The role of microRNA alterations in post-ischemic neovascularization

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Stellingen behorend bij het proefschrift getiteld

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1. The nucleotides that compose a particular microRNA are not set in stone, instead they can be actively altered by a number of different processes. *(this thesis)*

2. Alterations to a microRNA can have a dramatic effect on a microRNA's target genes, and thus its function. *(this thesis)*

3. The cellular response to ischemia is essential for recovery and includes microRNA alterations. *(this thesis)*

4. microRNA alterations should be continuously considered during discovery and development of microRNA-based biomarkers and therapeutics. *(this thesis)*

5. Many of the reagents used to specifically measure and manipulate the levels of a certain microRNA also target its isomiRs, leading to unexpected side effects. *(Neilsen C, Goodall G, Bracken C. IsomiRs--the overlooked repertoire in the dynamic microRNAome. Trends Genet. 2012;28(11):544-9)*

6. Modulation and application of RNA editing is an area of great potential. *(Christofi T, Zaravinos A. RNA editing in the forefront of epitranscriptomics and human health. J Transl Med. 2019;23;17(1):319)*

7. Accurate localization of most microRNA modifications is currently not possible. *(Kadumuri R, Janga S. Epitranscriptomic Code and Its Alterations in Human Disease. Trends Mol Med. 2018;24(10):886-903)*

8. Cardiovascular scientists have to promptly adapt to the rise of big data science. *(Lau E, Wu J. Omics, Big Data, and Precision Medicine in Cardiovascular Sciences. Circ Res. 2018;122(9):1165–1168)*

9. Nothing in life is to be feared, it is only to be understood. Now is the time to understand more, so that we may fear less. *(Marie Curie, as quoted in: Our Precarious Habitat (1973) by Melvin Benarde, p. v)*
   - Highlighting the importance of fundamental research

10. In the realm of ideas everything depends on enthusiasm… in the real world all rests on perseverance. *(Maxims and Reflections (1833) by Johann Wolfgang von Goethe)*
    - Referring to the translation of an idea into a scientific publication

11. No great discovery was ever made without a bold guess. *(Sir Isaac Newton (1642-1727))*
    - Indicating that pushing the boundaries of knowledge is never without risk

12. If I had five minutes to chop down a tree, I'd spend the first three sharpening my axe. *(Abraham Lincoln, as quoted in: Roads and Streets, Volume 103 (1960))*
    - Highlighting that a good preparation is more efficient than jumping right in