

Recently Published Papers in the Field of Molecular Evolution

GENERAL ASPECTS

Biochemical and Biophysical Research Communications

96 No. 1 1980

Genetic Code Correlations: Differential Rates of Non-Enzymatic Activation of Hydrophobic Amino Acids by ATP. Wullins, D. W. and Lacey, J. C. (Birmingham, U.S.A.) - p.491

Biochimie

62 No. 7 1980

Nucleotidic Cofactors and the Origin of the Genetic Code. Tremolieres, A. (Gif-sur-Yvette, France) - p. 493

BioSystems

13 No. 1-2 1980

Elementary Step Dynamics of Catalytic Hypercycles. Eigen, M. et al. (Göttingen, F.R.G.) - p. 1

Evolution of the Coenzymes. King, G. A. M. (Lower Hutt, New Zealand) - p. 23

Evolution

33 No. 4 1980

Gene Duplication and Phylogeny in *Clarkia*. Gottlieb, L. D. and Weeden, N. F. (Davis, U.S.A.) - p. 1025

FEMS Microbiology Letters

7 No. 2 1980

The Evolution of Biological Energy-Transducing Systems. Gest, H. (Bloomington, U.S.A.) - p. 73

Canadian Journal of Biochemistry

58 No. 3 1980

Evolutionary Relationship between *Halobacterium cutirubrum* and Eukaryotes Determined by Use of Aminoacyl-tRNA Synthetases as Phylogenetic Probes. Kwok, Y. and Wong, J. T.-F. (Ontario, Canada) - p. 213

Journal of Molecular Biology

140 No. 1 1980

A Systematic Approach to the Comparison of Protein Structures. Remington, S. J. and Matthews, B. W. (Eugene, U.S.A.) - p. 77

142 No. 4 1980

Efficient Catalysis of Polycytidylic Acid-Directed Oligoguanylate Formation by Pb^{2+} . Lohrmann, R. and Orgel, L. E. (San Diego, U.S.A.) - p. 555

Journal of Theoretical Biology

83 No. 4 1980

Evidence for Remnants of an Ordered Codon Sequence and a Restricted Codon Composition in Selected Proteins. Brown, A. P. (Birmingham, U. K.) - p. 537

Testing Models of Error Propagation. Gallant, J. A. and Prothero, J. (Seattle, U.S.A.) - p. 561

84 No. 3 1980

Pseudo-Oligomer Formation Between Related Soluble and Membrane-Bound Proteins. Implications on the Attachment of Proteins to Receptors and Membranes and the Evolution of Transport Proteins. Gräsbeck, R. and Kouvoonen, I. (Helsinki, Finland) - p. 505

Rapid Evolution and Histocompatibility Antigen Function. Fischer, K. M. (Philadelphia, U.S.A.) - p. 513

85 No. 3 1980

Hypercycles, Parasites and Packages. Bresch, C. et al. (Freiburg, F.R.G.) - p. 399

Hypercycles and Compartments. Compartments Assist - But do not Replace - Hypercyclic

Organisation of Early Genetic Information. Eigen, M. et al. (Göttingen, F.R.G.) - p. 407

85 No. 4 1980

An Application of Information Theory to Biological Evolution. Tanaka, M. (Osaka, Japan) - p. 789

Nature

287 No. 5779 1980

The Archaeobacteria and Eukaryotic Origins. Van Valen, L. M. and Maiorana, V. C. (Chicago, U.S.A.) - p. 248

287 No. 5782 1980

Chemical Evolution and Ammonia in the Early Earth's Atmosphere. Henderson-Sellers, A. and Schwartz, A. W. (Liverpool, U.K.) - p. 526

Naturwissenschaften

67 No. 4 1980

The Lumisphere, A New Model of Pre-Biotic Evolution. Heinz, B. et al. (Frankfurt/Main, F.R.G.) - p. 178

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Metabolic Microspheres. Origins and Evolution. Fox, S. W. (Coral Gables, U.S.A.) - p. 378

Origins of Life

10 No. 3 1980

On the Antisymmetry of the Amino Acid Code Table. Hasegawa, M. and Miyata, T. (Tokyo, Japan) - p. 265

