**R1.4 Interaction partner of the SH3 domain**

**Vrp1 and type I Myosins**

**R1.5 Other potential mechanisms for recruitment and disassembly of the Rvs complex**

**Bzz1**

The yeast F-BAR protein Bzz1 arrives early in the endocytic timeline and departs with the arrival of the Rvs complex. In the light of membrane curvature-preference for BAR proteins, it has been tempting to propose that the Bzz1 complex, that arrives at shallow invaginations, is replaced by the more concave Rvs complex on membrane invaginations. Rvs could compete with Bzz1 on the growing membrane tube, and replace it by forming a more energetically-favourable binding partner for the curved membrane. I tested this theory by studying the dynamics of Rvs in Bzz1del cells.

In bzz1del cells, Rvs is recruited to sites in similar numbers as the WT, and Rvs dynamics does not change. If Rvs was replacing Bzz1 at endocytic sites, Rvs should be recruited earlier, stay at sites longer, and likely be recruited in more numbers

Bending energy has been notoriously hard to calculate, since local properties of the membrane composition and protein coverage have been hard to determine. Canhan and Helfrich models have been used to model membrane mending, and predicts a force range og 10KbT for mammalian cells with a lipid composition of 50% cholesterol, using estimates of membrane tension around 0.2 x10ˆ3 KbT/nmˆ2.

BAR superfamily proteins bind to membranes exclusively by the so-called N-surface, which is composed of residues of helix 1 not oriented towards the helix bundle ([Millard et al, 2005](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3181480/#b76)) and which is complemented by lipid-binding residues of the flanking arms. Thereby, the lipid-binding surface correlates well with the concave surface of the banana-shaped BAR modules ([Figure 2](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3181480/figure/f2/)).

, which in turn have a preference for interaction with PiP2. Endophilin has been reported to have a slight preference for PtdIns(4,5)P2 over PtdIns4P2 . Endophilin is known to interact with Synaptojanin1 in the last phase of endocytosis.