**Reconstitution of ESCRT-mediated membrane budding and fission**

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The ESCRT (endosomal sorting complex required for transport) proteins comprise of a muti-subunit machine that catalyzes the formation of and cargo sorting into multivesicular bodies (MVBs) at endosomal membranes. Formation of MVBs requires an inward budding of the endosomal membrane, which appears to be managed by the 4-subunit ESCRT III complex. MLV formation represents a unique phenomenon where membrane buds form in the absence of a coat-like structure, seen to be required in other budding events to sculpt the underlying membrane. The mechanistic basis as to how such buds are formed remain unclear. We have attempted in vitro reconstitution of this budding reaction on model membrane sytems that allow the accurate monitoring of reaction kinetics in a flow set-up in order to analyze membrane intermediates generated dring this process. Preliminary results generated on such templates by the ESCRT III complex will be discussed.