Possible Role of RNA-Dependent DNA-Polymerase in Early Stages of Evolution. Balasubramanian, R. and Seetharamula, P. (Tamil Nadu, India) - p. 271

Science

209 No. 4455 1980

The Phylogeny of Prokaryotes. Fox, G. E. et al. (Urbana, U.S.A.) - p. 457

Zeitschrift für Naturforschung

35c No. 5/6 1980

Construction of Phylogenetic Trees by Pat-

tern Recognition Procedures. Sharaf, M. A. et al. (Seattle, U.S.A.) - p. 508

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19 No. 9 1980

Deoxyribonucleic Acid Sequence Organization in the Genome of the Dinoflagellate Cryptocodinium cohnii. Hinnebusch, A. G. et al. (Princeton, U.S.A.) - p. 1744

Cell

20 No. 1 1980

Characterization of Two Xenopus Somatic 5S DNAs and One Minor Oocyte-Specific 5S DNA. Peterson, R. C. et al. (Baltimore, U.S.A.) - p. 131

20 No. 2 1980

Assembly of the Mitochondrial Membrane System: Sequence Analysis of a Yeast Mitochondrial ATPase Gene Containing the oli-2 and oli-4 Loci. Macino, G. and Tzagoloff, A. (Roma, Italy) - p. 507

The Evolution of Genes: the Chicken Preproinsulin Gene. Perler, F. et al. (Boston, U.S.A.) - p. 555

20 No. 3 1980

The Ovalbumin Gene Family: Structure of the X Gene and Evolution of Duplicated Split Genes. Heilig, R. et al. (Strasbourg, France) - p. 625

Structure and Gene Organization in the Transforming Hind III-G Fragment of Adl2. Sugisaki, H. et al. (Kyoto, Japan) - p. 777

21 No. 1 1980

DNA Sequence Organization of the β -Globin Complex in the BALE/c Mouse. Jahn, C. L. et al. (Chapel Hill, U.S.A.) - p. 159

Evolution of a D. melanogaster Glutamate tRNA Gene Cluster. Hosbach, H. A. et al. (San Francisco, U.S.A.) - p. 169

Nucleotide Sequence of Cauliflower Mosaic Virus DNA. Franck, A. et al. (Strasbourg, France) - p. 285

21 No. 2 1980

The Structure of a Human α -Globin Pseudogene and Its Relationship to α -Globin Gene Duplication. Proudfoot, N. J. and Maniatis, T.

(Pasadena, U.S.A.) - p. 537

The Nucleotide Sequence of a Rabbit β -Globin Pseudogene. Lacy, E. and Maniatis, T. (Pasadena, U.S.A.) - p. 545

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The Primary Structure of the Human ϵ -Globin Gene. Baralle, F. E. et al. (Cambridge, U.K.) - p. 621

Human Fetal γ - and α -Globin Genes: Complete Nucleotide Sequences Suggest that DNA Can be Exchanged Between these Duplicated Genes. Slightom, J. L. et al. (Madison, U.S.A.) - p. 627

Complete Nucleotide Sequence of the Human δ -Globin Gene. Spritz, R. A. et al. (New Haven, U.S.A.) - p. 639

The Nucleotide Sequence of the Human β -Globin Gene. Lawn, R. M. et al. (Pasadena, U.S.A.) - p. 647

The Structure and Evolution of the Human β -Globin Gene Family. Efstratiadis, A. et al. (Boston, U.S.A.) - p. 653

Sequences of Three Copies of the Gene for the Major Drosophila Heat Shock Induced Protein and Their Flanking Regions. Ingolia, T. D. et al. (San Francisco, U.S.A.) - p. 669

Ovomucoid Intervening Sequences Specify Functional Domains and Generate Protein Polymorphism. Stein, J. P. et al. (Houston, U.S.A.) - p. 681

Correlation Between Splicing Sites within an Intron and Their Sequence Complementarity with U1 RNA. Avvedimento, V. E. et al. (Bethesda, U.S.A.) - p. 689

Variation in the Crossover Point of Kappa Immunoglobulin Gene V-J Recombination: Evidence from a Cryptic Gene. Max, E. E. et al. (Bethesda, U.S.A.) - p. 793

