

Stellingen behorende bij het proefschrift

“Functional Analysis of TTDA: From Human to Mouse – Big impact of a small protein”

1. Contrary to initial observations, TTDA is an essential NER factor. (*this thesis*)
2. The equilibrium between a TFIIH-bound and dissociated form of TTDA shifts towards the bound state when the complex is actively engaged in NER. (*this thesis*)
3. The finding that *Ttda*^{-/-} embryos die in utero between 10.5 days of gestation and birth, and that *Ttda*^{-/-} cells are viable, makes this mutant unique compared to deletions of the other TFIIH subunits. (*this thesis*)
4. The sensitivity of *Ttda*^{-/-} cells to oxidative DNA damage suggests that TTDA (and likely the whole TFIIH complex) has additional functions in DNA repair extending beyond NER. (*this thesis*)
5. A complete absence of TTD-A expression in humans will most likely be embryonic lethal. (*this thesis*)
6. Architecture is an underestimated aspect in science that can promote people to work together effectively. (*K. Lee et al., PLoS One 2010*)
7. Although biology makes significant progress in many areas, it is a sobering fact that the vast majority of species still awaits description. (*C. Mora et al., PLoS Biology 2011*)
8. The problem of endogenously produced DNA lesions is one of the major black holes in our knowledge on DNA repair.
9. It is important to understand the evolution and function of non-coding RNAs (ncRNAs), as the number of non-coding RNA transcripts surprisingly exceeds the number of protein-coding genes. (*A. Fatica et al., Nature 2014*)
10. Like in sports, high performance in science requires a team of highly qualified and experienced professionals who are not only selected on the basis of scientific skills, but also on their personal characteristics.
11. One of the striking differences between an iPhone and this thesis is the fact that this thesis cannot be financed by the “Personal budget for development”. (*CAO UMC 2013-2015*)