

## Recently Published Papers in the Field of Molecular Evolution

*The Biochemical Journal*

149 No.2 (August) 1975

The Amino acid Sequence of Troponin I from Rabbit Skeletal Muscle. Wilkinson, J.M., Grand, R.J.A. (Department of Biochemistry, University of Birmingham, P.O.Box 363, Birmingham B152TT, U.K.) - p. 493

*Biochimica et Biophysica Acta (P) Protein Structure*

393 No.2 (June) 1975

Primary Structure of Cytochrome c from the Insect *Ceratitis capitata*. Fernández-Sousa, J.M., et al. (Department of Biochemistry, Faculty of Sciences, University of Madrid, Madrid-3, Spain) - p. 358

The Myoglobin of Primates. VIII. *Gorilla gorilla Beringei* (Eastern Highland Gorilla). Romero-Herrera, A.E., et al. (MRC Abnormal Haemoglobin Unit, Department of Clinical Biochemistry, University of Cambridge, Addenbrooke's Hospital, Hills Road, Cambridge CB2 2QR, U.K.) - p. 383

*Biochimie*

57 No.5 (juillet) 1975

Structure primaire de la chaîne  $\alpha$  du composant majeur de l'hémoglobine d'oie (*Anser anser.*). Debouverie, D. (Laboratoire de Chimie Générale I, Faculté des Sciences, Université libre de Bruxelles) - p. 569

*Biologisches Zentralblatt*

94 No.3 (Mai/Juni) 1975

Zur dialektischen Theorie der Biogenese. Körner, Uwe. (Akademie für ärztliche Fortbildung der Deutschen Demokratischen Republik, Berlin) - p. 249

7 No.1 (July) 1975

Energetics of Abiogenic Chemical Systems. Buvet, R., Stoetzel, F. (Laboratoire Energétique Biochimique, Université Paris Val de Marne, Avenue du Général de Gaulle, 94000-Createil, France) - p. 2

Organization of Chemical Reactions into Dividing and Metabolizing Units: The Chemotons. Gánti, Tibor. (Institute of Physics, University of Gödöllő, Hungary) - p. 15

Stereomolecular Interactions and Microsystems in Experimental Protobiogenesis. Fox, Sidney W. (Institute for Molecular and Cellular Evolution and Department of Chemistry, University of Miami, Coral Gables, Florida, USA) - p. 22

*European Journal of Biochemistry*

56 No.2 1975

Determination of the Complete Amino-Acid Sequence of Protein S4 from *Escherichia coli* Ribosomes. Schiltz, Emil, Reinbolt, Joseph (Max-Planck-Institut für Molekulare Genetik, Abteilung Wittmann, Berlin-Dahlem) - p. 467

*FEBS Letters*

56 No.1 (August) 1975

Primary Structure of Human Plasminogen. Evidence for Gene Duplication in the Heavy Chain and Possible Homology with Fibrinogen. Laursen, Richard A., Lee, How-Ming (Department of Chemistry, Boston University, Boston, Massachusetts, 02215, USA) - p. 70

The Amino Acid Sequences of Reindeer, Moose and Fallow Deer, Pancreatic Ribonucleases. Leijenaar-van den Berg, G., Beintema, J.J. (Biochemisch Laboratorium, Rijksuniversiteit, Zernikelaan, Groningen, The Netherlands) - p. 101

56, No.2 (August) 1975

Primary Structure of Ribosomal Protein S6 from the Wild Type and a Mutant of *Escherichia coli*. Hitz, Hans, et al. (Max-Planck-Institut für Molekulare Genetik, Berlin-Dahlem, West Germany) - p. 259

The Primary Structure of the 5S RNA Binding Protein L18 from *Escherichia coli* Ribosomes. Brosius, Jürgen, et al. (Max-Planck-Institut für Molekulare Genetik, Abt. Wittmann, Berlin-Dahlem, Germany) - p. 359

77 No.6 (June) 1975

Origin and Early Evolution of Transition Element Enzymes.  
Egami, Fujio (Mitsubishi-Kasei Institute of Life Sciences,  
11 Minamiooya, Machida-shi, Tokyo 194) - p. 1165

Amino Acid Sequence of the  $\alpha$  Chain of Chicken AI Hemoglobin.  
Takei, Hiroshi, et al. (Department of Biochemistry, Nagasaki  
University, School of Medicine, Nagasaki, Nagasaki 852) -  
p. 1345

*L'Année Biologique*

4e Série - T.13 - Fasc.11-12 1974

Protéines et évolution moléculaire. Foucrier, Jean  
(Laboratoire de Biologie du Développement, U.E.R.Biomédicale,  
Université Paris XIII, 74, rue Marcel-Cachin, 93000 Bobigny)  
p. 37