Chromosoma

79 No. 1 1980

Chromosomal Evolution in Serpentes: A Comparison of G and C Chromosome Banding Patterns of Some Solubrid and Boid Genera. Mengden, G. A. and Stock, A. D. (Canberra, Australia) - p. 53

FEBS Letters

115 No. 2 1980

Repeated Sequences in the Mitochondrial Genome of Yeast. Bernardi, G. and Bernardi, G. (Paris, France) - p. 159

DNA Repeat Length of Chromatin from the Unicellular Alga *Listhodiscus luteus*. Shupe, K. et al. (College Station, U.S.A.) - p. 221

Gene

10 No. 1 1980

The Nucleotide Sequence of a Cloned Human Leucocyte Interferon cDNA. Mantel, N. et al. (Zürich, Switzerland) - p. 1

The Nucleotide Sequence of Human Fibroblast Interferon cDNA. Taniguchi, T. et al. (Tokyo, Japan) - p. 11

The Nucleotide Sequence of Adenovirus Type-5 Early Region E1 - the Region Between Map Positions 8.0 (Hind III Site) and 11.8 (SmaI Site). Maat, J. et al. (Leiden, Netherlands) - p. 27

10 No. 4 1980

On the Distribution of the Nucleotides in 7 Completely Sequenced DNAs. Fuchs, C. (Madison, U.S.A.) - p. 371

The Journal of Biological Chemistry

255 No. 10 1980

DNA Sequence of the Promoter Region of the α Ribosomal Protein Operon in *Escherichia coli*. Post, L. E. et al. (Madison, U.S.A.) - p. 4653

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Assembly of the Mitochondrial Membrane System. Sequence of the *oxi* 2 Gene of Yeast Mitochondrial DNA. Thalenfeld, B. E. and Tzagoloff, A. (New York, U.S.A.) - p. 6173

Structure of Cloned DNA Complementary to Rat Prolactin Messenger RNA. Cooke, N. E. et al. (San Francisco, U.S.A.) - p. 6502

255 No. 16 1980

Molecular Cloning of DNA Complementary to Bovine Growth Hormone mRNA. Miller, W. L. et al. (San Francisco, U.S.A.) - p. 7521

European Journal of Biochemistry

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Journal of Molecular Biology

139 No. 3 1980

DNA Sequence of T4 Transfer RNA Gene Cluster. Fukuda, K. and Abelson, J. (San Diego, U.S.A.)

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Fine Structure of Ribosomal RNA. III. Location of Evolutionarily Conserved Regions Within Ribosomal DNA. Gourse, R. L. and Gerbi, S. A. (Providence, U.S.A.) - p. 321

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Sequence Homologies Between Escherichia coli and Chloroplast Ribosomal DNA as Seen by Heteroduplex Analysis. Delius, H. and Koller, B. (Heidelberg, F. R. G.) - p. 247

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Sequence Definition and Organization of a Human Repeated DNA. Wu, J. C. and Manuelidis, L. (New Haven, U.S.A.) - p. 363

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Nucleotide Sequence of the trpB Gene in Escherichia coli and Salmonella typhimurium. Crawford, I. P. et al. (Iowa City, U.S.A.) - p. 489

Nucleotide Sequences of the trpG Regions of Escherichia coli, Shigella dysenteriae, Salmonella typhimurium and Serratia marcescens. Nichols, B. P. et al. (Stanford, U.S.A.) - p. 503

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Nature

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286 No. 5771 1980

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Ribosomal RNA Genes. Eperon, I. C. et al. (Cambridge, U.K.) - p. 460

286 No. 5774 1980

The cDNA for the β -Subunit of Human Chorionic Gonadotropin Suggests Evolution of a Gene by Readthrough into the 3'-Untranslated Region. Fiddes, J. C. and Goodman, H. M. (San Francisco, U.S.A.) - p. 684

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Nucleotide Sequence of the Yeast Plasmid. Hartley, L. and Donelson, J. E. (Iowa City, U.S.A.) - p. 860

Sequencing of 16S-23S Spacer in a Ribosomal RNA Operon of Euglena gracilis Chloroplast DNA Reveals Two tRNA Genes. Graf, L. et al. (Neuchatel, Switzerland) - p. 908

287 No. 5778 1980

Structure of a Family of Rat Amylase Genes. MacDonald, R. J. et al. (Dallas, U.S.A.) - p. 117

