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## **PLGA-based particulate vaccine delivery systems for immunotherapy of cancer**

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### **Citation**

Monteiro Garrido Castro e Silva, A. L. (2015, December 22). *PLGA-based particulate vaccine delivery systems for immunotherapy of cancer*. Retrieved from <https://hdl.handle.net/1887/37169>

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**Issue Date:** 2015-12-22

# Stellingen

Behorende bij het proefschrift

## PLGA-based particulate vaccine delivery systems for immunotherapy of cancer

1. Encapsulation of antigens in PLGA-nanoparticles results in enhanced MHC class I presentation and CD8<sup>+</sup> T cell activation.

*This thesis, chapter 4*

2. Low-burst release of encapsulated antigen is crucial for efficient MHC class I antigen presentation and CD8<sup>+</sup> T cell activation in vivo.

*This thesis, chapter 5*

3. Encapsulation of synthetic long peptides in nanoparticles is an effective way to achieve endolysosomal targeting and prolonged MHC class I antigen presentation.

*This thesis, chapter 6*

4. PLGA nanoparticles and/or liposomes loaded with synthetic long peptides do not require Toll-like receptor agonists to induce cellular immune responses.

*This thesis, chapter 7*

5. Synthetic long peptides antigen is more effectively processed for MHC class I presentation and induce stronger CD8<sup>+</sup> T cell responses than protein antigen.

*Rosalía et al., Eur J Immunol (43) 2013*

6. The size of particulate adjuvants is not only related to the strength, but also the type of immune responses.

*Oyewumi et al., Expert Rev Vaccines (9) 2010*

7. As most pathogens present multiple Toll-like receptor agonists to antigen-presenting cells, the combination of multiple Toll-like receptor agonists can result in a synergistic effect.

*Black et al., Expert Rev Vaccines (9) 2010*

8. The key properties of viruses that are responsible for eliciting potent immune responses may be used as a framework for rational vaccine design.

*Bachmann et al., Nat Rev Immunol (10) 2010*

9. The best way to get something done is to begin.

*Anonymous*

10. If we knew what it was we were doing, it would not be called research, would it?

*Albert Einstein*

11. If a favored idea fails a well-designed test, it's wrong. Get over it.

*Neil deGrasse Tyson*

12. Your questions are false if you already know the answer.

*José Saramago, The Stone Raft*