

Contents:

The Journal of Cell Biology

Volume 112, Number 4, February 1991

- 523 **A complex containing p34^{cdc2} and cyclin B phosphorylates the nuclear lamin and disassembles nuclei of clam oocytes in vitro.**
G. Dessev, C. Iovcheva-Dessev, J. R. Bischoff, D. Beach, J. Ruderman, and R. Goldman
- 535 **Cellular morphogenesis in the *Saccharomyces cerevisiae* cell cycle: localization of the *CDC3* gene product and the timing of events at the budding site.**
H. B. Kim, B. K. Haarer, and J. R. Pringle
- 545 **A distinct vesicle population targets membranes and pore complexes to the nuclear envelope in *Xenopus* eggs.**
G. P. A. Vigers and M. J. Lohka
- 557 **The nuclear membrane determines the timing of DNA replication in *Xenopus* egg extracts.**
G. H. Leno and R. A. Laskey
- 567 **Forskolin inhibits and reverses the effects of brefeldin A on Golgi morphology by a cAMP-independent mechanism.**
J. Lippincott-Schwartz, J. Glickman, J. G. Donaldson, J. Robbins, T. E. Kreis, K. B. Seamon, M. P. Sheetz, and R. D. Klausner
- 579 **Guanine nucleotides modulate the effects of brefeldin A in semipermeable cells: regulation of the association of a 110-kD peripheral membrane protein with the Golgi apparatus.**
J. G. Donaldson, J. Lippincott-Schwartz, and R. D. Klausner
- 589 **Spatial organization of the assembly pathways of glycoproteins and complex polysaccharides in the golgi apparatus of plants.**
P. J. Moore, K. M. M. Swords, M. A. Lynch, and L. A. Staehelin
- 603 **A stromal protein factor maintains the solubility and insertion competence of an imported thylakoid membrane protein.**
L. A. Payan and K. Cline
- 615 **Cholesterol is required for infection by Semliki Forest virus.**
T. Phalen and M. Kielian
- 625 **High-purity isolation of bullfrog hair bundles and subcellular and topological localization of constituent proteins.**
P. G. Gillespie and A. J. Hudspeth
- 641 **Three different actin filament assemblies occur in every hair cell: each contains a specific actin crosslinking protein.**
D. Drenckhahn, K. Engel, D. Höfer, C. Merte, L. Tilney, and M. Tilney
- 653 **β Actin and its mRNA are localized at the plasma membrane and the regions of moving cytoplasm during the cellular response to injury.**
T. C. Hoock, P. M. Newcomb, and I. M. Herman
- 665 **Domain structure in actin-binding proteins: expression and functional characterization of truncated severin.**
L. Eichinger, A. A. Noegel, and M. Schleicher
- 677 **Spatial and temporal control of nonmuscle myosin localization: identification of a domain that is necessary for myosin filament disassembly in vivo.**
T. T. Egelhoff, S. S. Brown, and J. A. Spudich
- 689 **Immunolocalization and molecular properties of a high molecular weight microtubule-bundling protein (syncolin) from chicken erythrocytes.**
P. Feick, R. Foisner, and G. Wiche
- 701 **The proximal portion of *Chlamydomonas* flagella contains a distinct set of inner dynein arms.**
G. Piperno and Z. Ramanis
- 711 **Intracellular free calcium oscillates during cell division of *Xenopus* embryos.**
N. Grandin and M. Charbonneau
- 719 **Low viscosity in the aqueous domain of cell cytoplasm measured by picosecond polarization microfluorimetry.**
K. Fushimi and A. S. Verkman

Contents continued on reverse of this cover

Cover picture: Beta actin is specifically localized at the plasma membrane in regions of moving cytoplasm during the endothelial cell migratory response to injury. Cells were fixed 30 min after injury and triple stained with rhodamine-labeled anti-beta actin IgG (*red-orange dye*), NBD-phalloidin (*green dye* that labels the entire actin filament pool), and Hoechst 33258 (*blue dye* that marks nuclear position). The selective localization of beta actin within the moving cytoplasm in association with the plasma membrane strongly favors its role in regulating actin-based motility. See related article in this issue by Hoock et al., 653-664.

- 727 **Genetically modified yolk proteins precipitate in the adult *Drosophila* fat body.**
F. M. Butterworth, M. Bownes, and V. S. Burde
- 739 **The structure of plasmodesmata as revealed by plasmolysis, detergent extraction, and protease digestion.**
L. G. Tilney, T. J. Cooke, P. S. Connelly, and M. S. Tilney
- 749 **Oxygen radicals induce human endothelial cells to express GMP-140 and bind neutrophils.**
K. D. Patel, G. A. Zimmerman, S. M. Prescott, R. P. McEver, and T. M. McIntyre
- 761 **Polarized expression of integrin receptors ($\alpha_6\beta_4$, $\alpha_2\beta_1$, $\alpha_3\beta_1$, and $\alpha_v\beta_5$) and their relationship with the cytoskeleton and basement membrane matrix in cultured human keratinocytes.**
P. C. Marchisio, S. Bondanza, O. Cremona, R. Cancedda, and M. De Luca
- 775 **Acknowledgment**