

Literature discussion aging, Friday June 13, 2013:

Questions to address while reading

What are the main hypotheses in this study? And how these were tested?

Specific questions:

- What are the tools that were used in this study?
- How was delayed aging assessed?
- How was reduced mitochondrial function assessed?
- How was mitonuclear protein imbalance assessed?
- In which of the known ageing-pathways mrps-5 is involved? How was this studied ?
- Which pharmacological drugs were used with what specific question, in which model systems?

Questions for literature discussion:

1. The authors start with Longevity is a complex physiological feature, and show that this is predominantly regulated by a single QTL. What critics one can find?
2. The authors mentioned that none of the genes in this QTL was previously reported to be related to longevity – what can one conclude as to the complexity of longevity?
3. Expression levels in young and caloric restrictions are not similar – what can one conclude? What is the relevance for humans?
4. Knockdown of mrps-5 levels is effective only during the development phase but not during adulthood – what is the relevance for the situation in human?
5. Rapamycin inhibits TOR signaling. mTOR signally is known for its ageing regulation across species, could the authors choose an alternative (and more specific) approach to demonstrate the mTOR pathway in mrops-5 aging-effect?
- 6- What are the novelties in this paper (why it got Nature article publications?)
- 7- How relevant is this study to the situation in human?