

STELLINGEN

Behorende bij het proefschrift

The Arachidonic Acid Pathway: A potential application in the diagnosis and prognosis of prostate cancer

1. Although metabolic alterations in the kynurenine pathway might be occurring in the prostate tumour, these changes cannot be evaluated in serum and therefore, cannot be used as markers for prostate cancer (this thesis).
2. Serum concentrations of 12-HETE metabolite were not statistically different between prostate cancer (PCa) patients and controls, although this metabolite was previously reported as marker for PCa progression in tissue (this thesis).
3. Protein expression of enzymes involved in HETEs production in the prostate tumour cannot explain the high concentration of these metabolites in serum, but overexpression of up-stream enzymes such as phospholipases can (this thesis).
4. Addition of metal ions such as Ca^{2+} improves structural characterisation of lipid species by mass spectrometry (this thesis).
5. Eicosanoids are compounds produced in the human body and derived from fatty acids such as arachidonic acid. These molecules could activate the PPARG receptor, a molecule involved in PCa progression, but this synergy still remains poorly understood (this thesis).
6. The metabolite sarcosine in urine is not a non-invasive marker for prostate cancer progression (Sreekumar et al., Nature 457, 910-914, 2009).
7. PCa population screening is still far away as this screening reduces mortality, but increases the rate of overdiagnosis (Schröder et al., The Lancet 384, 2027–2035, 2014).
8. Therapeutic targeting of metabolic enzymes such as lipoxygenases, could stop feeding the beast (Vander Heiden et al., Science 324, 1029-1033, 2009).
9. The study of epigenetic reactions involving lipids opens new possibilities for prostate cancer treatment (McDonnell et al, Cell Reports 17, 1463-1472, 2016).
10. A sleeping beauty experiment is the key to decipher the link between fatty acids, lipogenic enzymes, and the progression of prostate cancer (Ahmad et al., PNAS 113, 8290-8295, 2016).
11. 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.

Giovanny Rodriguez Blanco, 13 September 2017