

Multi-omics discovery of novel molecular pathways in cardiovascular calcification

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Propositions

Belonging to this thesis:

Multi-omics discovery of novel molecular pathways in cardiovascular calcification

by Marina Augusto Heuschkel

1. Reanalysis of multi-omics datasets is a tool to unveil novel molecular mechanisms in cardiovascular calcification. – This thesis
2. Glucose promotes extracellular matrix mineralization of vascular smooth muscle cells time and dose-dependently, while the absence of glucose inhibits mineralization. – This thesis
3. Hypotaurine/taurine metabolic pathway is a potential molecular target in hyperglycemia-induced vascular calcification. – This thesis
4. Reduced calcification was associated with decreased proliferation in hyperglycemia-induced vascular calcification. – This thesis
5. Cardiovascular disease is a prominent comorbidity in type 2 diabetes mellitus patients and vascular calcification represents a contributing risk factor to cardiovascular disease. – Einarson et al., *Cardiovascular Diabetology*, 2018, Raggi et al., *JACC*, 2008
6. Vascular calcification persists as a cardiovascular disorder without pharmacotherapy to either inhibit or halt its progression. – Schantl et al., *Advanced Therapeutics*, 2018
7. The best part of science is knowing, for a moment, something that nobody else in the world knows.
8. “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
9. “She believed in angels, and, because she believed, they existed.” – Clarice Lispector, *The hour of the Star*.
10. “Now... bring me that horizon.” – Captain Jack Sparrow, *Pirates of the Caribbean*.