

MOLECULAR AND CELLULAR BIOLOGY

Volume 12

March 1992

No. 3

GENE EXPRESSION

- High-Level Expression of the Rat Whey Acidic Protein Gene Is Mediated by Elements in the Promoter and 3' Untranslated Region** Trevor C. Dale, Michael J. Krnacik, Christian Schmidhauser, Claudia L.-Q. Yang, Mina J. Bissell, and Jeffrey M. Rosen 905-914
- Identification of cis-Acting Intron and Exon Regions in Influenza Virus NS1 mRNA That Inhibit Splicing and Cause the Formation of Aberrantly Sedimenting Presplicing Complexes** Martin E. Nemeroff, Ulrike Utans, Angela Krämer, and Robert M. Krug 962-970
- Tissue-Specific, Developmental, Hormonal, and Dietary Regulation of Rat Phosphoenolpyruvate Carboxykinase-Human Growth Hormone Fusion Genes in Transgenic Mice** Mary K. Short, David E. Clouthier, Ida M. Schaefer, Robert E. Hammer, Mark A. Magnuson, and Elmus G. Beale 1007-1020
- Effect of Mutations in a Zinc-Binding Domain of Yeast RNA Polymerase C (III) on Enzyme Function and Subunit Association** Michel Werner, Sylvie Hermann-Le Denmat, Isabelle Treich, André Sentenac, and Pierre Thuriaux 1087-1095
- Identification of the Sequences Responsible for the Splicing Phenotype of the Regulatory Intron of the L1 Ribosomal Protein Gene of *Xenopus laevis*** Paola Fragapane, Elisa Caffarelli, Matteo Lener, Silvia Prislei, Bina Santoro, and Irene Bozzoni 1117-1125
- Nonsense Codons in Human β -Globin mRNA Result in the Production of mRNA Degradation Products** Sai-Kiang Lim, Curt D. Sigmund, Kenneth W. Gross, and Lynne E. Maquat 1149-1161
- Silent and Expressed Sister *Mup* Genes Are Located within Distinct Chromatin Domains: Analysis by Pulsed-Field Gel Electrophoresis and Polymerase Chain Reaction-Supplemented DNase I Digestion** M. Rodriguez and E. Derman 1188-1193
- The Cysteine-Rich Protein Gene Family of *Giardia lamblia*: Loss of the *CRP170* Gene in an Antigenic Variant** Rodney D. Adam, Yong Min Yang, and Theodore E. Nash 1194-1201
- Analysis of a Tissue-Specific Enhancer: ARF6 Regulates Adipogenic Gene Expression** Reed A. Graves, Peter Tontonoz, and Bruce M. Spiegelman 1202-1208
- A Gene from the Variant Surface Glycoprotein Expression Site Encodes One of Several Transmembrane Adenylate Cyclases Located on the Flagellum of *Trypanosoma brucei*** Pascale Paindavoine, Sylvie Rolin, Suzanne van Assel, Maurice Geuskens, Jean-Claude Jauniaux, Christiane Dinsart, Guillemette Huet, and Etienne Pays 1218-1225
- The Low-Abundance U11 and U12 Small Nuclear Ribonucleoproteins (snRNPs) Interact To Form a Two-snRNP Complex** Karen Montzka Wassarman and Joan A. Steitz 1276-1285
- The Rev Protein of Human Immunodeficiency Virus Type 1 Promotes Polysomal Association and Translation of *gag/pol* and *vpu/env* mRNAs** Donna M. D'Agostino, Barbara K. Felber, Jeanette E. Harrison, and George N. Pavlakis 1375-1386
- Differential Regulation of the Rat Phosphoenolpyruvate Carboxykinase Gene Expression in Several Tissues of Transgenic Mice** Carol L. Eisenberger, Hovav Nechushtan, Hannah Cohen, Moshe Shani, and Lea Reshef 1396-1403

TRANSCRIPTIONAL REGULATION

- Differential Expression of Oocyte-Type Class III Genes with Fraction TFIIC from Immature or Mature Oocytes** Wanda F. Reynolds and Deborah L. Johnson 946-953

