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# Elucidating the mechanisms of action of short-chain fatty acids

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### STELLINGEN

behorende bij het proefschrift

### Elucidating the mechanisms of action of short-chain fatty acids From dietary fiber to host metabolism

- 1 The understanding of the short-chain fatty acid-induced effects is severely hampered by the lack of data on actual fluxes of short-chain fatty acids and metabolic processes regulated by short-chain fatty acids. – *This thesis*
- 2 *In vivo* short-chain fatty acid fluxes rather than cecal concentrations correlate in an inverse manner with biomarkers of the metabolic syndrome. *This thesis*
- 3 There are conspicuous differences between the metabolism of the three gut-derived short-chain fatty acids. *This thesis*
- 4 Short-chain fatty acids can act simultaneously as substrates and as regulators of glucose and lipid metabolism. *This thesis*
- 5 The regulatory role of short-chain fatty acids seems to be time-dependent, making it a suitable problem to address with a Systems Biology approach. *This thesis*
- 6 The dietary fiber guar gum protects against the metabolic syndrome through the same mechanism as supplemented short-chain fatty acids, indicating that short-chain fatty acids are the molecular mediators of the beneficial effects of guar gum. – *This thesis*
- 7 To use short-chain fatty acids as nutritional supplements to prevent and treat the metabolic syndrome, the results require confirmation in a large scale double blind randomized controlled clinical trial. *This thesis*
- 8 It's tempting to see your enemies as evil, but there's good and evil on both sides of every war ever fought. *Jorah Mormont, Game of Thrones*
- 9 Intelligence without ambition is a bird without wings. Salvador Dali
- 10 Choose a job you love, and you will never have to work a day in your live. *Confucius*

Groningen, 23 juni 2014 Gijs den Besten