). Borgardt, Richard A., Jr., et al. (Department of Chemistry, Indiana University, Bloomington, Indiana 47401) - p. 2597

15 No.14 (July) 1976

The Covalent Structure of Cartilage Collagen. Amino Acid Sequence of the NH_2-Terminal Helical Portion of the α1(II) Chain. Butler, William T., et al. (Institute of Dental Research and Department of Biochemistry, The University of Alabama in Birmingham, Birmingham, Alabama 35294) - p. 3000

Biochemical Genetics

14 No.5/6 (June) 1976

Primary Structure of the Marmoset (*Saguinus fuscicollis*) Hemoglibin. I. Use of Tryptic Maleylated Peptides in the Solubilization and Sequence Elucidation of the α- and β-Chains. Lin, K.D., et al. (Hemoglobin Laboratory, The University of Tennessee, Memorial Research Center/Center for Health Sciences, Knoxville, Tennessee) - p. 427

14 No.7/8 (August) 1976

Characterization of Hemoglobin Burke (β107(G9)Gly→Arg). Turner, James W., et al. (The Springfield Plaza Professional Building, Springfield, Virginia) - p. 577

Developmental Specificity and Evolution of the Acid Phosphatase Isoenzymes of *Triticum aestivum* and Its Progenitor Species. Torres, Michael A., Hart, Gary E. (Genetics Section, Plant Sciences Department, Texas A&M University, College Station, Taxas) - p. 595

Evolution of Mammalian Carbonic Anhydrase Loci by Tandem Duplication: Close Linkage of Car-1 and Car-2 to the Centromere Region of Chromosome 3 of the Mouse. Eicher, Eva M., et al. (The Jackson Laboratory, Bar Harbor, Maine) - p. 651

The Biochemical Journal

157 No.2 (August) 1976

The Amino Acid Sequence of Pike-Whale (Lesser-Rorqual) Pancreatic Ribonuclease. Emmens, Marchienus, et al. (Biochemisch

Laboratorium, Rijksuniversiteit, Zernikelaan, de Paddepoel, Groningen, The Netherlands) - p. 317

159 No.1 (October) 1976

Mouse Haemoglobin Beta Chains. Comparative Sequence Data on Adult Major and Minor Beta Chains from Two Species, *Mus musculus* and *Mus cervicolor*. Gilman, John G. (Department of Genetics, University of Wisconsin, Madison, WI 53706, USA) - p. 43

Amino Acid Sequence of a Four-Iron-Four-Sulphur Ferredoxin Isolated from *Bacillus stearothermophilus*. Hase, Toshiharu, et al. (Department of Biology, Faculty of Science, University of Osaka, Toyonaka, Osaka 560, Japan) - p. 55

Canadian Journal of Biochemistry

54 No.10 (October) 1976

The amino acid sequence of wheat ß-purothionin. Mak, A.S., Jones, B.L. (Department of Plant Science, University of Manitoba, Winnipeg, Man., Canada R3T 2N2) - p. 835

Amino acid sequence of penicillopepsin. I. Isolation and characterization of the chymotryptic peptides. Kurosky, Alexander, Hofmann, Theo (Department of Biochemistry, University of Toronto, Toronto, Ont., Canada M5S 1A8) - p. 872

Amino acid sequence of penicillopepsin. IV. Myxobacter AL-1 protease II and *Staphylococcus aureus* protease fragments and homology with pig pepsin and chymosin. Cunningham, Anne, et al. (Department of Biochemistry, University of Toronto, Toronto, Ont., Canada M5S 1A8) - p. 902

Cell

8 No.4 (August) 1976

Sequences of 5S Ribosomal RNA from Xenopus mulleri and the Evolution of 5S Gene-Coding Sequences. Ford, Peter J., Brown, Ronald D. (Department of Molecular Biology, University of Edinburgh, Kings Buildings, Edinburgh EH9 3JR, Scotland) - p. 485

Comparative Biochemistry and Physiology

55 No.1B 1976

A Comparative Study of the ß-Crystallins of Four Sub-Mammalian Species. Zigler, J.Samuel, Jr., Sidbury, J.B., Jr. (Box 3854, Duke Medical Center, Durham,NC 27710, USA) - p. 19

