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## Post-transcriptional control of C/EBP $\alpha$ and C/EBP $\beta$ proteins

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## PROPOSITIONS

Belonging to the thesis:

“Post-transcriptional Control of C/EBP $\alpha$  and C/EBP $\beta$  Proteins:  
Insights into their role in energy homeostasis and diseases”

To be defended by Mohamad Amr Zaini

on Monday 11 December 2017 at 12:45 hours

1. C/EBP $\alpha$  acetylation by p300 and deacetylation by SIRT1 determine its transcriptional functions in response to changed metabolic conditions. (*This thesis*)
2. C/EBP $\alpha$  is a key mediator downstream of SIRT1 to transcriptionally adapt mitochondrial function in response to alterations in the cellular energy/nutrition state. (*This thesis*)
3. Calorie restriction (CR) is very beneficial for our health but unfortunately it is not easily manageable. Thus, there is an unmet need for CR mimetics.
4. Reduced C/EBP $\beta$ -LIP level in mice results in CR-type of metabolic improvements and therefore suppression of C/EBP $\beta$ -LIP function by translational downregulation might have therapeutic value. (*This thesis and Zidek et al. 2015*)
5. The C/EBP $\beta$ -uORF based translation initiation/re-initiation reporter system is suitable for high throughput screening of drugs reducing C/EBP $\beta$ -LIP translation with potential CR mimetic properties. (*This thesis*)
6. SBDS function is specifically required for efficient translation re-initiation into the protein isoforms C/EBP $\alpha$ -p30 and C/EBP $\beta$ -LIP. (*This thesis and In et al. 2016*)
7. “And mankind have not been given of knowledge except a little.” *The Holy Quran (17:85)*
8. “Acquire knowledge and teach people. Learn along with it dignity, tranquility and humility for those who teach you and humility for those whom you teach.” *Umar ibn Al-khattab*