

Propositions/Stellingen

1. MEP1 (*MOG-interacting and ectopic P-granule 1*) and DOC1 (*deleted in oral cancer 1*) are the *bona fide* subunits of the *Drosophila* NuRD chromatin remodeling complex. (This thesis)
2. Metabolic enzyme GMP Synthetase (GMPS) acts as a sensor of cellular nucleotide pool and activates p53-mediated replicative stress response to the nucleotide depletion. (This thesis)
3. E3 ubiquitin-ligase TRIM21 negatively regulates p53 stability by retaining GMPS in the cytoplasm. (This thesis)
4. Ubiquitilation by TRIM21 and deubiquitilation by USP7 forms a switch that determines the sub-cellular localization of GMPS. (This thesis)
5. Chromatin remodelers organize cellular chromatin by counteracting DNA sequence-driven nucleosome positioning in a class specific manner. (Moshkin *et al.*, 2012. *Mol Cell Biol.* 32(3): 675-88)
6. There is no space in the biological research that is totally free from the influence of metabolism. (DeBerardinis and Thompson. 2012. *Cell.* 148 (6): 1132-44)
7. Nucleotide deficiency promotes genome instability in the early stages of cancer development. Oncogenic signals trigger cell proliferation without coordinate nucleotide synthesis results in aberrant DNA replication and damage that leads to carcinogenesis. (Bester *et al.*, 2011. *Cell* 145, 435-446)
8. "Every cell in your body has to do right job. And that all boils down to what genes being transcribed" (Robert Tjian, Professor of Biochemistry, UC Berkeley)
9. "Go to the ant, thou sluggard: considered her ways and be wise". Over 2000 yeas ago, several Indian physicians reported the honey urine *madhumea* as a common hereditary disease in stout patients. Cure was deemed to have been achieved when the urine from patients ceased to attract ants. (Trowel 1982. *Br.Med.J (Clin.Res.Ed)* 285: p.217)
10. A physician who fails to enter the body of a patient with the lamp of knowledge and understanding can never treat diseases. He should first study all the factors, including environment, which influence a patient's disease, and then prescribe treatment. It is more important to prevent the occurrence of disease than to seek a cure. (Acharya Charaka (300 BC), Indian physician who wrote Charaka Samhita, a ayurvedic encyclopedia of medicine)
11. "Impossible also means I'm possible" (anonymous)