Subunit Homologies of Lactate Dehydrogenase (LDH) Isoenzymes between Amphibians (*Xenopus laevis*) and Mammals (Wistar Rat). Lyra, L., et al. (Institut für Molekularbiologie und Biochemie der Freien Universität Berlin, D 1000 Berlin 33, Arnimallee 22) p. 31

Comparative Studies of Human, Equine, Porcine and Bovine Erythrocytes Membrane Sialoglycoproteins. Hamazaki, Hideaki, et al. (Department of Biochemistry, Kitasato University School of Medicine, Sagamihara, Kanagawa, Japan; Biological Institute, Faculty of Science Tohoku University, Sendai, Japan) - p. 37

Subunit Compositions of Vertebrate α-Crystallins. De Jong, Wilfried W., et al. (Department of Biochemistry, University of Nijmegen, Nijmegen, The Netherlands) - p. 49

The Stereospecific Distribution and Evolutionary Significance of Invertebrate Lactate Dehydrogenases. Long, George L. (Department of Chemistry, Pomona College, Claremont, California 91711, USA) - p. 77

European Journal of Biochemistry

66 No.1 1976

Determination of the Amino-Acid Sequence of the Ribosomal Protein S8 of *Escherichia coli*. Stadler, Herbert, Wittmann-Liebold, Brigitte (Max-Planck-Institut für Molekulare Genetik, Ihnenstraße 63/73, D-1000 Berlin(West) 33-Dahlem) - p. 49

67 No.2 1976

The Keratin Chains of Avian Scale Tissue. Sequence Heterogeneity and the Number of Scale Keratin Genes. Walker, Ian D., Bridgen, John (Medical Research Council Laboratory of Molecular Biology, Cambridge) - p. 283

67 No.3 1967

The Amino-Acid Sequences of the α-Crystallin A Chains of Red Kangaroo and Virginia Opossum. De Jong, Wilfried W., Terwindt, Eugénie C. (Laboratorium voor Biochemie, Universiteit van Nijmegen) - p. 503

68 No.1 1976

Amino-Acid Sequence of a Coelenterate Toxin: Toxin II from *Anemonia sulcata*. Wunderer, Gert, et al. (Institut für Klinische Chemie und Klinische Biochemie der Universität München) - p. 193

The Primary Structure of a Non-initiating Methionine-Specific tRNA from Brewer's Yeast. Gruhl, Hartmut, Feldmann, Horst (Institut für Physiologische Chemie, Physikalische Biochemie und Zellbiologie der Universität München) - p. 209

Primary and Tertiary Structure of the Principal Human Adenylate Kinase. von Zabern, Ingeborg, et al. (Max-Planck-Institut für Medizinische Forschung, Heidelberg) - p. 281

FEBS-Letters

65 No.3 (June) 1976

Studies on the Significance of Sequence Homologies among Proteins from *Escherichia coli* Ribosomes. Wittmann-Liebold, B., Dzionara, M. (Max-Planck-Institut für Molekulare Genetik, Berlin-Dahlem, Germany) - p. 281

Hemoglobin Chapel Hill or $\alpha_2^{74Asp\rightarrow Gly}\beta_2$. Orringer, E.P., et al. (Division of Hematology, Departments of Medicine and Laboratory Medicine, University of North Carolina, Chapel Hill, N.C. 27514, USA) - p. 297

66 No.1 (July) 1976

Partial Amino Acid Sequence in the N-Terminal Region of an Anti-*Micrococcus lysodeikticus* Antibody Heavy Chain of Allotype a1. Van Hoegaerden, M., Strosberg, A.D. (Laboratorium Chemie der Proteinen, Vrije Universiteit Brussel Paardenstraat, 65, 1640 Sint-Genesius Rode, Belgium) - p. 35

66 No.2 (July) 1976

Amino Acid Sequence of Cardiotoxin from the Venom of *Naja naja atra*. Hayashi, Kyozo, et al. (Department of Biological Chemistry, Faculty of Pharmaceutical Sciences, Kyoto University, Kyoto, Japan) - p. 210

Partial Amino Acid Sequence of Histone H1 from Sperm of the Sea Urchin, *Parechinus angulosus*. Strickland, W.N., et al. (Department of Biochemistry, C.S.I.R. Chromatin Research Unit, University of Cape Town, Rondebosch, South Africa) - p. 322

