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## **Particulate based vaccines for cancer immunotherapy**

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# Stellingen

behorende bij het proefschrift

## Particulate based vaccines for cancer immunotherapy

1. Facilitated entry of vaccines into the cytosol promotes efficient and early MHC class I presentation. *(this thesis)*
2. Presence of antigen inside the cytosol leads to their destruction. Therefore, vaccines should be encapsulated in protective particulate carriers which gradually release its content for sustained MHC class I presentation. *(this thesis)*
3. "To target or not to target a vaccine?" To target. Targeted vaccines are superior in Ag delivery to antigen presenting cells and strongly improve T cell responses compared to non-targeted vaccines. *(this thesis)*
4. Particulate vaccine targeting to DC via the C-type lectin receptor DEC-205, the integrin CD11c or the TNF- $\alpha$  receptor CD40 leads to comparable Dendritic cell maturation. *(this thesis)*
5. Vaccines consisting of multiple adjuvants have improved capacity to activate Dendritic cells and stimulate robust anti-tumor T cell responses.
6. Antigen-specific therapeutic approaches will potentiate non-specific immunotherapy protocols, such as vaccinations combined with immune check point blockade inhibitors, and lead to better specific memory T cell formation and long lasting clinical responses.
7. Vaccine induced cancer specific T cells will require the exogenous provision of the right cytokines at the right time to maintain their tumor cytotoxic effector functions.
8. Cancer vaccines will not suffice to achieve durable clinical responses if one does not include therapies which sufficiently curbs tumor induced immune suppression.
9. When experiments fail continuously, worry not, hit the gym and aim for heavy squats and dead lifts to empower the body and mind and you will return back to the lab as a better scientist.
10. Started from the bottom now we're here... *Black-Canadian lyricist Aubrey Drake Graham, song title "Started from the bottom", 2013*
11. To cherish, to adapt and to learn from new and different cultures increases the likelihood of being a successful and joyful person.
12. It's better to go down with your own vision than with someone else's. *Johan Crujff a.k.a. El Salvador, April 25, 1947*