

Publication

Aerosol immunisation for TB: matching route of vaccination to route of infection

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TB remains a very significant global health burden. There is an urgent need for better tools for TB control, which include an effective vaccine. Bacillus Calmette-Guérin (BCG), the currently licensed vaccine, confers highly variable protection against pulmonary TB, the main source of TB transmission. Replacing BCG completely or boosting BCG with another vaccine are the two current strategies for TB vaccine development. Delivering a vaccine by aerosol represents a way to match the route of vaccination to the route of infection. This route of immunisation offers not only the scientific advantage of delivering the vaccine directly to the respiratory mucosa, but also practical and logistical advantages. This review summarises the state of current TB vaccine candidates in the pipeline, reviews current progress in aerosol administration of vaccines in general and evaluates the potential for TB vaccine candidates to be administered by the aerosol route.

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