

**P020** Recruitment of effectors to Golgi membranes by the Arl3p/Arl1p pathway.

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The Arf-like GTPase Arl3p is required to recruit a second GTPase, Arl1p, to the Golgi in *Saccharomyces cerevisiae*. Arl1p binds to the GRIP domain, which is present in a number of long coiled-coil proteins or 'golgins'. We have found that Arl3p is not myristoylated like most members of the Arf family, but is instead amino-terminally acetylated by the NatC complex, one of three complexes in yeast that acetylate the N termini of proteins. Targeting of Arl3p also requires a Golgi membrane protein Sys1p. The human homologues of Arl3p (Arf-related protein 1 (ARFRP1)) and Sys1p (hSys1) can be isolated in a complex after chemical cross-linking. This suggests that the targeting of ARFRP1/Arl3p to the Golgi is mediated by a direct interaction between its acetylated N terminus and Sys1p/hSys1. In addition, we have identified a new effector for Arl1p by affinity chromatography using GTP- and GDP-locked forms of the GTPase. This protein is encoded by an uncharacterised ORF and is predicted to be a single span membrane protein. A tagged version of this protein was confirmed by western blotting to bind exclusively to the GTP-bound form of Arl1p. Yeast lacking this protein show a defect in the sorting of a GFP-tagged form of the SNARE Snc1p. Therefore we believe that this protein represents a new, conserved effector of the Sys1p/Arl3p/Arl1p pathway.