Commentary
A cell biological perspective on genome research.
J. R. McIntosh and R. R. West

Regular Articles
Chromatin conformation and salt-induced compaction: Three-dimensional structural information from cryoelectron microscopy.
J. Bednar, R. A. Horowitz, J. Dubochet, and C. L. Woodcock

Sac1p mediates the adenosine triphosphate transport into yeast endoplasmic reticulum that is required for protein translocation.
P. Mayinger, V. A. Bankaitis, and D. I. Meyer

Anterograde and retrograde traffic between the rough endoplasmic reticulum and the Golgi complex.
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Misfolded major histocompatibility complex class I molecules accumulate in an expanded ER-Golgi intermediate compartment.
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Caveolin cycles between plasma membrane caveolae and the Golgi complex by microtubule-dependent and microtubule-independent steps.
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Rab 7: An important regulator of late endocytic membrane traffic.
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Pay32p of the yeast Yarrowia lipolytica is an intraperoxisomal component of the matrix protein translocation machinery.
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Studies of the interaction between titin and myosin.
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Actin filaments in yeast are unstable in the absence of capping protein or fimbrin.
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Ponticulin plays a role in the positional stabilization of pseudopods.

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Fission yeast cell morphogenesis: Identification of new genes and analysis of their role during the cell cycle.
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A localized elevation of cytosolic free calcium is associated with cytokinesis in the zebrafish embryo.
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An amino-terminal extension is required for the secretion of chick agrin and its binding to extracellular matrix.
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Adequate connexin-mediated coupling is required for proper insulin production.
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Hepatocyte growth factor/scatter factor induces a variety of tissue-specific morphogenic programs in epithelial cells.

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Cover picture: The micrograph shows Schizosaccharomyces pombe mutants, stained with Calcofluor to visualize the cell wall, which are defective in cell shape and polarity. These mutants identify 19 independent genes with different morphogenetic functions during the cell cycle. See the related article in this issue by Verde et al., 1529-1538.
Massive programmed cell death in intestinal epithelial cells induced by three-dimensional growth conditions: Suppression by mutant c-H-ras oncogene expression.
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Surface attachment of *Salmonella typhimurium* to intestinal epithelia imprints the subepithelial matrix with gradients chemotactic for neutrophils.
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Cover picture: Adult cardiomyocytes were injected as beating cells with an expression plasmid containing γ-cytoplasmic actin provided with an epitope tag. After further incubation, beating stopped and the cell structures were analyzed. The epitope was stained with specific antibody and visualized with RITC (red) while myomesin served as a marker for assembled sarcomeric M bands (green). The actin organization in the transfected cell is changed by the expression of the cytoplasmic actin isoform. See related article in this issue by von Arx et al., 1759–1773.
The assembly of integrin adhesion complexes requires both extracellular matrix and intracellular rho/rac GTPases.
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A role for phosphatidylinositol 3-kinase in the regulation of β1 integrin activity by the CD2 antigen.

The L1 adhesion molecule is a cellular ligand for VLA-5.
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P-selectin must extend a sufficient length from the plasma membrane to mediate rolling of neutrophils.

Collagen and collagenase gene expression in three-dimensional collagen lattices are differentially regulated by α1β1 and α2β1 integrins.
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