

Focusing on the versatile Transcription-coupled DNA Repair Pathway

1. The newly developed tyramide signal amplification allows, for the first time, to quantify TC-NER-derived UDS induced by physiological relevant levels of UV-light irradiation.
This thesis (Chapter 2 and 3)
2. Sufficient information has been collected to reconsider the name of the domain of unknown function (DUF 2043) of UVSSA.
This thesis (Chapter 3 and 4) and Sikela, J.M. et al., (2017)
3. Recruitment of UVSSA and CSB to transcription-blocking lesions is stimulated by, respectively, histone chaperone Spt16 or the chromatin remodeler SMARCA5. This suggests that distinct Chromatin modifying enzymes are involved in the response to transcription-blocking DNA lesions.
This thesis (Chapter 3) and Aydin, O.Z., et al., (2014)
4. UVSSA and CSB are not only required in TC-NER, but also function in other DNA repair pathways.
This thesis (Chapter 4 and 5), Menoni, H., et al., (2012), Guo, J., et al., (2013) and Batenburg, N.L., et al., (2015)
5. Stalling of RNA polymerase II on base excision repair (BER) intermediates rather than on BER-initiating lesions, may explain the existence of the disputed transcription-associated BER.
This thesis (Chapter 5), Kathe, S.D., et al., (2004) and Kitsera, N., et al., (2011)
6. The intrinsically tied generation of ROS-induced oxidative DNA damage and pyrimidine dimer formation upon UV-irradiation may explain the responsiveness of NER-initiating proteins to both types of lesions.
This thesis (Chapter 4 and 5)
7. If DNA will be utilized as an archiving method for digital information, it is of the utmost importance to have an excellent understanding of DNA damage, repair and its stability.
Erlich, Y. and D. Zielinski, (2017)
8. Instead of plotting error bars on averaged data points in scientific figures, it would be more informative to plot all independent data points generated in experiments.
Vaux, D.L., (2012)
9. Utilizing Matrigel to mimic extracellular matrixes brings tissue regeneration, organ replacement and personalized medicine based on 3D cell culture ever closer to reality.
Benton, G., et al., (2014)
10. Elimination of diseases does not come from vaccinating the individual, but through vaccinating the population with a coverage >95%.
Mollema, L., et al., (2014)
11. To reduce the risk for developing obesity and skin cancer, the average amount of Nutella put on bread for breakfast should be switched with the average amount of sunscreen applied to skin.
Olsen, C.M., et al., (2017) and Giovannini, M., et al., (2008)

