[Zoom In](http://genesdev.cshlp.org/content/20/22/3054.long)

http://genesdev.cshlp.org/content/20/22/3054.long

**Figure 5.**

Model of rhomboid function in regulating mitochondrial membrane dynamics. Mitochondrial membrane fusion requires both the full-length and cleaved form of the Mgm1 GTPase. (*Left*) Under lower ATP concentrations, the first hydrophobic segment is preferentially used as the Mgm1 transmembrane anchor, which cannot be cleaved by Pcp1. In this way, unhealthy mitochondria (lower mitochondrion) are prevented from fusing with healthy mitochondria. Stationary phase conditions also result in no Pcp1 expression, and thus no Mgm1 cleavage. (*Right*) Under conditions of Pcp1 expression and high ATP levels, the second hydrophobic segment is used as the Mgm1 transmembrane domain to a higher degree, facilitating cleavage by Pcp1. This cleaved form of Mgm1 acts in concert with the uncleaved form to promote mitochondrial membrane fusion (upper mitochondria). It should be noted that the exact topology of Pcp1 in the inner membrane, including whether Pcp1 has six or seven transmembrane domains, has not been resolved