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# Vaccines & Vaccination

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### **Vaccine adjuvants; the good, the bad and the ugly**

Highly purified antigens suffer from poor immunogenicity. Current paradigms to address this problem focus on use of potent innate immune activators as adjuvants, thereby mimicking natural infection. Unfortunately using this approach adjuvant immunogenicity and reactogenicity are largely inseparable. This talk will address the question of whether pro-inflammatory danger signals are really needed to make modern vaccines effective. Using examples of vaccines against influenza, West Nile virus, Japanese encephalitis virus and other important biodefense pathogens, data will be provided to show that bigger is not always better when it comes to vaccine adjuvants. Novel polysaccharide adjuvants such as delta inulin (Advax™) with more subtle immune effects surprisingly provide the best long-term immune memory responses and vaccine protection in the absence of generation of danger signals.

### **Biography**

Nikolai Petrovsky is the Director of endocrinology at Flinders Medical Centre with a conjoint position as Professor of Medicine at Flinders University. He is also Vice-president and secretary-general of the International Immunomics Society. He is active in diabetes, endocrinology and vaccine research. He is the Founder of Vaxine, a company funded by the US National Institutes of Health to develop novel vaccine technologies in 2009. He has developed vaccines against influenza, hepatitis B, sting allergy, malaria, Japanese encephalitis, rabies and HIV, has authored over 90 papers and chapters and is a regular invited speaker at international vaccine conferences.

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