
Stellingen behorende bij het proefschrift

The Circadian Clock-Cell Cycle Connection and its Implication for Cancer

- 1- Circadian clock-cell cycle coupling is essential for dynamic regulation of the mammalian cell cycle period (*this thesis*).
 - 2- Disruption of the positive limb of the circadian molecular oscillator might be an attractive approach to decrease the proliferation rate of cancer cells (*this thesis*).
 - 3- A complete loss of Cryptochromes may facilitate the transition of a normal cell into a cancer cell (*this thesis*).
 - 4- The uncoupling of the circadian clock and cell cycle in mouse breast carcinoma cells provides an experimental basis for the application of chronotherapy in cancer treatment (*this thesis*).
 - 5- NIH3T3^{3C} cells represent an ideal tool to experimentally validate and refine the mathematical model for the circadian clock - cell cycle connection (*this thesis*).
 - 6- Cell cycle regulation by the positive and negative limb of the circadian oscillator follows the Yin Yang principle.
 - 7- Skipping breakfast may be an ideal way to reduce skin cancer (*Stokkan et al., Science. 2001, 291:490-493; Bjarnason et al., Am J Pathol. 2001, 158:1793-1801*).
 - 8- The finding that 40% of the mouse liver phosphoproteins oscillate in a circadian manner challenges the importance of circadian gene expression. (*Robles et al., Cell metab. 2017, 25:118-127*).
 - 9- Clock dependent cell cycle entry and progression are not necessarily the same things (*Matsuo et al., Science. 2003, 302:255-259*).
 - 10- The concept of “circadian gating of DNA replication” is challenged by the observation that in *Neurospora crassa* DNA replication itself is essential for circadian clock function (*Liu et al., Mol Cell. 2017, 67:203-213*).
 - 11- Have patience. All things are difficult before they become easy.
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