

HIGHLIGHTS from *MBoC*

The Editorial Board of *Molecular Biology of the Cell* has highlighted the following articles from the August 1 and 15, 2011, issues. From among the many fine articles in the journal, the Board selects for these Highlights articles that are of broad interest and significantly advance knowledge or provide new concepts or approaches that extend our understanding.

A phosphodegron controls nutrient-induced proteasomal activation of the signaling protease Ssy5

D. J. Omnus, T. Pfirrmann, C. Andréasson, and P. O. Ljungdahl

The Ssy1-Ptr3-Ssy5 (SPS) sensor of extracellular amino acids coordinates the sequential activity of general signaling factors and the 26S proteasome in a novel proteolytic activation cascade to activate the intracellular signaling protease Ssy5, which endoproteolytically activates two latent transcription factors.

Mol. Biol. Cell 22 (15), 2754–2765

Dynamic profiling of mRNA turnover reveals gene-specific and system-wide regulation of mRNA decay

S. E. Munchel, R. K. Shultzaberger, N. Takizawa, and K. Weis

A pulse-chase approach is outlined for measuring mRNA turnover rates under changing growth conditions.

Mol. Biol. Cell 22 (15), 2787–2795

The spindle checkpoint protein Mad2 regulates APC/C activity during prometaphase and metaphase of meiosis I in *Saccharomyces cerevisiae*

D. Tsuchiya, C. Gonzalez, and S. Laceyfield

The spindle checkpoint protein Mad2 sets the duration of meiosis I by downregulating APC/C activity to ensure the timely degradation of APC/C substrates. In the absence of Mad2, premature APC/C activity can cause misregulation of meiotic cell cycle events, resulting in chromosome missegregation.

Mol. Biol. Cell 22 (16), 2848–2861

Involvement of the Rho–mDia1 pathway in the regulation of Golgi complex architecture and dynamics

Y. Zilberman, N. O. Alieva, S. Miserey-Lenkei, A. Lichtenstein, Z. Kam, H. Sabanay, and A. Bershadsky

A study of the role of actin cytoskeleton regulation in Golgi organization and function shows that Rho regulates Golgi fragmentation into ministacks, as well as formation of Rab6-positive Golgi-derived vesicles, via mDia1 formin activation. The Rho–mDia1 pathway affects the Golgi complex by controlling fusion and fission of Golgi membranes.

Mol. Biol. Cell 22 (16), 2900–2911 ■



Spatial separation of the mammalian glycoprotein quality control axis: The distinct intracellular locations of calnexin (red), ERMan1 (green), and nuclei (blue) in HeLa cells are shown. (Image: Budi Utama and Shujuan Pan, Baylor College of Medicine, Houston, TX)