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extinguishing metaflammation: mechanisms and therapeutic opportunities for immunological control of metabolic dysfunctions

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Stellingen behorend bij het proefschrift

Extinguishing metaflammation - Mechanisms and therapeutic opportunities for immunological control of metabolic dysfunctions

1. Liver Kinase B1 signaling in dendritic cells protects against obesity-induced insulin resistance and hepatic steatosis by limiting T helper 17 cell priming. (this thesis)
2. A soluble form of the mannose receptor is an important contributor to obesity-induced insulin resistance and inflammation in metabolic tissues. (this thesis)
3. The immunomodulatory helminth glycoprotein omega-1 improves whole-body metabolic homeostasis by suppressing energy intake, not via its Th2-inducing properties. (this thesis)
4. The plant extract Totum-63 constitutes a promising nutritional supplement for the treatment of established metaflammation and type 2 diabetes. (this thesis)
5. Inflammatory responses should be considered on a spectrum, where immune cells are actively involved in both acute responses to infection or injury, as well as normal homeostatic processes in the absence of any perturbations. (Medzhitov, *Science*, Nov 2021; 374: 1070-1075)
6. Not all macrophages are bad: Interventional strategies targeting macrophages in metabolic tissues require a careful evaluation of beneficial versus pathological macrophage subsets and their tissue microenvironment. (Jaitin et al., *Cell*, Jul 2019, 178(3): 686-698)
7. Inducing type 2 immunity in adipose tissue holds promise for improving insulin sensitivity, yet tissue-specific targeting is essential given the pro-fibrotic effects of hepatic type 2 immunity. (Gieseck et al., *Immunity*, Jul 2016; 45(1): 145-158)
8. The emerging picture of macrophage activation suggests a flexible spectrum of different activation states, where tissue- and context-specific parameters are dominant predictors of macrophage function. (Sanin et al., *Science Immunology*, Apr 2022, 7(70): eabl7482)
9. Teamwork makes the dream work: Scientific collaborations should be encouraged more in the Netherlands through funding and academic requirements as a way to relieve work pressure and enhance the quality of scientific output.
10. The human genome has evolved in a timeframe when physical activity was high, therefore being sedentary is a physiologically abnormal state. (Booth et al., *Journal of Applied Physiology*, Feb 2000; 88: 774-787)
11. Endurance training facilitates problem solving: If you don't have answers to your problems after a four-hour run, you ain't getting them. (Christopher McDougall, *Born to Run*, 2010)
12. Alles komt goed. En zo niet, dan toch.