Biological Frontiers

LETTERS


EDITORIAL

Knowledge as Real Estate: A. Keatley ........................................ 717

ARTICLES

Biological Frontiers: F. R. Blattner ........................................ 719

Monoclonal Antibodies Reveal the Structural Basis of Antibody Diversity: J.-L. Teillaud et al. ........ 721

Genes of the Major Histocompatibility Complex in Mouse and Man: M. Steinmetz and L. Hood .......... 727

Studying Promoters and Terminators by Gene Fusion: M. Rosenberg, A. B. Chepelnisky, K. McKenney .......... 734

Transcription of Class III Genes: Formation of Preinitiation Complexes: A. B. Lassar, P. L. Martin, R. G. Roeder ........ 740

BK Viral Enhancer Element and a Human Cellular Homolog: N. Rosenthal et al. ........ 749


Translocations Among Antibody Genes in Human Cancer: P. Leder et al. ........ 765
**AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE**


Yeast RNA Polymerase II Genes: Isolation with Antibody Probes: *R. A. Young and R. W. Davis* ..................................................... 778

Directed Mutagenesis of Dihydrofolate Reductase: *J. E. Villafranca et al.* .................. 782

Surface Molecules Identify Groups of Growing Axons: *R. D. G. McKay et al.* ........................ 788

Modulation of Synapse Formation by Cyclic Adenosine Monophosphate: *M. Nirenberg et al.* .................................................. 794

In situ Hybridization to Study the Origin and Fate of Identified Neurons: *L. B. McAllister et al.* ................................................... 800

Metallothionein–Human GH Fusion Genes Stimulate Growth of Mice: *R. D. Palmiter et al.* .......................................................... 809

Introduction of Genetic Material into Plant Cells: *A. Caplan et al.* .............................. 815

**NEWS AND COMMENT**

Scientists Describe "Nuclear Winter" ........................................................................... 822

EPA Revs Up to Regulate Biotechnology ........................................................................ 823

**Briefing:** Dingell Wants Action on NIH Authorization: House Report Blasts DOE on Oak Ridge Pollution; Revision of Pesticide Law Put on Hold ................................................................. 824

**RESEARCH NEWS**

Choosing the Next Synchrotron Light Source ................................................................ 826

Gene Splicers Contemplate the Rat Brain ...................................................................... 828

COVER

Mouse on the right is more than twice the size of its control sibling because it contains a foreign gene composed of the mouse metallothionein promoter fused to the human growth hormone structural gene. To our knowledge, this is the first example of a human gene expressed in another animal. The metallothionein promoter (yellow) extends in the first exon. Gene exons (cross-hatched areas) represent the part of the gene that becomes the message for human growth hormone. The human growth hormone gene is red. A piece of the pBR322 plasmid is shown in beige. See page 809. [R. L. Brinster and R. E. Hammer, School of Veterinary Medicine, University of Pennsylvania, Philadelphia 19104]