

Horserace Betting Levy Board
Parnell House
25 Wilton Road
London, SW1V 1LW

Tel: 020 7333 0043
Fax: 020 7333 0041
Web: www.hblb.org.uk
Email: equine.grants@hblb.org.uk



Functional analysis of the *Rhodococcus equi* genome

Professor Jose Vazquez-Boland
University of Edinburgh

On-going project: an overview



The soil bacterium *Rhodococcus equi* is the causative agent of a severe respiratory disease of foals associated with a high case-fatality rate if antibiotic treatment is not rapidly administered. *R. equi* is recognised as a major cause of mortality in horses between 1 and 5 months of age, is endemic in many stud farms, and there is no vaccine to prevent the infection. We recently determined the complete nucleotide sequence of the *R. equi* genome ([Prj712](#)).

This project will focus on the functional characterisation of the genome by microarray transcriptomic profiling and mutant analysis to identify the mechanisms used by *R. equi* to cause infection and persist in the environment. The fundamental knowledge derived from these studies will help to identify targets for the rational design of attenuated live vaccines and therapies to treat *R. equi* infection, and to suggest interventions to limit the spread of the organism in the stud farms.
