

Stellingen
behorend bij het proefschrift

**Potential new gamma-globin regulators:
in vivo analysis of their role in the hematopoietic system.**

1. KDM7A is dispensable for hematopoiesis and does not have a role in repressing the HBG1/2 genes in adult erythropoiesis. (this thesis)
2. PRMT4 is not essential for the hematopoietic system and does not have a role in developmental regulation of globin expression. (this thesis)
3. Low recombination efficiency of floxed Prmt1 and Prmt5 alleles indicates selective survival of cells that escaped Cre recombinase activity. (this thesis)
4. Efficient erythroid-specific recombination of Chtop floxed alleles by EpoR-Cre does not affect CHTOP protein levels. (this thesis)
5. Treatment of pregnant dams with polyIC does not lead to in utero activation of the Mx1-Cre transgene. (this thesis)
6. Thalidomide derivatives specifically targeting BCL11A degradation are promising novel agents for γ -globin induction. (Sievers et al (2018) Science 362, DOI: 10.1126/science.aat0572)
7. The normal function of a protein is not always revealed by depletion or over-expression studies, which was already perceived by Paracelsus: "All things are poison, and nothing is without poison, the dosage alone makes it, so a thing is not a poison." (Paracelsus, physician/ alchemist/ astrologer, 1493/4-1541)
8. Darwin's statement that "Natural selection has been the most important, but not the exclusive, means of modification" is of particular interest to consider with respect to emerging new techniques to modify the genome, such as zinc finger nucleases and CRISPR-Cas9. (Charles Darwin, naturalist/ geologist/ biologist, 1809-1882)
9. Free exchange of materials between laboratories is a stalwart of science, but not without its risks. This is indicated by Prof. dr. E.C. Zwarthoff by adapting a Dutch saying: "One should always look a gift horse in the mouth."
10. Many scientists are forced to save on the execution of experiments due to inadequate research budgets. This practice can jeopardize the outcome and waste limited resources as indicated by the citation of Prof. dr. F.G. Grosveld "The most expensive experiment is an experiment that does not work."
11. In difficult times the truth can be hard, but knowledge can then help to understand and take away your worries. This was indicated by the citation of Marie Skłodowska-Curie: "Nothing in life is to be feared, it is only to be understood. Now is the time to understand more, so that we may fear less." (Marie Skłodowska-Curie, physicist/ chemist, 1867-1934)