Short Communication

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Disease incubation period of inhalational anthrax in the rabbit

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Abstract

An initial aim was to parameterize the CR model using high-dose rabbit data and then conduct a low-dose extrapolation. The CR low-dose attack rate was then compared against known low-dose rabbit data as well as the low-dose curve obtained when the entire rabbit dose–response data set was fitted to an exponential dose–response (EDR) model. The CR model predictions demonstrated excellent agreement with actual low-dose rabbit data. We next used a modified CR model (MCR) to examine disease incubation period (the time to reach a fever >40 °C). The MCR model predicted a germination period of 14.5 h following exposure to a low spore dose, which was confirmed by monitoring spore germination in the rabbit lung using PCR, and predicted a low-dose disease incubation period in the rabbit between 14.7 and 16.8 days. Overall, the CR and MCR model appeared to describe rabbit inhalational anthrax well. These results are discussed in the context of conducting laboratory studies in other relevant animal models, combining the CR/MCR model with other computation models of inhalational anthrax, and using the resulting information towards extrapolating a low-dose response prediction for man.

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Biography

The Bradford W. Gutting is a senior researcher fellow at the Instituteof pharmaceutics, Saudi Arabia. he is in the thirdyear of her Ph.D. and is a holder of DST-INSPIRE fellowship. She has qualified UGC NET exam twice. The Bradford is a senior research fellow at the Institute of pharmaceutics and Medical, Saudi. he is in the third year of her Ph.D. and is a holder of DST-INSPIRE fellowship. She has qualified UGC NET exam twice. The Bradford W. Gutting is a senior research fellow at the Institute of Nuclear medicine and Allied Sciences, India. She is in the third year of her Ph.D. and is a holder of DST-INSPIRE fellowship.

