

# The transcriptomics of the ever-changing heart

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# The Transcriptomics of the ever-changing Heart

## From Development to Senescence

### Propositions

1. I solemnly swear that I am up to no good. (*The Marauder's Map* - J. K. Rowling)
2. The heart is surprisingly unaffected by aging, expressing a high immune response at the gene level. (*This thesis*)
3. From the perceptive of their transcriptomes, each accelerated aging murine model manifests a pathway specific modification rather than a phenotypical change. (*This thesis*)
4. We must continue to challenge generally accepted but unproven principles. (*This thesis*)
5. Human induced pluripotent stem cell differentiation show expression patterns of major cardiomyocytes populations of the adult human heart. (*This thesis*)
6. Bioinformatics including machine learning approaches can help to decipher patterns with promising insights not detectable by the "human eye" in large datasets. (*This thesis*)
7. Science needs to continuously adapt and improve the management of overwhelming information gathered over decades of research. (*This thesis*)
8. We are only as strong as we are united, as weak as we are divided. (Albus Dumbledore in *Harry Potter and the Goblet of Fire* - J. K. Rowling)
9. Success in research needs four Gs: Glück, Geduld, Geschick und Geld. ("Luck, patience, skill and money", Paul Ehrlich)
10. I think everybody in this country should learn how to program a computer because it teaches you how to think. (Steve Jobs)
11. Tudo o que acontece uma vez pode nunca mais acontecer, mas tudo o que acontece duas vezes, acontecerá certamente uma terceira. ("Everything that happens [only] once can never happen again. But everything that happens twice will surely happen a third time." - *The Alchemist* - Paulo Coelho)

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