67 No.1 (August) 1976

Structural Study of the α Chain of one Haemoglobin from the Adult Salamander, *Pleurodeles waltlii*. Flavin, M., et al. (Laboratoire de Biologie Générale, Université Paul Sabatier, 31000 Toulouse; Unité de Recherches sur les Anémies. INSERM U. 91, Hôpital Henri Mondor 94010 Creteil, France) - p. 52

The Primary Structure of Protein L10 from *Escherichia coli* Ribosomes. Dovgas, N.V., et al. (Institute of Protein Research, Academy of Sciences of the USSR, Poustchino, Moscow Region, USSR) - p. 58

The Primary Structure of Human Plasminogen: Characterization and Alignment of the Cyanogen Bromide Peptides. Lee, How-Ming, Laursen, Richard A. (Department of Chemistry, Boston University, Boston, Massachusetts, 02215, USA) - p. 113

67 No.3 (September) 1976

The Amino Acid Sequence of Cytochrome c from *Asterias rubens* L. (Common Starfish). Lyddiatt, Andrew, Boulter, Donald (Department of Botany, University of Durham, Durham DH1 3LE, England) - p. 331

68 No.1 (September) 1976

The Primary Structure of Histone H2B from Brown Trout (*Salmo trutta*) Testes. Kootstra, A., Bailey, G.S. (Department of Biochemistry, University of Otago, Dunedin, New Zealand) - p. 76

The Primary Structure of Protein L16 Located at the Peptidyltransferase Center of *Escherichia coli* Ribosomes. Brosius, Jürgen, Chen, Robert (Max-Planck-Institut für Molekulare Genetik, Abt. Wittmann, Berlin-Dahlem) - p. 105

Primary Structure of Protein S20 from the Small Ribosomal Subunit of *Escherichia coli*. Wittmann-Liebold, Brigitte, et al. (Max-Planck-Institut für Molekulare Genetik, Abt. Wittmann, Berlin-Dahlem) - p. 110

Primary Structure of Protein L33 from the Large Subunit of the *Escherichia coli* Ribosome. Wittmann-Liebold, Brigitte, Pannenbecker, Renate (Max-Planck-Institut für Molekulare Genetik, Abt. Wittmann, Berlin-Dahlem) - p. 115

68 No.2 (October) 1976

Primary Structure of the B Subunit of Cholera Enterotoxin. Nakashima, Y., et al. (Department of Molecular Biophysics and Biochemistry and Department of Physiology, Yale University School of Medicine, New Haven, Connecticut 06510) - p. 275

Federation Proceedings

35 No.10 (August) 1976

Molecular evolution: the neutralist - selectionist controversy. Harris, Harry (Galton Laboratory, Department of Human Genetics and Biochemistry, University College London, London NW1 2HE, England) - p. 2079

Progress in the neutral mutation-random drift controversy. King, Jack Lester (Aquatic and Population Biology Section, Department of Biological Sciences, University of California, Santa Barbara, California 93106) - p. 2087

Protein evolution and the molecular clock. Fitch, Walter M., Langley, Charles H. (Department of Physiological Chemistry, University of Wisconsin, Madison, Wisconsin 53706) - p. 2092

Controlling protein evolution. Wills, Christopher (Department of Biology, University of California at San Diego, La Jolla, California 92037) - p. 2098

Hoppe-Seyler's Zeitschrift für Physiologische Chemie

356 No.12 (Dezember) 1975

Die Aminosäuresequenz des doppelköpfigen Proteinaseninhibitors aus der Glandula submandibularis des Hundes, II. Ein Methioninrest als reaktives Hemmzentrum für Chymotrypsin. Hochstraßer, Karl; Fritz, Hans (Hals-Nasen-Ohrenklinik der Universität, D-8000 München 2, Pettenkoferstr.4a) - p. 1859

The Amino Acid Sequence of the Double-Headed Proteinase Inhibitor from Canine Submandibular Glands, III. Sequencing Studies. Hochstraßer, Karl, et al. (Hals-Nasen-Ohrenklinik der Universität, D-8000 München 2, Pettenkoferstr.4a) - p. 1865

