

The RNA-binding protein Quaking in vascular health and disease Bruin, R.G. de

Citation

Bruin, R. G. de. (2018, April 5). *The RNA-binding protein Quaking in vascular health and disease*. Retrieved from https://hdl.handle.net/1887/60912

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Author: Bruin, R.G. de Title: The RNA-binding protein Quaking in vascular health and disease Issue Date: 2018-04-05

Propositions accompanying the thesis

The RNA-binding protein Quaking in vascular health and disease

R.G. de Bruin

- 1. The RNAissance is now. This thesis
- Quaking is a potent modulator of RNA fate, in particular splicing, which is also supported by the extreme conservation of the RNA-binding motif in RNA transcripts amongst species. *This thesis & D. Ray, PhD (Nature. 2013;499(7457):172-177)*
- 3. Interfering with RNA-binding protein function is a challenging, but potentially very potent therapeutic strategy for ameliorating both rare and common human diseases. *This thesis*
- 4. Investigating the role of Quaking in cellular biology, alternative splicing and disease pathophysiology requires you to "embrace complexity." Quote by M. Ares Jr., professor of molecular, cell and developmental biology at the University of California Santa Cruz, USA
- 5. The predictive power of bio-informatic analyses is immense and should not be under-appreciated, as evidenced by the prediction in 2008 that Quaking could well be a central governor of alternative splicing. *Wang et al.* (*Nature. 2008;456(7221):470-476*)
- The risk of inducing permanent harmful off-target effects in DNA-modifying strategies to ameliorate disease in humans, as CRISPR-CAS9 based technologies could enable, might be the strongest argument to target gene expression posttranscriptionally.
- If you're not often wrong, you're not at the frontier. Discovering you were wrong through proper experimentation is unfortunately under-appreciated in modern science. First sentence: Lewis C. Cantley, professor of cancer biology at Cornell University, USA
- 8. When I am working on a problem, I never think about beauty ... but when I have finished, if the solution is not beautiful, I know it is wrong. *R. Buckminster Fuller, architect* (1895-1983)
- 9. Competition has been shown to be useful up to a certain point and no further, but cooperation, which is the thing we must strive for today, begins where competition leaves off. *Franklin D Roosevelt (March 3, 1912)*
- 10. Never be the brightest person in a room. James Watson commenting on how they discovered the structure of DNA, TED conference 2005, California, USA
- 11. Assumption is, both in science and clinical medicine, the mother of all screwups