

Improved immunomodulators for improved vaccines

WP5.3: Adjuvants and Immunomodulators

Adjuvants should be: non-toxic, potent, stable, well-defined, specific*, versatile, economical

*specific actions: e.g. mucosal stimulation, CD8+ induction, Th1 as opposed to Th2, etc.

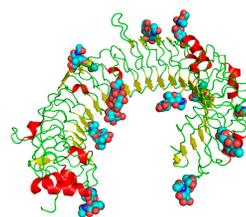
Adjuvants in current veterinary vaccines

(review in preparation)

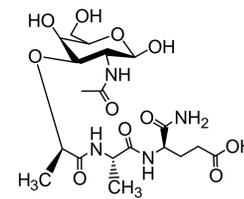
Tentative author list:

Peter Heegaard, Gregers Jungersen (VET), Thomas Vahlenkamp (FLI), plus additional German and Danish coauthors

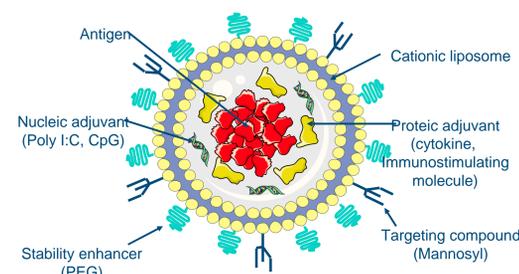
In-depth review on adjuvants in current use in veterinary vaccines. For many commercial vaccines it is not disclosed precisely which adjuvants are used, and the review will seek to shed some light on this.



Human TLR 3, LRR domain, Choe et al, 2005, Science 309, 581ff



Murmayl dipeptide, TLR2 agonist



Liposome, schematic

WP5.3: Participants and research interests

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JPA4: Establishing new projects and increasing collaboration with other Theme 5 WPs

Newly established collaborative projects include:

Baculovirus/polygene adjuvant (FLI) to be tested in fish virus challenge models (VET).

Rift valley fever virus epitopes to be synthesized for testing specificities of poly- and monoclonal antibodies (VET - WP 5.1 collaboration (INIA))
Internally Epizone funded ASFV project with IAH and other Epizone partners (IAH project leader)

Planned:

Session/meeting on siRNA and delivery systems for siRNA (jointly with WP5.4 and 5.1)

7: Synthetic immunomodulators; adjuvants in fish;
3: antiviral cytokines and bacteriophages; **5:** innate responses protecting against neurovirulent viruses;
6: PLGA microspheres; **9:** cationic liposome delivery and heat shock proteins as adjuvants; **10:** Chemokines as adjuvants for DNA vaccination in fish; **11:** adverse reactions after vaccination; **12:** cytokines and CpG based adjuvants in FMDV vaccination