



Universiteit
Leiden
The Netherlands

Molecular approaches to identify cancer T cell antigens and improve immunogenicity

Hos, B.J.

Citation

Hos, B. J. (2023, June 29). *Molecular approaches to identify cancer T cell antigens and improve immunogenicity*. Retrieved from <https://hdl.handle.net/1887/3628370>

Version: Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/3628370>

Note: To cite this publication please use the final published version (if applicable).

Propositions part of the thesis

Molecular approaches to identify cancer T cell antigens and improve immunogenicity

1. Analysis of presented peptides through proteomics is an effective method to increase the hit-rate of identifying relevant neoantigens - *this thesis*
2. Transfection of MHC class II negative tumor cells with CIITA is a reliable method for inducing the presentation of immunologically relevant helper T cell epitopes on tumor cells - *this thesis*
3. Decentralised storage of cancer cell lines can result in genetic drift and divergence of cell lines between research groups and institutes with potentially significant alterations of immunological responses - *this thesis*
4. Bioorthogonal 'click'-chemistry has high potential for in situ tagging of antigens during later stages of antigen presentation - *this thesis*
5. The efficacy of personalized cancer vaccines depend on the quantity of included neoantigens, supported by the character and depth of the induced immune response - *Eryn Blass et al., Nature Reviews, 2021*
6. Prediction of CD4+ T cell epitopes remains challenging although 'wet' approaches that acquire MHC class II presented peptides from cancer cells shall improve algorithmic tools - *Julien Racle et al., Immunity, 2023*
7. Formulation is one of the most important steps in vaccine design, yet remains the most puzzling - *Bali Pulendran et al., Nature Reviews Drug discovery, 2021; Freidrich M. Cruz et al., Annual Review of Immunology, 2017*
8. Discovery comes from experiments under suboptimal conditions - *inspired by a quote from Frank Herbert's Dune ("Highly organized research is guaranteed to produce nothing new"; 2015 edition, Hodder And Stoughton Ltd.)*
9. The gravity of science should lay on the quality of the path taken, not whether we reach the desired endpoint - *inspired by a quote from Ryan North's Dinosaur Comics ("Failure is just success rounded down", 2007)*
10. The top of long and challenging mountain trails have the most stunning views - *Brett Hos, shower thoughts*