

# Propositions

Propositions belonging to the thesis

## Consequences of Interstrand Crosslinks in Hematopoiesis:

### Tipping the balance between proliferation and senescence

1. Bone marrow failure in *Ercc1* deficient mice is not related to the physiology of hormonal aging but to specific types of damage (*this thesis*).
2. Hematopoietic stem and progenitor cells lacking *Ercc1* have a severe competitive disadvantage which is due to their active proliferation rate (*this thesis*).
3. Loss of p53 ameliorates maintenance and proliferation of hematopoietic stem and progenitor cells in mice that lack repair, while it also predisposes to leukemia (*this thesis*).
4. The resistance of Fanconi Anemia patients to erythropoietin is directly linked to the impaired repair in erythroblasts, and is not due to a presumed scaffold function of Fanconi proteins in a complex of the erythropoietin receptor and Stat signaling molecules (*this thesis, Pang et al., Mol. Cell Biol. 2000*).
5. p53 activation acts as an antagonist of Wnt signaling during erythroid progenitor expansion *in vitro* (*this thesis*).
6. DNA is as old as mankind itself, yet it only lasts a lifetime.
7. The increasing regulation in clinical research is not ethical towards patients, because it delays the implementation of novel therapeutic strategies.
8. In the near future, tissue engineering will resolve the crisis in transplantation caused by the shortage of donor tissues and organs.
9. Integration of the American Food and Drug Administration (FDA) and European Medicine Agency (EMA) could benefit equivalent healthcare due to more timely access to innovative prescription drugs (*J.R. Graham, Pacific Research Institute, July 2010*).
10. All of mankind inherently look up to a higher being; for some it is God, for others it is themselves.
11. The choice to combine a new job, finishing a PhD and being a mother, forces both the employee and the PhD student as well as the mother to let go of perfection.

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