Snake Venom Toxins. The Amino Acid Sequences of Toxin $V^{II}2$, a Cytotoxin Homologue from Banded Egyptian Cobra Venom. Joubert, Francois J. (National Chemical Research Laboratory, Council for Scientific and Industrial Research, P.O.Box 395, Pretoria 0001, Republic of South Africa) - p. 1893

The Purification and Amino Acid Sequence of Toxin CM-13b from *Naja Haje annulifera* (Egyptian Cobra) Venom. Joubert, Francois J. (National Chemical Research Laboratory, Council for Scientific and Industrial Research, P.O.Box 395, Pretoria, 0001 South Africa) - p. 1901

Determination of the Complete Amino Acid Sequence of Protein S21 from Escherichia coli Ribosomes. Vandekerckhove, Joel, et al. (Afdeling Biochemie, Departement Humane Biologie, Katholieke Universiteit, Leuven, 6 Dekenstraat, B-3000 Leuven) - p. 1955

The Primary Structure of Protein L32 from the 50S Subunit of Escherichia coli Ribosomes. Wittmann-Liebold, Brigitte, et al. (Max-Planck-Institut fpr Molekulare Genetik, D-1 Berlin 33, Ihnenstr.63-73) - p. 1977

Amino Aicd Sequence of Human Fibrin. Preliminary Note on the Peptides Obtained by Cleaving the γ-Chain at the Methionyl Bonds. Henschen, Agnes, Warbineck, Renate (Max-Planck-Institut für Biochemie, D-8033 Martinsried bei München) - p. 1981

Amino Acid Sequence of Human Fibrin. Preliminary Note on the Peptides Obtained by Cleaving the γ-Chain at the Arginyl Bonds. Henschen, Agnes, Lottspeich, Friedrich (Max-Planck-Institut für Biochemie, D-8033 Martinsried bei München) - p. 1985

357 No.6 (Juni) 1976

The Sequence Determination of a Protein in a Micro Scale: The Sequence Analysis of Ribosomal Protein L34 of *Escherichia coli*. Chen, Robert (Max-Planck-Institut für Molekulare Genetik, Abt. Wittmann, Berlin-Dahlem, Germany) - p. 873

International Journal of Peptide and Protein Research

8 No.4 1976

Studies on the Primary Structure of Bison Pancreatic Ribonuclease. Muskiet, Frits A.J., et al. (Biochemisch Laboratorium, Zernikelaan, Rijksuniversiteit, Groningen, The Netherlands) - p. 345

8 No.5 1976

Primary Structure of Equine Growth Hormone. Zakin, M.M., et al. (Departamento de Quimica Biológica, Facultad de Farmacia y Bioquîmica, Universidad de Buenos Aires and Centro para el Estudio de las Hormonas Hipofisarias, Buenos Aires, Argentina) p. 435

The Journal of Biochemistry

79 No.3 (March) 1976

Snake Venom Proteinase Inhibitors. III. Isolation of Five Polypeptide Inhibitors from the Venoms of *Hemachatus haemachatus* (Ringhal's Cobra) and *Naja nivea* (Cape Cobra) and the Complete Amino Acid Sequences of Two of Them. Hokama, Xasuji, et al. (Institute for Protein Reseach, Osaka University, Suita, Osaka 565) - p. 559

79 No.6 (June) 1976

Fragmentation of Rat Serum Albumin by Cyanogen Bromide Cleavage and the Amino Acid Sequences of Four Fragments. Isemura, Satoko, Ikenaka, Tokuji (Department of Biochemistry, Niigata University School of Medicine, Niigata, Niigata 951) - p. 1183

Primary Structure of Bovine Plasma High-Molecular-Weight Kininogen. The Amino Acid Sequence of a Glycopeptide Portion (Fragment 1) Following the C-Terminus of the Bradykinin Moiety. Han, Yong Nam, et al. (Division of Plasma Proteins, Institute for Protein Research, Osaka University, Suity, Osaka 565) - p. 1201

The Journal of Biological Chemistry

251 No.10 (May) 1976

The Primary Structure of *Bacillus subtilis* and *Bacillus stearothermophilus* 5S Ribonucleic Acids. Sequence Variations between Polynucleotides Derived from Mesophilic and Thermophilic Organisms. Marotta, Charles A., et al. (Research Laboratories Massachusetts General Hospital and the Department of Psychiatry, Harvard Medical School, Boston, Massachusetts 02114) - p. 3122

