



Universiteit
Leiden
The Netherlands

Nucleotide excision repair : a multi-step mechanism required to maintain genome integrity

Moser, J.

Citation

Moser, J. (2010, September 7). *Nucleotide excision repair : a multi-step mechanism required to maintain genome integrity*. Retrieved from <https://hdl.handle.net/1887/15929>

Version: Corrected Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/15929>

Note: To cite this publication please use the final published version (if applicable).

STELLINGEN

Behorend bij het proefschrift:

Nucleotide Excision Repair

A multi-step mechanism required to maintain genome integrity

1. By virtue of its high affinity for DNA and 6-4PP, UV-DDB forms a stable complex to 6-4PPs which facilitates subsequent recruitment of repair proteins, resulting in enhanced repair of these lesions (*Batty et al., 2000; this thesis*).
2. DDB2 binds to UV-damaged DNA independently of XPC suggesting that it may have a role in priming chromatin around DNA lesions which subsequently facilitates the assembly of the pre-incision NER complex (*this thesis*).
3. The sealing of chromosomal DNA nicks that arise during NER are entirely dependent on a functional XRCC1-DNA Ligase III α complex in quiescent or terminally differentiated cells (*this thesis*).
4. RPA couples NER mediated incision to DNA repair synthesis and ligation thereby precluding the initiation of further incision events that could lead to genomic instability (*this thesis*).
5. Arsenic induces its co-carcinogenic effects at least in part by inhibiting the sealing of chromosomal DNA nicks that arise during NER (*Hartwig et al., 1997; this thesis*).
6. Over 140 million people in over 70 countries are exposed to dangerously high arsenic concentrations in their drinking water, making it the largest mass poisoning of a population from any environmental exposure in history. It is therefore strange that not one government agency has given this the priority it deserves (*Brammer and Ravenscroft, 2009*).
7. Defects in genome maintenance clearly occur in various progeroid syndromes, which suggest that DNA damage, also known to accumulate in normal aging, might be the driving force of aging and age-related pathology (*Sedelnikova et al., 2004; Schumacher et al., 2008*).
8. Induction of p53 by oxidative stress and other sources of DNA damage can affect the development of atherosclerosis, thus providing a link between the DNA damage response and cardiovascular disease (*Mercer et al., 2007*).
9. De spanning in de wetenschap is voor een aanzienlijk deel gelegen in het feit dat je nooit weet wat er mis zal gaan tijdens een experiment.
10. Bona valetudo melior est quam maximae divitiae (Goede gezondheid is meer waard dan de grootste rijkdom)
11. Promotie onderzoek is net als in Leeuwarden wonen, je moet voortdurend aan iedereen uitleggen waarom het leuk is.