Propositions accompanying the PhD thesis

“Identification of novel peroxisome functions in yeast”

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1. Peroxisomal reactive oxygen species production is a key driver of aging, across different species.
2. Discovery of new examples of piggyback import (Chapter 3) and novel PTS receptors (Effelsberg et al., 2016. J Biol Chem. 290(42) : 25333-42; Yifrach et al., 2016, J Cell Sci. 129: 4067-4075) suggest that some peroxisomal matrix proteins may be imported via uncharacterized mechanisms that are yet to be unraveled.
3. Peroxisomes are pivotal in the maintenance and regulation of gut homeostasis and it’s response to a constantly changing microbiological environment which is necessary for organismal health (Di Cara et al., 2018, Mol Cell Bio. 29: 2766-2783).
4. Given that proteins involved in membrane contact sites can have two or more functions, structure-function approaches to assess their specific roles can lead to breakthroughs in this field (González Montoro et al., 2018. Dev Cell. 45(5) : 621-636).
5. Close contacts between peroxisomes and vacuoles during conditions of strong peroxisome growth most likely facilitate membrane lipid transfer (Wu et al., 2019. Biochim Biophys Acta Mol Cell Res. 1866(3) : 349-359).
6. “The only source of knowledge is experience”. – Albert Einstein
7. “It is not your passing inspirations or brilliant ideas so much as your everyday mental habits that control your life”. – Paramahansa Yogananda