251 No.11 (June) 1976

Partial Amino Acid Sequences around the Essential Carboxylate in the Active Sites of the Intestinal Sucrase·Isomaltase Complex. Quaroni, Andrea, Semenza, Giorgio (Laboratorium für Biochemie der Eidgenössischen Technischen Hochschule, CH 8006 Zürich, Switzerland) - p. 3250

Nucleotide Sequence of a 5S Ribosomal RNA Precursor from *Bacillus subtilis*. Sogin, Mitchell L., et al. (Division of Molecular and Cellular Biology, National Jewish Hospital and Research Center, Denver, Colorado 80206; Department of Biophysics and Genetics, University of Colorado School of Medicine, Denver, Colorado 80220) - p. 3480

251 No.10 (September) 1976

Primary Structure of Human Carbonic Anhydrase C. Henderson, Louis E., et al. (Department of Biochemistry, University of Gothenburg, Chalmers Institute of Technology, Fack, S-402 20 Göteborg 5, Sweden) - p. 5457

Journal of Molecular Biology

104 No.1 (June) 1976

Structure and Function of Haemoglobin Philly (Tyr C1(35)β→Phe). Asakura, T., et al. (Department of Pediatrics and Biochemistry, The Children's Hospital University of Pennsylvania, Philadelphia Pa 19104, USA) - p. 185

104 No.2 (June) 1976

Isolation and Sequence Analysis of Sea Urchin (*Lytechinus pictus*) Histone H4 Messenger RNA. Grunstein, Michael, Schedl, Paul. (Departments of Medicine and Biochemistry, Stanford University School of Medicine, Standford, Calif. 94305; Veterans Administration Hospital, Palo Alto, Calif. 94304, USA) - p. 323

Sequence Analysis and Evolution of Sea Urchin (*Lytechinus pictus* and *Strongylocentrotus purpuratus*) Histone H4 Messenger RNAs. Grunstein, Michael, et al. (Departments of Medicine and Biochemistry, Stanford University School of Medicine, Stanford, Calif. 94305; Veterans Administration Hospital, Palo Alto, Calif. 94304, USA) - p. 351

105 No.1 (July) 1976

Stochastic versus Augmented Maximum Parsimony Method of Estimating Superimposed Mutations in the Divergent Evolution of Protein Sequences. Methods Tested on Cytochrome c Amino Acid Sequences. Moore, G.William, et al. (Wayne State University School of Medicine, Department of Anatomy, Detroit, Mich.

48201, USA; Space Sciences Laboratory, University of California at Berkeley, Berkeley, Calif. 94720, USA) - p. 15

The Evolution of the Globin Family Genes: Concordance of Stochastic and Augmented Maximum Parsimony Genetic Distances for α Hemoglobin, β Hemoglobin and Myoglobin Phylogenies. Holmquist, Richard, et al. (Space Sciences Laboratory, University of California, Berkeley, Calif. 94720, USA) - p. 39

Exploring Structural Homology of Proteins. Rossmann, Michael G., Argos, Patrick (Department of Biological Sciences, Purdue University, West Lafayette, Ind. 47907, USA) - p. 75

106 No.3 (September) 1976

The Evolutionary Origin of Proinsulin. Amino Acid Sequence Homology with the Trypsin-related Serine Protease Detected and Evaluated by New Statistical Methods. De Haen, Christoph, et al. (Department of Biochemistry, University of Washington, Seattle, Wash. 98195, USA) - p. 639

Fine Structure of Ribosomal RNA. I. Conservation of Homologous Regions within Ribosomal RNA of Eukaryotes. Gerbi, Susan A. (Brown University Biomedical Division, Providence, R.I. 02912, USA) - p. 791

Journal of Molecular Medicine

1 No.3 (April-June) 1976

A New Hemoglobin Variant Involving the Distal Histidine: Hb Bicêtre (ß 63 (E7) His → Pro). Wajcman, Henri, et al. (Institute de Pathologie Moléculaire INSERM CHU Cochin, 75014 Paris) - p. 187

