IN BRIEF

ORGANELLE DYNAMICS

Endosome–centriole liasons

Recycling endosomes can be found near centrosomes, and there have been suggestions that the two may be linked. Here, the authors show that recycling endosome components are in intimate contact with mother centriole appendage proteins, with implications for membrane traffic. The authors developed an *in vitro* assay to assess whether endosomal components associate with membrane-free centrosomes. They found that RAB11•GTP, but not RAB11•GDP, bound to mother centrioles, and that this required the appendage protein cenexin. Furthermore, depletion and localization analysis supported a model in which the RAB11 GTPase-activating protein EVI5 is anchored to the mother centriole via the appendage protein centriolin. These appendage proteins were also important for normal endosomal recycling, suggesting that the structural association of the centrosome and the endosome has biological implications.

ORIGINAL RESEARCH PAPER Hehnly, H. *et al.* The centrosome regulates the RAB11-dependent recycling endosome pathway at appendages of the mother centriole. *Curr. Biol.* **22**, 1944–1950 (2012)

UBIQUITYLATION

Disassembling SCF ubiqutin ligases

Skp–cullin–F-box (SCF) ubiquitin ligases contain an F-box protein, which confers the specificity of the ligase by binding to substrates. Yen *et al.* now describe in detail how, in response to cadmium stress, the activity of an SCF containing the F-box protein Met30 (SCF^{Met30}) is also regulated by dissociation of Met30. They found that, in *Saccharomyces cerevisiae*, the AAA-ATPase Cdc48 interacts with Met30 in a cadmium-dependent manner; this correlates with the dissociation of Met30 from Skp1. Interestingly, Cdc48 was recruited to autoubiquitylated Met30. Under normal conditions, SCF^{Met30} ubiquitylates the transcriptional activator Met4 to repress its activity; however, Met4 is stabilized in response to cadmium and mediates the cadmium stress response. Met4 was persistently ubiquitylated in Cdc48 mutants under cadmium stress, indicating that Cdc48 is required for SCF^{Met30} inactivation under these conditions. This study provides mechanistic insight into how a SCF ubiquitin ligase can be regulated by dissociation of its F-box component.

ORIGINAL RESEARCH PAPER Yen, J. L. *et al.* Signal-induced disassembly of the SCF ubiquitin ligase complex by Cdc48/p97. *Mol. Cell* **48**, 288–297 (2012)

CELL DEATH

A pro-apoptotic role for sirtuin 3

The deacetylase sirtuin 3 (SIRT3) controls multiple aspects of mitochondrial function and is known to function as a tumour suppressor. Now, Verma *et al.* show that SIRT3 can reduce tumour cell survival by enhancing the activity of BAK and BAX, two pro-apoptotic proteins that disrupt the integrity of the outer mitochondrial membrane to cause apoptosis. Previous work had demonstrated that the mitochondrial-bound glycolytic enzyme hexokinase II prevents mitochondrial injury during apoptosis by inhibiting BAK and BAX. Here, the authors show that SIRT3 decreases the activity of cyclophilin D, which induces the detachment of hexokinase II from the mitochondria and thus enhances BAK- and BAX-induced mitochondrial injury and apoptotic cell death.

ORIGINAL RESEARCH PAPER Verma, M., Shulga, N. & Pastorino, J. G. Sirtuin-3 modulates Bak/Bax dependent apoptosis. *J. Cell Sci.* 29 Oct 2012 (doi:10.1242/jcs.115188)