*Nature*

252 No.5482 (November) 1974

Mutational pressure as the main cause of molecular evolution  
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Mishima, Shizuoka-ken, 411 Japan) - p. 351

254 No.5495 (March) 1975

The phosphorylated site of calf thymus F2b histone by the  
cyclic AMP-dependent protein kinase. Farago, Anna, et al.  
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School, and Department of Biochemistry, Lőránd Eötvös  
University, Budapest 1088, Hungary) - p. 88

256 No.5516 (July) 1975

$\beta$ -structures of alternating polypeptides and their possible  
prebiotic significance. Brack, André, Orgel, Leslie E. (The  
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256 No.5517 (August) 1975

The origin of nuclei and of eukaryotic cells. Cavalier-Smith,  
T. (Department of Biophysics, University of London King's  
College, 26-29 Drury Lane, London WC2B 5RL, U.K.) - p. 463

5S RNA secondary structure. Fox, George E., Woese, Carl R.  
(Provisional Department of Genetics and Development,  
University of Illinois, Urbana, Illinois 61801) - p. 505

Early role during chemical evolution for cytochrome P450 in oxygen detoxification. Wickramasinghe, Rohan H., Ville, Claude A. (Laboratory of Human Reproduction and Reproductive Biology, Department of Biological Chemistry, Harvard Medical School, 25 Shattuck Street, Boston, Massachusetts 02115) - p. 509

Human embryonic haemoglobins including a comparison by homology of the human  $\zeta$  and  $\alpha$  chains. Kamuzora, H., Lehmann, H. (MRC Abnormal Haemoglobin Unit, University Department of Clinical Biochemistry, Addenbrooke's Hospital, Hills Road, Cambridge CB2 2QR, UK) - p. 511

*Origins of Life*

6 No.1/2 (January/April) 1975

Amino Acids in Carbonaceous Chondrites. Lawless, James G., Peterson, Etta (Ames Research Center, NASA, Planetary Biology Division, Moffett Field, Calif. 94035, USA) - p. 3

Remarks on the Chemical Conditions on the Surface of the Primitive Earth and the Probability of the Evolution of Life. Suess, Hans E. (Physikalisches Institut der Universität, Bern, Switzerland) - p. 9

Molten Earth and the Origin of Prebiological Molecules. Shimizu, Mikio (Institute of Space and Aeronautical Science, University of Tokyo, Komaba, Meguro-ku, Tokyo, Japan) - p. 15

Soil and Water and Its Relationship to the Origin of Life. Anderson, Duwayne M., Banin, Amos (U.S. Army Cold Regions Research and Engineering Laboratory, Hanover, N.H., USA) - p. 23

Microbial Contributions to the Evolution of the "Steady State" Carbon Dioxide System. Morita, Richard Y. (Dept. of Microbiology and School of Oceanography, Oregon State University, Corvallis, Ore. 97331, USA) - p. 37

Structures of Biogenic Origin from Early Precambrian Rocks of Euro-Asia. Lopuchin, A.S. (Institute of Geology of the Order of the Red Banner of Labor of the Academy of Sciences of Kirgiz S.S.R., Frunze, U.S.S.R.) - p. 45

Photochemical Synthesis of Simple Organic Free Radicals on Simulated Planetary Surfaces - an ESR Study. Tseng, Shin-Shyong, Chang, Sherwood (Planetary Biology Division, Ames Research Center, NASA, Moffett Field, Calif. 94035, USA) - p. 61

High Frequency Discharge Experiment. I. Yuasa, S., Ishigami,

M. (Dept. of Biology, College of General Education, Osaka University, Toyonaka, Osaka 560, Japan) - p. 75

Formation of Prebiochemical Compounds in Models of the Primitive Earth's Atmosphere. I.  $\text{CH}_4\text{-NH}_3$  and  $\text{CH}_4\text{-N}_2$  Atmospheres. II.  $\text{CH}_4\text{-H}_2\text{S}$  Atmospheres. Toupance, G., et al. (Université de Paris, Val de Marne, Laboratoire d'Energétique Biochimique Creteil 94000, France) - p. 83 and p. 91

Organic Synthesis by Quench Reactions. Park, W.K., et al. (Research Institut for Engineering Sciences, Wayne State University, Detroit, Mich. 48202, USA) - p. 99

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Quantum Chemical Study of the Thermodynamics, Kinetics of Formation and Bonding of  $\text{H}_2\text{CN}$ . Loew, G.H., Chang, S. (Dept. of Genetics, Stanford University Medical Center, Stanfor, Calif. 94305, USA) - p. 117