Journal of Theoretical Biology

60 No.2 (August) 1976

Interactive Macromolecular Sites. I. Basic Theory. Anderson, Norman G. (Department of Surgery, and South Carolina Memorial Cancer Institute, Medical University of South Carolina, Charleston, S.C. 29401, USA) - p. 401

Interactive Macromolecular Sites. II. Role in Prebiotic Macromolecular Selection and Early Cellular Evolution. Anderson, Norman G. (South Carolina Memorial Cancer Institure, and Department of Surgery, The Medical University of Sout Carolina, Charleston, S.C. 29401, USA) - p. 413

The Evolution of Sexual Reproduction: A Model Which Assumes Individual Selection. Treisman, Michel (Department of Experimental Psychology, University of Oxford, South Parks Road, Oxford OX1 3UD, England) - p. 421

Nature

260 No.5551 (April) 1976

Complete nucleotide sequence of bacteriophage MS2 RNA: primary and secondary structure of the replicase gene. Fiers, W., et al. (Laboratory of Molecular Biology, University of Ghent, 9000 Ghent, Belgium) - p. 500

261 No.5560 (June) 1976

Stereoselectivity of ß irradiation of D,L-tryptophan in aqueous solution. Darge, W., et al. (Fachhochschule Aachen, FRG; Biological Research Center Szeged, Hungary; Kernforschungsanlage Jülich GmbH, Postfach 1913, D-517 Jülich, FRG) - p. 522

261 No.5561 (June) 1976

Australopithecus, Homo erectus and the single species hypothesis. Leakey, R.E.F., Walker, Alan C. (National Museums of Kenya, P.O.Box 40658, Nairobi, Kenya; Departments of Anatomy and Anthropology, Harvard University, Cambridge, Mass. 02138) - p. 572

New hominid fossils from the Koobi Fora formation in Northern Kenya. Leakey, R.E.F. (National Museums of Kenya, P.O.Box 40658, Nairobi, Kenya) - p. 574

World's oldest animal traces. Clemmey, H. (Department of Earth Sciences, Leeds University, Leeds LS2 9JT, UK) - p. 576

Explanation of large scale extinctions of lower vertebrates. Thomson, Keith Stewart (Department of Biology and Peabody Museum of Natural History, Yale University, New Haven, Conn. 06520) - p. 578

DNA endoreduplicatíon and polyteny understood as evolutionary strategies. Nagl, W. (Department of Biology, The University, PO Box 3049, D-6750 Kaiserslautern, FRG) - p. 614

261 No.5562 (June) 1976

Partial sequences of 16S rRNA and the phylogeny of blue-green algae and chloroplasts. Bonen, L., Doolittle, W.F. (Department of Biochemistry, Dalhousie University, Halifax, Nova Scotia) - p. 669

Rates of size increase and of phyletic evolution. Boucot, A.J. (Department of Geology, Oregon State University, Corvallis, Oregon) - p. 694

263 No.5575 (September) 1976

Complementary base pairing and the origin of substitution mutations. Topal, Michael D., Fresco, Jacques R. (Department

of Biochemical Sciences, Princeton University, Princeton, New Jersey 08540) - p. 285

Possible pathway for prebiotic uracil synthesis by photodehydrogenation. Chittenden, G.J.F., Schwartz, Alan W. (Department of Exobiology, University of Nijmegen, Toernooiveld, Nijmegen, The Netherlands) - p. 350

Die Naturwissenschaften

63 No.5 1976

Evolution und Alter von Bakterien. Müller H.E. (Staatl. Medizinaluntersuchungsamt Braunschweig) - p. 224

63 No.7 1976

Synthetic Organic Microstructures and the Origins of Cellular Life. Folsome, C.E. (Laboratory for Exobiology, Department of Microbiology, University of Hawaii, Honolulu, Hawaii) - p. 303

Plant and Cell Physiology

16 No.6 (December) 1975

Molecular evolution of ribulose-1,5-bisphosphate carboxylase. Takabe, Tetsuko, Akazawa, Takashi (Research Institute for Biochemical Regulation, School of Agriculture, Nagoya University Chikusa, Nagoya 464, Japan) - p. 1049

