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Liposomes as delivery system for allergen-specific immunotherapy

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1. Both antigen and adjuvant need to be taken up by the same antigen presenting cell to achieve adjuvant effect. (This thesis)
2. Cationic liposomes induce a stronger immune response than colloidal aluminum hydroxide (This thesis)
3. Cationic liposomes with coiled-coil associated antigen are an interesting adjuvant for allergen specific immunotherapy because both a Th1 and Treg immune response is induced (This thesis)
4. Antigen nature and formulation play an important role in their uptake by antigen presenting cells (This thesis)
5. Antigen presentation on the surface of nanoparticles may reduce IgE crosslinking capacity, resulting in a hypoallergenic formulation. (This thesis)
6. Allergenic material of house dust and pollen extracts adsorbed onto aluminium hydroxide gel or calcium phosphate gel gave favorable results in more than 70% of the cases.
E H Relyveld, E Henocq, Allergens adsorbed on aluminum hydroxide preparation, standardization controls and therapeutic results, Dev Biol Stand;29:295-307 (1975)
7. The current pandemic illustrates the need and use of vaccine adjuvant platforms which can quickly be adapted to new antigens or diseases.
Krammer, F. SARS-CoV-2 vaccines in development. Nature 586, 516–527 (2020).
8. Given that most chronic diseases are affected by the immune system, therapeutic vaccination should be considered a possible treatment.
Schijns, V, Fernández-Tejada, A, Barjaktarović, Ž, et al. Modulation of immune responses using adjuvants to facilitate therapeutic vaccination. Immunol Rev. 296: 169– 190. (2020)
9. The physical properties of nanoparticles, such as their size and the antigen density on their surface, influence their immunogenicity.
Pulendran, B., S. Arunachalam, P. & O'Hagan, D.T. Emerging concepts in the science of vaccine adjuvants. Nat Rev Drug Discov 20, 454–475 (2021).
10. Goede chemie is het halve werk.
Wim Jiskoot
11. Het zou net zo makkelijk moeten zijn om een student een onvoldoende te geven als het is om een student een voldoende te geven.
12. Een positieve herinnering of ervaring is sterker en meer waard dan een negatieve.