

# Contents:

## The Journal of Cell Biology

Volume 127, Number 3, November 1994

- 581 Human CENP-A contains a histone H3 related histone fold domain that is required for targeting to the centromere.  
K. F. Sullivan, M. Hechenberger, and K. Masri
- 593 Association of nuclear matrix antigens with exon-containing splicing complexes.  
B. J. Blencowe, J. A. Nickerson, R. Issner, S. Penman, and P. A. Sharp
- 609 The amino-terminal region of the retinoblastoma gene product binds a novel nuclear matrix protein that co-localizes to centers for RNA processing.  
T. Durfee, M. A. Mancini, D. Jones, S. J. Elledge, and W.-H. Lee
- 623 A novel FK506- and rapamycin-binding protein (*FPR3* gene product) in the yeast *Saccharomyces cerevisiae* is a proline rotamase localized to the nucleolus.  
B. M. Benton, J.-H. Zang, and J. Thorner
- 641 Transport into and out of the Golgi complex studied by transfecting cells with cDNAs encoding horseradish peroxidase.  
C. N. Connolly, C. E. Futter, A. Gibson, C. R. Hopkins, and D. F. Cutler
- 653 Signal-mediated retrieval of a membrane protein from the Golgi to the ER in yeast.  
E. C. Gaynor, S. te Heesen, T. R. Graham, M. Aeby, and S. D. Emr
- 667 Clathrin-dependent localization of  $\alpha 1,3$  mannosyltransferase to the Golgi complex of *Saccharomyces cerevisiae*.  
T. R. Graham, M. Seeger, G. S. Payne, V. L. MacKay, and S. D. Emr
- 679 *LDLC* encodes a brefeldin A-sensitive, peripheral Golgi protein required for normal Golgi function.  
S. D. Podos, P. Reddy, J. Ashkenas, and M. Krieger
- 693 Transport via the regulated secretory pathway in semi-intact PC12 cells: Role of intra-cisternal calcium and pH in the transport and sorting of secretogranin II.  
L. Carnell and H.-P. H. Moore
- 707 Golgi spectrin: Identification of an erythroid  $\beta$ -spectrin homolog associated with the Golgi complex.  
K. A. Beck, J. A. Buchanan, V. Malhotra, and W. J. Nelson
- 725 Clathrin polymerization is not required for bulk-phase endocytosis in rat fetal fibroblasts.  
P. Cupers, A. Veithen, A. Kiss, P. Baudhuin, and P. J. Courtoy
- 737 The *Hansenula polymorpha PER1* gene is essential for peroxisome biogenesis and encodes a peroxisomal matrix protein with both carboxy- and amino-terminal targeting signals.  
H. R. Waterham, V. I. Titorenko, P. Haima, J. M. Cregg, W. Harder, and M. Veenhuis
- 751 *Saccharomyces cerevisiae* contains four fatty acid activation (FAA) genes: An assessment of their role in regulating protein N-myristylation and cellular lipid metabolism.  
D. R. Johnson, L. J. Knoll, D. E. Levin, and J. I. Gordon
- 763 Structural changes in muscle crossbridges accompanying force generation.  
K. Hirose, C. Franzini-Armstrong, Y. E. Goldman, and J. M. Murray
- 779 The free energy for hydrolysis of a microtubule-bound nucleotide triphosphate is near zero: All of the free energy for hydrolysis is stored in the microtubule lattice.  
M. Caplow, R. L. Ruhlen, and J. Shanks
- 789 Microtubule dependency of p34<sup>cdc2</sup> inactivation and mitotic exit in mammalian cells.  
P. R. Andreassen and R. L. Margolis
- 803 The transmembrane signaling pathway involved in directed movements of *Chlamydomonas* flagellar membrane glycoproteins involves the dephosphorylation of a 60-kD phosphoprotein that binds to the major flagellar membrane glycoprotein.  
R. A. Bloodgood and N. L. Salomonsky
- 813 Reexpression of glial fibrillary acidic protein rescues the ability of astrocytoma cells to form processes in response to neurons.  
W.-J. Chen and R. K. H. Liem

Contents continued

**Cover picture:** 3-D rendering of digitized confocal optical sections through the mid-plane of a monkey CV1 nucleus double labeled with mAbs to the B1C8 nuclear matrix antigen (green) and lamin proteins A/C (red). Complex architectural organization within the nucleus is emphasized, and is the focus of two papers in this issue (Blencowe et al., 593–607 and Durfee et al., 609–622). (Photo provided by Michael A. Mancini.)

- 825 NCAM-dependent neurite outgrowth is inhibited in neurons from *Fyn*-minus mice.  
H. E. Beggs, P. Soriano, and P. F. Maness
- 835 Degeneration of neural cells in the central nervous system of mice deficient in the gene for the adhesion molecule on Glia, the  $\beta 2$  subunit of murine Na,K-ATPase.  
J. P. Magyar, U. Bartsch, Z.-Q. Wang, N. Howells, A. Aguzzi, E. F. Wagner, and M. Schachner
- 847 Epidermal growth factor receptor-mediated cell motility: Phospholipase C activity is required, but mitogen-activated protein kinase activity is not sufficient for induced cell movement.  
P. Chen, H. Xie, M. C. Sekar, K. Gupta, and A. Wells
- 859 Receptor tyrosine kinase signaling required for integrin  $\alpha v\beta 5$ -directed cell motility but not adhesion on vitronectin.  
R. L. Klemke, M. Yebra, E. M. Bayna, and D. A. Cheresh
- 867 ICAM-3 regulates lymphocyte morphology and integrin-mediated T cell interaction with endothelial cell and extracellular matrix ligands.  
M. R. Campanero, P. Sánchez-Mateos, M. A. del Pozo, and F. Sánchez-Madrid
- 879 Collagen IV  $\alpha 3$ ,  $\alpha 4$ , and  $\alpha 5$  chains in rodent basal laminae: Sequence, distribution, association with laminins, and developmental switches.  
J. H. Miner and J. R. Sanes