

**P014** Protein-interactors of the MKLP1/ZEN-4 C-terminal domain  
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During late mitosis, cytokinesis enables the creation of two physically distinct daughter cells through the division of cytoplasm. In animal cells, this process requires interplay between an actomyosin-based contractile ring, and microtubule-based structures such as the central spindle and midbody. These structures are formed when microtubules of the mitotic spindle are bundled between segregating chromosomes and defects in this process lead to failure in cytokinesis. The evolutionarily conserved centralspindlin complex - composed of a mitotic kinesin-like protein (human MKLP1(CHO1)/fly Pavarotti/worm ZEN-4) and a GAP-domain protein (human MgcRacGAP/ fly Tumbleweed(DRacGAP50C)/worm CYK-4) - is essential for central spindle/midbody formation. Although functionally important, the molecular role of the C-terminal domain of the kinesin subunit is unclear. To determine the function of this region, we are performing biochemical analyses of both the intra- and inter-molecular protein-protein interactions mediated by the MKLP1/ZEN-4 C-terminal domain. Our results will provide a basis on which to understand both the regulation of the centralspindlin complex and the factors recruited to the central spindle/midbody.