



# One Health: connecting human and animal health

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Your partner in solving public health issues  
through veterinary interventions

Safeguarding human and animal health through veterinary and biomedical research



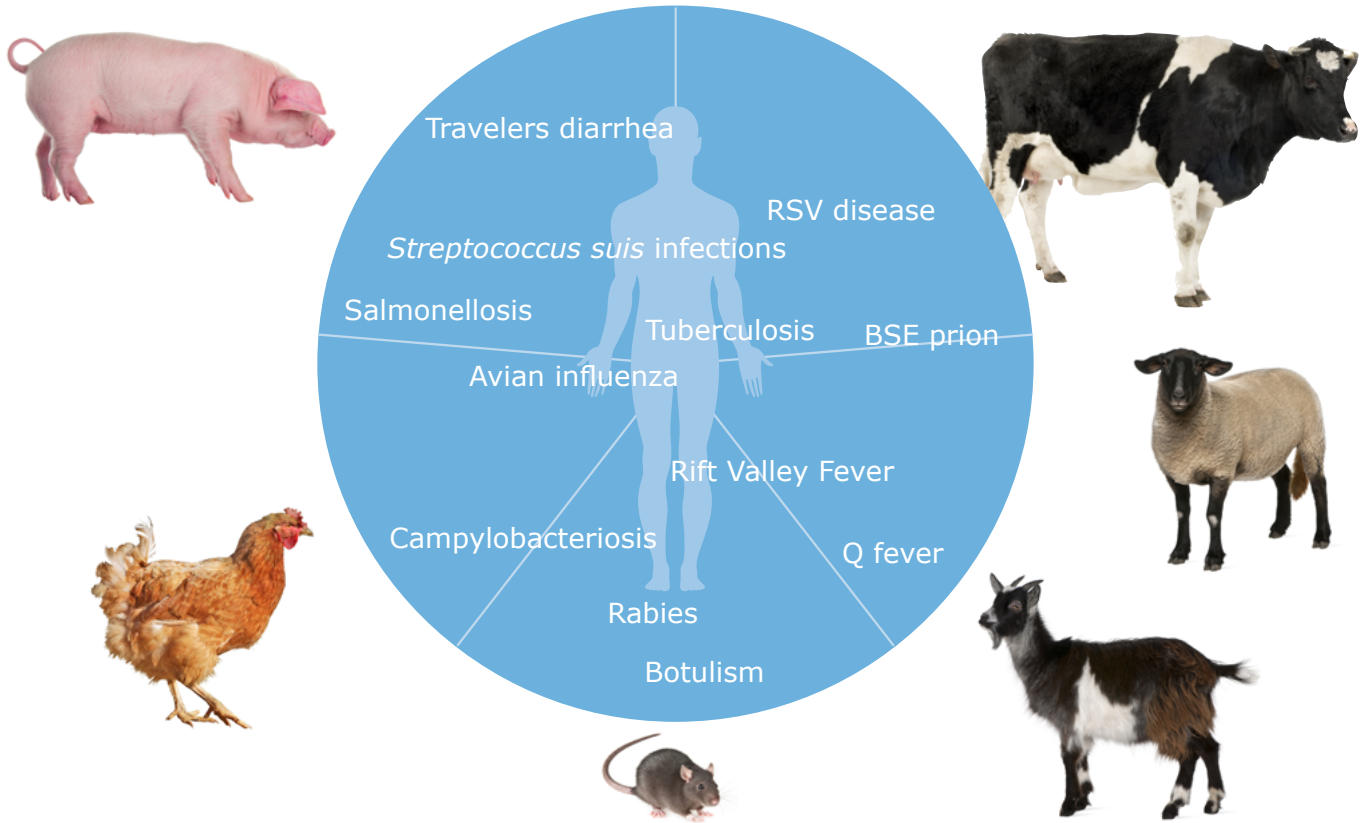
CENTRAL VETERINARY INSTITUTE  
WAGENINGEN **UR**

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## One Health

The 'One Health' concept connects human and veterinary health to combat future challenges. Since 70% of newly emerging human diseases arise from animal reservoirs (zoonoses), veterinary research is an indispensable part of

this field. CVI contributes to the understanding and control of zoonoses through diagnosis and research in livestock and wildlife. Prevention and control of zoonotic infections in the animal population eliminates reservoirs thereby protecting public health.



### Examples of our animal models

#### Influenza

Avian influenza virus poses a severe threat to public health and the global poultry industry. Direct contact with infected poultry can result in fatal human infections. Elimination of the virus from the poultry population is therefore a priority. At CVI we monitor commercial poultry and wild birds using next-generation sequencing, molecular techniques and bioinformatics.

Furthermore, we are developing new broadly protective vaccines (using the latest reverse genetics techniques) as well as new application routes for the mass vaccination of poultry to prevent outbreaks and the ensuing transmission to humans.

#### Q fever

Between 2007 and 2010 the Netherlands was confronted with the largest Q fever outbreak ever reported, which resulted in more than 4000 human cases. CVI and partners in the human field genotyped the Q fever bacterium that persisted in the human and animal populations. This justified stringent control measures in dairy goats, which led to a successful control of the outbreak. Research provided new insights into the excretion of the bacterium in goats as well as potential additional risks for humans. Comparison of innate immunity in goats and humans is being studied to develop better control measures.

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