

Stellingen behorende bij het proefschrift

## **Circadian Forensics: Estimating blood trace deposition time using rhythmic biomarkers**

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1. Being able to estimate the time when a human trace was deposited at a crime scene can be crucial for solving the criminal cases (*Ackermann et al., 2010*).
2. Trace deposition time in one aspect relates to the time of day or night when a sample was left at the crime scene (*this thesis and Ackermann et al., 2010*).
3. Applying circadian hormones melatonin and cortisol for trace deposition time estimations is feasible (*Ackermann et al., 2010*).
4. In all tissues studied to date, 5–10% of the transcriptome displays circadian rhythms (*Cermakian & Boivin 2009*).
5. Rhythmic mRNA markers increase the accuracy of blood deposition timing when used together with circadian hormones (*this thesis*).
6. Combining rhythmic metabolites, mRNA, and hormones allows the currently most accurate estimation of blood deposition time (*this thesis*).
7. Careful validation of the introduced biomarkers and models is needed before their application to trace deposition timing in forensic casework (*this thesis*).
8. Biomarkers and models developed for blood trace deposition timing may also prove useful for estimating the time of death (*this thesis*).
9. “The true delight is in the finding out rather than the knowing.” (*Isaac Asimov*)
10. “There isn’t a way things should be. There’s just what happens, and what we do.” (*Terry Pratchett*)
11. “Jump, and you will find out how to unfold your wings as you fall.” (*Ray Bradbury*)