TimeTeller: A non-invasive method for the molecular and computational characterization of the internal biological clock in humans

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I4H

SUMMARY

Cancer treatment outcome, co-morbidities and side effects vary largely from patient to patient. Treatment regimens do not take circadian variations into account, neither of the patient nor of the drug metabolism. Adjusting the timing of treatment to the patient's circadian rhythm can optimise efficacy and diminish side effects, leading to better life quality for patients and reduced cost of care. The team has developed a reliable, non-invasive and easy-to-perform method for the characterization of the clock – called TimeTeller. It is further validated to offer personalized cancer support treatment and patient care by optimising the timing of treatment based on the circadian rhythms of the patient and the drug target. TimeTeller is a hybrid technology that uses molecular, mathematical and digital processing to profile an individual's inner circadian variations and provide personalised scheduling for behavioural and medical timing.

PPROJECT ACHIEVEMENTS DURING AND AFTER I4H

- Development of TimeTeller – an innovative easy-to-perform method to determine the individual circadian rhythm using human saliva samples
- Follow-on funding acquired of BIH Digital Health Accelerator

LONG-TERM GOALS

- CE certification
- Implementation of TimeTeller for treatment optimization in the clinic
- Startup foundation