LETTERS


EDITORIAL

The Recombinant DNA Debate: M. F. Singer

ARTICLES

The Need for a New Medical Model: A Challenge for Biomedicine: G. L. Engel

Second Phases in Steel: W. R. Bandi

NEWS AND COMMENT

NSF: Pressures Mount to Provide Grants for Industrial Researchers

Mathematician Paul Erdős: Total Devotion to the Subject

Science in Europe/Benn and British Rethink Energy Policy

Science and Technology at State: Recognizing the Problem

RESEARCH NEWS

Persistent Infections: The Role of Viruses

BOOK REVIEWS

Jupiter, reviewed by J. W. Warwick; Patterns of Human Variation, M. H. Crawford; Science and Civilisation in China, P. M. Rattansi; Discrete Multivariate Analysis, I. Olkin; The Ethology of Predation, T. W. Schoener; Books Received and Book Order Service

REPORTS

Recombinant DNA: Examples of Present-Day Research: J. Abelson

Charon Phages: Safer Derivatives of Bacteriophage Lambda for DNA Cloning: F. R. Blattner et al.

Recombinational Switch for Gene Expression: J. Zieg et al.


EK2 Derivatives of Bacteriophage Lambda Useful in the Cloning of DNA from Higher Organisms: The A7WES System: P. Leder, D. Tiemeier, L. Enquist

Chemical Synthesis of Restriction Enzyme Recognition Sites Useful for Cloning: R. H. Scheller et al.

Screening A7W Recombinant Clones by Hybridization to Single Plaques in situ: W. D. Benton and R. W. Davis
Use of Phage Immunity in Molecular Cloning Experiments: K. Backman, D. Hawley, M. J. Ross

Hybridization in situ of SV40 Plaques: Detection of Recombinant SV40 Virus Carrying Specific Sequences of Nonviral DNA: L. P. Villarreal and P. Berg

Increase in Conjugal Transmission Frequency of Nonconjugative Plasmids: N. J. Crisone and A. J. Clark

Five Hundredfold Overproduction of DNA Ligase After Induction of a Hybrid Lambda Lysogen Constructed in vitro: S. M. Panasenko et al.

Interspersion of Short Repetitive Sequences Studied in Cloned Sea Urchin DNA Fragments: A. S. Lee, R. J. Britton, E. H. Davidson

Nucleotide Sequences from a Rabbit Alpha Globin Gene Inserted in a Chimeric Plasmid: A. Y. Liu et al.

Analysis of Chicken Ribosomal RNA Genes and Construction of Lambda Hybrids Containing Gene Fragments: W. McClements and A. M. Skalka

Clones of Individual Repetitive Sequences from Sea Urchin DNA Constructed with Synthetic Eco RI Sites: R. H. Scheller et al.


Cloned Ribosomal RNA Genes from Chloroplasts of Euglena gracilis: M. I. Lomax et al.

Cloning of Yeast Transfer RNA Genes in Escherichia coli: J. S. Beckmann, P. F. Johnson, J. Abelson

Excision and Recombination of Adenovirus DNA Fragments in Escherichia coli: M. Perricaudet et al.

Cloning of Cauliflower Mosaic Virus (CLMV) DNA in Escherichia coli: W. W. Szeto et al.

The Effects of Escherichia coli and Yeast DNA Insertions on the Growth of Lambda Bacteriophage: J. R. Cameron and R. W. Davis

Use of Isolators in Recombinant DNA Research: P. Kourilsky

Degradation of DNA by Nucleases in Intestinal Tract of Rats: L. Maturin, Sr., and R. Curtiss III

Probability of Establishing Chimeric Plasmids in Natural Populations of Bacteria: B. R. Levin and F. M. Stewart

Interbacterial Transfer of Escherichia coli–Drosophila melanogaster Recombinant Plasmids: D. H. Hamer

PRODUCTS AND MATERIALS

Chemical Carcinogen Glove Box; Storage Cabinets for Flammables; Modulation Contrast System; Infrared Spectrophotometers; Ultrasonic Cup Horn; Measurement of Atmospheric Electricity; Bench-Top Chemostat; Organic Carbon Analyzer; Disposable Water Dispensers; Skeletal Vascular Casting; Back-Lighted Digitizers; Electronic Balances; Gas Chromatographs; Vertical Slab Polyacrylamide Gel Electrophoresis; Data Recording System; Literature

COVER

Charon 11 vector phages (dark indigo plaques) can be distinguished on lac' bacteria (lower left, yellow plate) from reconstituted vector phages with the lac fragment reversed (light blue plaques) and from the phages with foreign DNA (small colorless plaques). On lac' bacteria (upper right, yellow plate) the reverse phages are also colorless. The brown plates verify safety features of the host bacteria. See page 161. [Frederick Blattner et al., University of Wisconsin]