287 No. 5779 1980

Nucleotide Sequence of an Avian Sarcoma Virus Oncogene (src) and Proposed Amino Acid Sequence for the Gene Product. Czernilofsky, A. P. et al. (San Francisco, U.S.A.) - p. 198

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The Structure of One of the Eight or More Distinct Chromosomal Genes for Human Interferon α . Nagata, S. et al. (Zürich, Switzerland) - p. 401

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Molecular Cloning and Sequencing of cDNA Encoding the Precursor to the Small Subunit of Chloroplast Ribulose-1,5-Biphosphate Carboxylase. Bedbrook, J. R. et al. (Cambridge, U.K.)

- p. 692

Nucleic Acids Research

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Nucleotide Sequence of a 5S Ribosomal RNA Gene in the Sea Urchin Lytechinus variegatus. Lu, A.-L. et al. (Chapel Hill, U.S.A.) - p.1839

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8 No. 10 1980

Nucleotide Sequence of the E. coli Gene Coding for Dihydrofolate Reductase. Smith, D. R. and Calvo, J. M. (Ithaca, U.S.A.) - p.2255

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8 No. 12 1980

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Nucleotide Sequence of the Gene ompA Coding the Outer Membrane Protein II* of Escherichia coli. Beck, E. and Bremer, E. (Heidelberg, F. R. G.) - p. 3011

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8 No. 15 1980

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Coding and Spacer Sequences in the 5,8S - 2S Region of Sciara coprophila Ribosomal DNA. Jordan, B. R. et al. (Marseille, France) - p. 3565

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8 No. 19 1980

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Some Rules in the Ordering of Nucleotides in the DNA. Nussinov, R. (Rehovot, Israel)-p.4545

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DNA Sequence of Regulatory Region for Integration Gene of Bacteriophage λ . Abraham, J. et al. (Berkeley, U.S.A.) - p. 2477

Structure of a Split Yeast Gene: Complete Nucleotide Sequence of the Actin Gene in Saccharomyces cerevisiae. Gallwitz, D. and Sures, I. (Marburg, F.R.G.) - p. 2546

Sequences of the recA Gene and Protein. San-car, A. et al. (New Haven, U.S.A.) - p. 2611

DNA Sequence Encoding the NH₂-Terminal Peptide Involved in Transport of λ Receptor, an Escherichia coli Secretory Protein. Hedgpeth, J. et al. (Paris, France) - p. 2621

Selective Amplification of Variants of a Complex Repeating Unit in DNA of a Crustacean. Christie, N. T. and Skinner, D. M. (Oak Ridge, U.S.A.) - p. 2786

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Nucleotide Sequence of Moloney Leukemia Virus 3' End Reveals Details of Replication, Analogy to Bacterial Transposons, and an Unexpected Gene. Sutcliffe, J. G. et al. (La Jolla, U.S.A.) - p. 3302

Structure of Moloney Murine Leukemia Viral DNA: Nucleotide Sequence of the 5' Long Terminal Repeat and Adjacent Cellular Sequences. Beversen, C. et al. (San Diego, U.S.A.) - p. 3307

Intracisternal A-Particle Genes: Identifica-

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Nucleotide Sequence of Immunoglobulin Heavy Chain Joining Segments Between Translocated V_H and μ Constant Region Genes. Bernard, O. and Gough, N. M. (Melbourne, Australia) - p. 3630

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Isolation and Sequence of the Gene for Actin in Saccharomyces cerevisiae. Ng, R. and Abel-son, J. (La Jolla, U.S.A.) - p. 3912

Nucleotide Sequence of the Primary Origin of Bacteriophage T7 DNA Replication: Relationship to Adjacent Genes and Regulatory Elements. Saito, H. et al. (Boston, U.S.A.) - p. 3917

Nucleotide Sequences of Integrated Moloney Sarcoma Provirus Long Terminal Repeats and Their Host and Viral Junctions. Dhar, R. et al. (Bethesda, U.S.A.) - p. 3937

Replicator Regions of the Yeast Mitochondrial DNA Responsible for Suppressiveness. Blanc, H. and Dujon, H. (Gif-sur-Yvette, France) - p. 3942

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O F P R O T E I N S

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