Extracellular vesicle therapeutics for cardiac repair: A translational perspective

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Stellingen

behorend bij het proefschrift getiteld 'Extracellular vesicle therapeutics for cardiac repair. A translational perspective'

1. The isolation method of extracellular vesicles can affect their biological activity. *(this thesis)*

2. Finding the primary driving factor for the observed difference in EVs' therapeutic efficacy between our and previous studies is of great importance for future clinical translation. *(this thesis)*

3. Injectable UPy-hydrogels provide gradual release of extracellular vesicles and increase retention *in vivo*, which could potentially enhance therapeutic efficacy. *(this thesis)*

4. The biological activity of EVs is retained after short-term storage. *(this thesis)*

5. The mechanism by which extracellular vesicles exert their effect is most likely via proteins and not miRNAs. *(Toh, 2019)*

6. Future work should focus on developing *in vitro* assays that assess biological activity of extracellular vesicles and are able to predict *in vivo* functionality.

7. Improving standardization of cell culture and extracellular vesicle isolation methods is essential to move towards clinical application of extracellular vesicles.

8. Extracellular vesicle therapeutics may now be at the 'peak of inflated expectations'. The next phase might be on its way, which may not necessarily be a bad thing. (*Gartner Hype Cycle*)

9. For a large part, extracellular vesicle research consists of culturing massive numbers of cells and isolating vesicles; after that the real work has yet to begin.

10. If finding a therapeutic strategy for heart failure was so simple, it had already existed.

11. Science is based on the Latin term 'ignoramus', translated as 'we do not know'. The basis of this term is that we do not know everything and that the things we think we know can be invalidated if we learn more about it. *(Sapiens, Yuval Noah Harari)*.