Aminonitriles: Possible Role in Chemical Evolution. Chadha, Mohindra S., et al. (Bio-Organic Division, Bhabha Atomic Research Center, Bombay, India) - p. 127

NMR Studies of Prebiotic Polypeptides. Andini, Salvatore, et al. (Istituto Chimico, Università di Napoli, 80134 Naples, Italy) - p. 147

The Origin of Proteins: Heteropolypeptides from Hydrogen Cyanide and Water. Matthews, Clifford N. (Dept. of Chemistry, University of Illinois at Chicago Circle, Chicago, Ill. 60680, USA) - p. 155

Prebiotic Nucleotide Synthesis-Demonstration of a Geologically Plausible Pathway. Schwartz, Alan W., et al. (Dept. of Exobiology, University of Nijmegen, Nijmegen, The Netherlands) - p. 163

Models of Prebiological Phosphorylation. Halmann, M. (Dept. of Isotope Research, The Weizmann Institute of Science, Rehovot, Israel) - p. 169

Conditions of Occurrence for Primeval Processes of Transphosphorylations. Etaix, Elisabeth, Buvet, René (Laboratoire d'Energétique Biochimique, Université Paris Val de Marne, 94000 Creteil, France) - p. 175

Experiments on the Origins of Optical Activity. Bonner, William A., Flores, Jose J. (Chemistry Dept., Stanford University, Stanford, Calif. 94305, and Ames Research Center, NASA, Moffett Field, Calif. 94035, USA) - p. 187

Coacervate-Like Microspheres from Lysine-Rich Proteinoid. Rohlfiing, Duane L. (Dept. of Biology, University of South Carolina, Columbia, S.C. 29208, USA) - p. 203

Evolution in Bioids: Hypercompetitivity as a Source of Bistability and a Possible Role of Metal Complexes as Prenucleoprotic Mediators of Molecular Asymmetry. Decker, P. (Chemical Department, Veterinary School, Hannover, F.R.G.) - p. 211

Entropy of the Genetic Information and Evolution. Hasegawa, Masami, Yano, Taka-Aki (Dept. of Biophysics and Biochemistry, Faculty of Science, University of Tokyo, Hongo, Tokyo, Japan) - p. 219

Physical Foundations of the Probability of Biogenesis. Bogdanski, C.A. (Laboratoire d'Evolution des Etres Organisés, Centre National de la Recherche Scientifique, 75006, Paris VI, France) - p. 229

Some Physical Parameters Controlling Cell Size During the Evolution of the Procarions. McCabe, M. (Institute of Medical Chemistry, University of Uppsala, Uppsala, Sweden) - p. 239

The Beginning of Photosynthesis. Broda, E. (Institute of Physical Chemistry, Vienna University, Vienna, Austria) - p. 247

Evolution of Photosystems of Photosynthetic Organisms. Karapetyan, N.V. (A.N. Bakh Institute of Biochemistry, U.S.S.R. Academy of Sciences, Moscow, U.S.S.R.) - p. 253

Evolution of Oxygen by Plants in Relation to Biosphere Evolution. Kutuyurin, V.M. (V.I. Vernadsky Geochemistry Institute, Academy of Science, Moscow, U.S.S.R.) p. 257

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On the Question of the Origin and Evolution of the Genetic System. Novák, Vladimír, Liebl, Vlastimil (Prebiology Group, Institute of Microbiology, Czechoslovak Academy of Sciences, Praha, Czechoslovakia) - p. 269

A Model for the Coevolution of the Genetic Code and the Process of Protein Synthesis: Review and Assessment. Lacey, James C. et al. (Laboratory of Molecular Biology, University of Alabama School of Medicine, University Station, Birmingham Ala. 35294, USA) - p. 273

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*Paleopleurocapsa wopfnerii* gen. et sp. nov.: A Late Precambrian alga and its modern counterpart. Knoll, Andrew H., et al. (Department of Geological Sciences, Harvard University, Cambridge, Massachusetts 02138 USA) - p. 2488

Interlocus variation of genetic distance and the neutral mutation theory. Nei, Masatoshi, Tateno, Yoshio (Center for Demographic and Population Genetics, University of Texas at Houston, Texas 77025) - p. 2758

Evolutionary and structural influences on light chain constant ( $C_L$ ) region of human and mouse immunoglobulins. Kabat, Elvin A., et al. (Fogarty International Center and Laboratory of Molecular Biology, National Institute of Arthritis, Metabolism and Digestive Diseases, National Institutes of Health, Bethesda, Maryland 20014, USA) - p. 2785

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