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Research and development of biodefence vaccines

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The research and development of vaccines for biodefence poses some particular issues in terms of handling potentially dangerous pathogens in the laboratory and in animal models. Furthermore such vaccines cannot be tested for efficacy directly in man and so there is a need to identify immune correlates of protection in animal models for translation as surrogate markers of efficacy in clinical trials. This process has been facilitated by the introduction in 2002 of the Animal Rule by the FDA. This talk will review progress to date in the R&D of biodefence vaccines with some specific examples of its application. It will review the immunoanalysis conducted on a range of animal models and the progress towards the derivation of immune correlates of protection which in turn facilitates the identification of surrogate markers of efficacy, essential for the successful conduct of clinical trials.

Biography

E D Williamson is an Immunologist, working in a microbiology group. She has a track record of successful research and has had scientific input to a range of R&D projects, initially in the veterinary vaccine field and more recently in the biodefence field. She has been involved with the R&D of new recombinant vaccines from initiation to clinical trial. Currently, she is a Principal Scientist at DSTL Porton Down, contributing to the technical management of a number of projects towards the development of vaccines and therapies for serious human pathogens, with practical input to others. She has authored over 140 peer-reviewed papers.

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