

Dissecting mechanisms of neonatal cardiac regeneration

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Dissecting mechanisms of neonatal cardiac regeneration

Propositions

1. Therapies envisaging the restoration of lost cardiomyocytes to prevent/restrain heart failure are yet to be developed (This thesis);
2. Cardiac regeneration depends on the well-orchestrated regulation of cardiomyocyte proliferation and angiogenesis. A better understanding of the mechanisms regulating these two processes, including post-transcriptional control by non-coding RNAs, is required to improve heart response to injury. (This thesis);
3. Neonatal apex resection injury model co-activates regenerative and reparative mechanisms and can be used for the identification of pro-regenerative molecules and mechanisms. (This thesis);
4. Cardiac regeneration or more efficient repair can be achieved by promoting cardiomyocyte proliferation and vascularization while restraining fibrosis. (This thesis).
5. Traditional methodologies to measure cardiomyocyte proliferation fail to discriminate hyperplasia from binucleation. Development of new protocols is of great importance to truly identify neomyogenic therapies. (This thesis);
6. “Disagreements are one of the fundamental positive aspects of science” – Anthony Fauci
7. “It is paradoxical, yet true, to say, that the more we know, the more ignorant we become in the absolute sense, for it is only through enlightenment that we become conscious of our limitations. Precisely one of the most gratifying results of intellectual evolution is the continuous opening up of new and greater prospects.” - Nikola Tesla
8. Science is a way of thinking much more than a body of knowledge (adapted from a quote by Carl Sagan).
9. “The real voyage of discovery consists not in seeking new landscapes, but in having new eyes” – Marcel Proust

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