Proceedings of the National Academy of Sciences

73 No.3 (March) 1976

Hemoglobin Wayne: A frameshift mutation detected in human hemoglobin alpha chains. Seid-Akhavan, Medi, et al. (Department of Human Genetics, University of Michigan Medical School, Ann Arbor, Mich. 48109) - p. 882

73 No.6 (June) 1976

Amino Acid Sequence at the FdUMP binding site of thymidylate synthetase. Bellisario, Ronald L., et al. (Divison of Laboratories and Research, New York State Department of Health, Albany, New York 12201) - p. 1848

Amino acid sequence of tropomyosin-binding component of rabbit skeletal muscle troponin. Pearlstone, J.R., et al. (Medical Research Council of Canada Group of Protein Structure and Function, Department of Biochemistry, University of Alberta, Edmonton, Alberta, Canada) - p. 1902

Cyanobacterial DNA-binding protein related to *Escherichia coli* HU. Haselkorn, Robert, Rouvière-Yaniv, Josette (Service de Physiologie Microbienne and Département de Biologie Moleculaire, Institut Pasteur, Paris, 75015) - p. 1917

Rates of evolution in seed plants: Net increase in diversity of chromosome numbers and species numbers through time. Levin, D. A., Wilson, C. (Department of Botany, The University of Texas, Austin, Tex. 78712) - p. 2086

Human and murine phosphorylcholine-binding immunoglobulins: Conserved subgroup and first hypervariable region of heavy chains. Riesen, Walter F., et al. (Basel Institute for Immunology, Postfach 4005 Basel 5, Switzerland) - p. 2096

73 No.5 (May) 1976

Evolution of continuous variation: Direct approach through joint distribution of genotypes and phenotypes. Cavalli-Sforza, L.L., Feldman, M.W. (Dept.of Genetics, Stanford University, Stanford, Calif. 94305) - p. 1689

73 No.7 (July) 1976

The evolution of a universal genetic code. Tze-Fei Wong, J. (Department of Biochemistry, University of Toronto, Toronto M5S 1A8, Canada) - p. 2336

Phylogenetic origins of immune recognition: Lymphocyte surface immunoglobulins in the goldfish, *Carassius auratus*. Warr, Gregory W., et al. (Walter and Eliza Hall Institute of Medical Research, P.O. Royal Melbourne Hospital, Melbourne 3050, Australia) - p. 2476

73 No.8 (August) 1976

Partial amino-acid sequence of the precursor of an immunoglobulin light chain containing NH_2-terminal pyroglutamic acid. Burstein, Yigal, et al. (Departments of Organic Chemistry and Chemical Immunology, The Weizmann Institute of Science, Rehovot, Israel) - p. 2604

The Quarterly Review of Biology

51 No.1 (March) 1976

Life-History Tactics: A Review of the Ideas. Stearns, Stephen C. (Institute of Animal Resource Ecology, University of British Columbia, Vancouver, B.C., Canada V6T 1W5) - p. 3

Science

192 No.4246 (June) 1976

Evolution on the Level of Communities. Wilson, David Sloan (Department of Zoology, University of Washington, Seattle 98195) - p. 1358

193 No.4247

Thermal Polyamino Acids: Synthesis at Less Than 100°C. Rohlfing, Duane L. (Department of Biology, University of South Carolina, Columbia 29208) - p. 68

193 No.4248 (July) 1976

Microfossils in *Conophyton* from the Soviet Union and Their Bearing on Precambrian Biostratigraphy. Schopf, William J., Sovietov, Yu.K. (Department of Geology, University of California, Los Angeles 90024; Institute of Geology and Geophysics, U.S.S.R. Academy of Sciences, Siberian Branch, Novosibirsk-90, 630090) - p. 143

Australian Journal of Biological Sciences

28 No.4 (August) 1975

Studies on Monotreme Proteins. VI. Amino Acid Sequence of the ß-Chain of Haemoglobin from the Platypus, *Ornithorhynchus anatinus*. Whittaker, R.G., Thompson, E.O.P. (School of Biochemistry, University of New South Wales, P.O. Box 1, Kensington, N.S.W. 2033) - p. 353

Nature

263 No.5572 (September) 1976

Simple model for treating evolution of multigene families. Ohta, Tomoko (National Institute of Genetics, Mishima, Shizuoka-ken, 411, Japan) - p. 74

Compiled by Lothar Träger