Peroxisome biogenesis and maintenance in yeast

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Propositions accompanying the PhD thesis

"Peroxisome biogenesis and maintenance in yeast"

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1. Elucidating the mechanisms of Pex3-independent peroxisomal membrane protein targeting is necessary to understand the formation of pre-peroxisomal vesicles and peroxisomes (Chapter 2; Chapter 3; Knoops et al., 2014, *J Cell Biol.* 204: 659–68).

2. During *de novo* biogenesis of peroxisomes, these organelles are formed from existing membranes, rather than from unassembled lipids and proteins.

3. Pre-peroxisomal vesicles that are present in mutant yeast cells, which temporarily lack peroxisomes, are intermediates of peroxisome biogenesis in wild type yeast cells.

4. Peroxisome-vacuole contact sites observed in *Hansenula polymorpha* most likely play a role in membrane expansion since they form only at conditions of strong peroxisome proliferation (Wu et al., 2019, *Biochim Biophys Acta Mol Cell Res.* 1866: 349–59).

5. Organelle hitchhiking is one of the most striking functions of a membrane contact site (Salogiannis et al., 2016, *J Cell Biol.* 212: 289–96).

6. "You must demand from yourselves, even if others do not demand from you." John Paul II