Continued on following page

Temperature-Dependent Regulation of a Heterologous Transcriptional Activation Domain Fused to Yeast Heat Shock Transcription Factor	J. José Bonner, Scott Heyward, and Donna L. Fackenthal	1021–1030
HEB, a Helix-Loop-Helix Protein Related to E2A and ITF2 That Can Modulate the DNA-Binding Ability of Myogenic Regulatory Factors	Jing-Shan Hu, Eric N. Olson, and Robert E. Kingston	1031–1042
<i>cis</i>-Acting Sequences Required for Inducible Interleukin-2 Enhancer Function Bind a Novel Ets-Related Protein, Elf-1	Craig B. Thompson, Chung-Yih Wang, I-Cheng Ho, Paul R. Bohjanen, Bronislawa Petryniak, Carl H. June, Susan Miesfeldt, Liquian Zhang, Gary J. Nabel, Beverly Karpinski, and Jeffrey M. Leiden	1043–1053
The HIP1 Binding Site Is Required for Growth Regulation of the Dihydrofolate Reductase Gene Promoter	Anna L. Means, Jill E. Slansky, Stephanie L. McMahon, Mark W. Knuth, and Peggy J. Farnham	1054–1063
Role of Multifunctional Autonomously Replicating Sequence Binding Factor 1 in the Initiation of DNA Replication and Transcriptional Control in <i>Saccharomyces cerevisiae</i>	Peter R. Rhode, Suzanne Elsasser, and Judith L. Campbell	1064–1077
Cyclic AMP Response Element-Binding Protein and the Catalytic Subunit of Protein Kinase A Are Present in F9 Embryonal Carcinoma Cells but Are Unable To Activate the Somatostatin Promoter	Norma Masson, Matthew Ellis, Stephen Goodbourn, and Kevin A. W. Lee	1096–1106
A Single Transcription Factor Binds to Two Divergent Sequence Elements with a Common Function in Cardiac Myosin Light Chain-2 Promoter	Pankaj Qasba, Ershen Lin, Ashok Kumar, and M. A. Q. Siddiqui	1107–1116
BLyF, a Novel Cell-Type- and Stage-Specific Regulator of the B-Lymphocyte Gene <i>mb-1</i>	Andrew L. Feldhaus, David Mbangkollo, Kara L. Arvin, Christopher A. Klug, and Harinder Singh	1126–1133
Hepatocyte Nuclear Factor 1 and C/EBP Are Essential for the Activity of the Human Apolipoprotein B Gene Second-Intron Enhancer	Alan R. Brooks and Beatriz Levy-Wilson	1134–1148
Dissection of a Carboxy-Terminal Region of the Yeast Regulatory Protein RAP1 with Effects on Both Transcriptional Activation and Silencing	Christopher F. J. Hardy, Dina Balderes, and David Shore	1209–1217
Domains of the Rat rDNA Promoter Must Be Aligned Stereospecifically	WenQin Xie and Lawrence I. Rothblum	1266–1275
Embryonal Long Terminal Repeat-Binding Protein Is a Murine Homolog of FTZ-F1, a Member of the Steroid Receptor Superfamily	Toshio Tsukiyama, Hitoshi Ueda, Susumu Hirose, and Ohtsura Niwa	1286–1291
An Antisense Promoter of the Murine <i>c-myc</i> Gene Is Localized within Intron 2	Douglas B. Spicer and Gail E. Sonenshein	1324–1329
The Core Promoter Region of the Tumor Necrosis Factor α Gene Confers Phorbol Ester Responsiveness to Upstream Transcriptional Activators	Dale C. Leitman, Erich R. Mackow, Trevor Williams, John D. Baxter, and Brian L. West	1352–1356
CELL GROWTH AND DEVELOPMENT		
Nuclear Localization and Regulation of <i>erk</i>- and <i>rsk</i>-Encoded Protein Kinases	Rey-Huei Chen, Charlyn Sarnecki, and John Blenis	915–927
The RNA Polymerase II 15-Kilodalton Subunit Is Essential for Viability in <i>Drosophila melanogaster</i>	Douglas A. Harrison, Mark A. Mortin, and Victor G. Corces	928–935
Regulation of Tetradecanoyl Phorbol Acetate-Induced Responses in NIH 3T3 Cells by GAP, the GTPase-Activating Protein Associated with p21^{c-ras}	Mukund Nori, Gilles L'Allemain, and Michael J. Weber	936–945

