

Stellingen behorende bij het proefschrift

X CHROMOSOME INACTIVATION

Spreading of Silencing

1. Xist silencing efficiency strongly relies on the genomic environment from which Xist RNA is forced to spread. (*this thesis*)
2. Escaping genes are intrinsically able to resist XCI, regardless of the *cis*-position Xist transcription is initiated from. (*this thesis*)
3. LINE elements facilitate the propagation of silencing along the chromosome rather than working as X-linked specific binding sites for Xist *in cis* spreading. (*this thesis*).
4. During XCI, CTCF binding at X-linked escaping loci protects them from becoming inactivated. (*this thesis*)
5. Only by integrating both *in vivo* and *in vitro* observations we will be able to faithfully address species-specific mechanisms involved in XCI regulation. (*this thesis*)
6. Some people are sceptical about the importance of fundamental research, and it is often very difficult to find funding, but we've definitely shown that it can radically advance science.
Jennifer Doudna, a pioneer of the revolutionary CRISPR genome-editing technology
7. Disease-associated structural variants, when affecting CTCF-associated boundary elements, cause pathogenicity by disrupting the structure of topologically associated chromatin domains leading to ectopic promoter interactions and altered gene expression. *Lupianez et al., Cell 161, 1012–1025, May 21, 2015*
8. The European Commission estimates that around one million babies are likely to have been born to Erasmus couples since 1987*. This proves that education erases borders between countries and boundaries between people. We should all work to extend this attitude far beyond Europe.
**The Erasmus impact study. European Union, 2014*
9. As a grad student I was invited to attend fifty PhD defences. Overall, 88% of the doctoral committee members were men and 12% were women. This observation might lead to think that carrying a Y chromosome confers an advantage to reach top leadership positions in science. This is simply not true: two X chromosomes work just as good.
10. The most beautiful embryonic stem cell colonies tend to appear on Saturday evening, usually picked by a well-dressed scientist who expected to go out for dinner but pick ES colonies instead.
11. A win doesn't feel as good as a loss feels bad, and the good feeling doesn't last long as the bad. Not even close. *Andre Agassi, Open*

Agnese Loda, Rotterdam, October 28th 2016