

Stellingen behorend bij het proefschrift

## Chromatin remodeling in the UV-induced DNA damage response

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1. Human ISWI isoform SMARCA5 and its binding partners ACF1 and WSTF are rapidly recruited to UV-C induced DNA damage to specifically facilitate CSB binding and to promote transcription recovery. *This thesis*
2. Targeting of SMARCA5 to UV-induced DNA lesions occurs via a principally distinct mechanism as compared to its targeting to DNA double-strand breaks. *This thesis*
3. The catalytic ATPase subunits of SWI/SNF, BRG1 and BRM, interact with GG-NER damage detection protein DDB2 and BRG1 regulates its association with damaged DNA. *This thesis*
4. Transcription-coupled nucleotide excision repair and global genome nucleotide excision repair require different chromatin-remodeling factors. *This thesis*
5. The function of ATP-dependent chromatin remodeling complexes in the UV-induced DNA damage response is not only limited to chromatin remodeling, but probably also includes the regulation of RNA metabolism, processing and export. *This thesis*
6. If a species escapes its ecological constraints and proliferates rapidly, this can trigger ecosystem collapse and the extinction of other species. Because tumors similarly harbor intricate population dynamics, this provides the possibility to exploit their ecosystem for treatment. *Korolev et al., 2014*
7. Sunscreen (SPF50) does not protect against the development of UV-induced melanoma of sunlight-exposed mice, but only delays the onset of it. *Viros et al., 2014*
8. The proven efficacy of DNA repair inhibitors in treating certain tumors, when used in combination with DNA-damaging chemotherapeutic drugs, argues for more research to identify drugable DNA repair factors targets.
9. The link between BRCA2 and RNA-mediated genome instability indicates that R-loops may be a significant source of replication stress and cancer-associated instability. *Bhatia et al., 2014*
10. Breast cancer patients should be recommended to participate in rehabilitation programs including aerobic and strength training. *Eyigor and Kanyilmaz, 2014; Trihn et al., 2014; Courneya et al., 2014; Ballard-Barbash et al., 2012.*
11. The majority is never right. Who are the people that make up the biggest proportion of the population -- the intelligent ones or the fools? *Henrik Ibsen*