Induction of Mammary Tumors by Expression of Polyomavirus Middle T Oncogene: A Transgenic Mouse Model for Metastatic Disease	Chantale T. Guy, Robert D. Cardiff, and William J. Muller	954–961
The Retinoblastoma Protein Physically Associates with the Human cdc2 Kinase	Qianjin Hu, Jacqueline A. Lees, Karen J. Buchkovich, and Ed Harlow	971–980
Interaction of Phosphatidylinositol 3-Kinase-Associated p85 with Epidermal Growth Factor and Platelet-Derived Growth Factor Receptors	P. Hu, B. Margolis, E. Y. Skolnik, R. Lammers, A. Ullrich, and J. Schlessinger	981–990
SH2 Domains of the p85α Subunit of Phosphatidylinositol 3-Kinase Regulate Binding to Growth Factor Receptors	C. Jane McGlade, Christine Ellis, Michael Reedijk, Deborah Anderson, Geraldine Mbamalu, Alastair D. Reith, George Panayotou, Peter End, Alan Bernstein, Andrius Kazlauskas, Michael D. Waterfield, and Tony Pawson	991–997
Alteration of a Cyclic AMP-Dependent Protein Kinase Phosphorylation Site in the c-Fos Protein Augments Its Transforming Potential	Isabelle Tratner, Rivka Ofir, and Inder M. Verma	998–1006
<i>IME4</i>, a Gene That Mediates <i>MAT</i> and Nutritional Control of Meiosis in <i>Saccharomyces cerevisiae</i>	Jyoti C. Shah and Mary J. Clancy	1078–1086
A Synthetic Lethal Screen Identifies SLK1, a Novel Protein Kinase Homolog Implicated in Yeast Cell Morphogenesis and Cell Growth	Christine Costigan, Sonja Gehrung, and Michael Snyder	1162–1178
<i>tkl</i> Is the Avian Homolog of the Mammalian <i>lck</i> Tyrosine Protein Kinase Gene	Lionel M. L. Chow, Michael J. H. Ratcliffe, and André Veillette	1226–1233
The mRNA 5' Cap-Binding Protein, eIF-4E, Cooperates with v-myc or E1A in the Transformation of Primary Rodent Fibroblasts	Anthoula Lazaris-Karatzas and Nahum Sonenberg	1234–1238
Phosphorylation of Translation Initiation Factor eIF-4E Is Induced in a ras-Dependent Manner during Nerve Growth Factor-Mediated PC12 Cell Differentiation	Robert M. Frederickson, Walter E. Mushynski, and Nahum Sonenberg	1239–1247
The Protein Kinase C-Related PKC-L(η) Gene Product Is Localized in the Cell Nucleus	Hagar Greif, Jacob Ben-Chaim, Tova Shimon, Edna Bechor, Hagit Eldar, and Etta Livneh	1304–1311
A 41-Kilodalton Protein Is a Potential Substrate for the p210^{<i>bcr-abl</i>} Protein-Tyrosine Kinase in Chronic Myelogenous Leukemia Cells	Ellen Freed and Tony Hunter	1312–1323
Human p53 and <i>CDC2Hs</i> Genes Combine To Inhibit the Proliferation of <i>Saccharomyces cerevisiae</i>	Janice M. Nigro, Robert Sikorski, Steven I. Reed, and Bert Vogelstein	1357–1365
Multiple SH2-Mediated Interactions in v-src-Transformed Cells	C. Anne Koch, Michael F. Moran, Deborah Anderson, Xingquan Liu, Geraldine Mbamalu, and Tony Pawson	1366–1374
Progression Colorectal Cancer Is Associated with Multiple Tumor Suppressor Gene Defects but Inhibition of Tumorigenicity Is Accomplished by Correction of Any Single Defect via Chromosome Transfer	Michele C. Goyette, Kathleen Cho, Clare L. Fasching, Daniel B. Levy, Kenneth W. Kinzler, Christos Paraskeva, Bert Vogelstein, and Eric J. Stanbridge	1387–1395
CELL AND ORGANELLE STRUCTURE AND ASSEMBLY		
Distal Protein Sequences Can Affect the Function of a Nuclear Localization Signal	Min Gao and David M. Knipe	1330–1339

DNA DYNAMICS AND CHROMOSOME STRUCTURE

- | | | |
|--|---|-----------|
| Amplicon Structure in Multidrug-Resistant Murine Cells: A Nonrearranged Region of Genomic DNA Corresponding to Large Circular DNA | Fredrik Ståhl, Yvonne Wettergren, and Göran Levan | 1179–1187 |
| Molecular and Genetic Analysis of the Yeast Early Meiotic Recombination Genes <i>REC102</i> and <i>REC107/MER2</i> | Marc Cool and Robert E. Malone | 1248–1256 |
| The HeLa Pur Factor Binds Single-Stranded DNA at a Specific Element Conserved in Gene Flanking Regions and Origins of DNA Replication | Andrew D. Bergemann and Edward M. Johnson | 1257–1265 |
| Two Alternative Pathways of Double-Strand Break Repair That Are Kinetically Separable and Independently Modulated | Jacqueline Fishman-Lobell, Norah Rudin, and James E. Haber | 1292–1303 |
| <i>MEI4</i>, a Meiosis-Specific Yeast Gene Required for Chromosome Synapsis | Thomas M. Menees, Petra B. Ross-Macdonald, and G. Shirleen Roeder | 1340–1351 |

ERRATA

- | | | |
|---|--|------|
| Isolation and Characterization of PKC-L, A New Member of the Protein Kinase C-Related Gene Family Specifically Expressed in Lung, Skin and Heart | Nina Bacher, Yaffa Zisman, Eva Berent, and Etta Livneh | 1404 |
| Sequences Regulating Temporal Poly(A) Site Switching in the Adenovirus Major Late Transcription Unit | James D. DeZazzo, Erik Falck-Pedersen, and Michael J. Imperiale | 1404 |
| <i>tpv-met</i> Oncogene Product Induces Maturation-Promoting Factor Activation in <i>Xenopus</i> Oocytes | Ira O. Daar, Gretchen A. White, Susan M. Schuh, Douglas K. Ferris, and George F. Vande Woude | 1404 |