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C/EBP β isoforms and the regulation of metabolism

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Propositions

Belonging to the thesis:

“C/EBP β isoforms and the regulation of metabolism -
A fine balance between health and disease”

To be defended by Tobias Ackermann

On Monday 29th of October 2018 at 16:15

- 1) C/EBP β -LIP translation is controlled by the nutrient sensing kinase complex mTORC₁ and deficiency in LIP expression results in metabolic improvements similar to mTORC₁ inhibition and calorie restriction (this thesis).
- 2) C/EBP β -LIP represses tumour suppressive miRNA let-7 and thereby induces LIN28B to boost cellular metabolism and energy level (this thesis).
- 3) C/EBP β -LIP caused metabolic reprogramming addicts cells to glycolysis derived NADH (this thesis).
- 4) C/EBP β isoforms control metabolism on organismal and cellular level and influence the life and health span of mice (this thesis; Bégay et al., 2015, J Mol Med and Müller et al., 2018 Elife).
- 5) C/EBP β -LIP is part of a nutrient level based negative feedback loop that regulates metabolism and cell survival (this thesis).
- 6) “Klein aber oho” - small but powerful (German phrase)
- 7) “Elk nadeel heb z'n voordeel” - Every disadvantage has its advantage (Johan Cruyff)
- 8) Translation control contributes to health and lifespan regulation. (This thesis; Müller et al., 2018 Elife; Brina et al, 2015, Nature Communications and Hofmann et al, 2015, Cell).
- 9) Metabolic reprogramming imposes liabilities onto cancer cells. (This thesis and Vander Heiden and DeBerardinis, 2017, Cell)