



Improving the immunogenicity of vaccines

This new technology allows significant improvements in immunogenicity of vaccines by application of a special type of hydrophobic posttranslational modification.

BACKGROUND

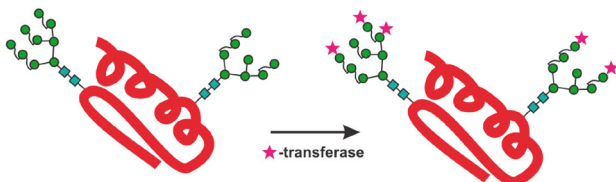
Vaccination success with purified proteins traditionally relies on adjuvant properties of the formulation itself. Decoration of vaccines with the plant-typical glyco-feature xylose has shown to improve immunogenicity. However, a hydrophobic posttranslational modification (PTM) would be much more efficient.

TECHNOLOGY

Certain algae and mosses equip their Asn-linked oligosaccharides with a hydrophobic cap that expectably confers strong immunogenicity. While algal enzymes can act on high-mannose N-glycans, moss enzymes can act on paucimannosidic/hybrid-type N-glycans. The single enzymes for these important modifications are yet still unidentified. We offer to perform the identification and characterization using a combination of affinity chromatography, mass spectrometry and bioinformatics. The enzymes would then be co-expressed with the vaccine protein in a host of choice (CHO, *Pichia* or plants) and the immunogenicity with and without the hydrophobic PTM could be assessed.

OUR OFFER

Significant improvements in immunogenicity of glycosylated protein vaccines with a totally new technology.



EXPERTS

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AVAILABLE FOR

Joint Research Project

Contract Research

National and international Funding Calls

DEVELOPMENT STATUS

TRL 1-2

IPR (OPTIONAL)

None – will be generated for our industrial partner

KEYWORDS

- Immunogenicity
- Vaccination
- Posttranslational Modifications
- Glycosylation

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