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The role of inflammation in cardiac and vascular remodelling

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Stellingen

behorende bij het proefschrift

The role of inflammation in cardiac and vascular remodelling

1. Rather than total abolishment of the post-infarct inflammatory response, timely suppression is beneficial against adverse cardiac remodelling following MI (this thesis).
2. PC-mAb treatment reduces the adverse long term inflammatory response, while the necessary early inflammatory response is not affected and thereby reduces adverse cardiac remodelling (this thesis).
3. Inhibition of microRNA-495 treatment not only leads to development of smaller atherosclerotic plaques, but the remaining plaque also showed a more stable phenotype (this thesis).
4. Rather than upregulation of one or two target genes, it is the sum of many modest upregulated target genes that is responsible for the observed effect on adverse vascular remodelling (this thesis).
5. The fact that microRNA-495 positively influences both therapeutic neovascularization and adverse vascular remodelling, and thus breaks with the Janus phenomenon, makes it a very interesting potential therapeutic target (this thesis).
6. Modulating inflammation is likely to be most effective at the early stage of health decline, at a time when the compensatory capacity of the organism is not completely exhausted and might still counteract physiological and functional declines (Ferucci L. & Fabbri E. *Nat Rev Cardiol.* 2018 Jul 31. doi: 10.1038/s41569-018-0064-2).
7. Although the innate immune system has evolved to serve and protect its host, its aberrant and chronic stimulation can also have detrimental consequences (Raggi P. *Atherosclerosis.* 2018 Jul 25;276:98-108. doi: 10.1016/j.atherosclerosis.2018.07.014).
8. The process of myocardial reperfusion, can paradoxically, in itself, induce cardiomyocyte death and myocardial injury, a phenomenon which has been termed 'myocardial reperfusion injury', and which can contribute up to 50% of the final MI size (Ong S.B. *Pharmacol Ther.* 2018 Jun;186:73-87. doi: 10.1016/j.pharmthera.2018.01.001).
9. It is possible that natural IgM, such as anti-PC, could counter atherosclerosis development by binding to dead and dying cells in the lesions, increasing phagocytosis and clearance of obnoxious pro-inflammatory compounds (Frostegard J. *BMC Med.* 2013 May 1;11:117. doi: 10.1186/1741-7015-11-117).
10. Goed omgaan met tegenslagen en doorzettingsvermogen zijn cruciale eigenschappen voor een promotiestudent.