

Vaccine adjuvants: current challenges and future approaches. ^[1]

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Abstract For humans, companion animals, and food producing animals, vaccination has been touted as the most successful medical intervention for the prevention of disease in the twentieth century. However, vaccination is not without problems. With the development of new and less reactogenic vaccine antigens, which take advantage of molecular recombinant technologies, also comes the need for more effective adjuvants that will facilitate the induction of adaptive immune responses. Furthermore, current vaccine adjuvants are successful at generating humoral or antibody mediated protection but many diseases currently plaguing humans and animals, such as tuberculosis and malaria, require cell mediated immunity for adequate protection. A comprehensive discussion is presented of current vaccine adjuvants, their effects on the induction of immune responses, and vaccine adjuvants that have shown promise in recent literature.

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