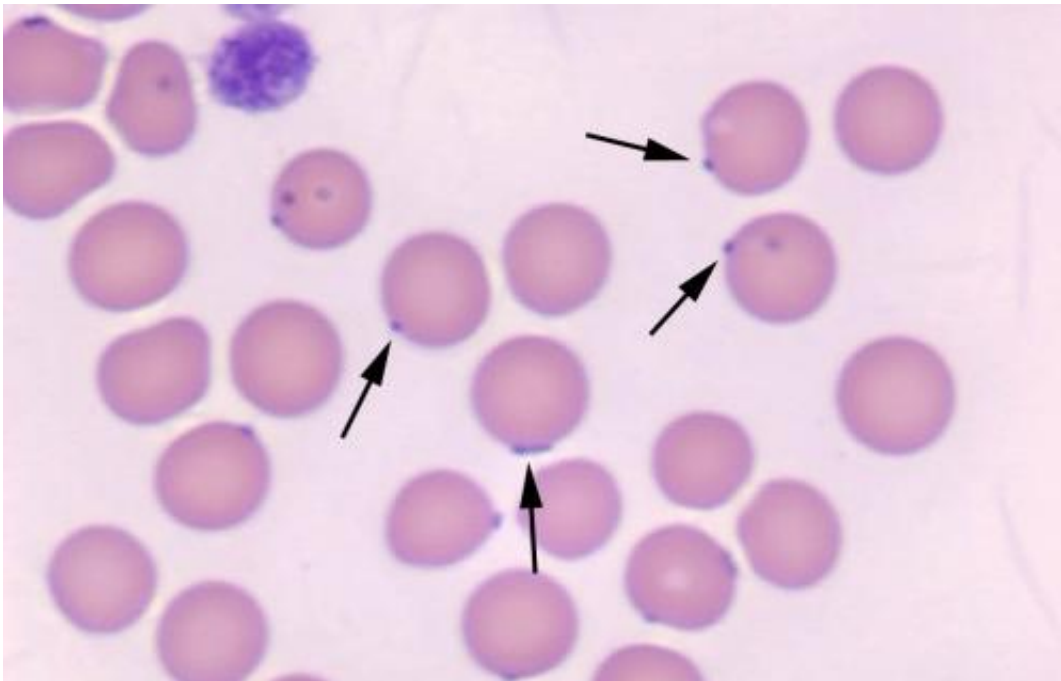


Study advances knowledge of relatively unknown blood-borne bacteria

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Blood smear showing hemoplasma organisms (examples are arrowed) attached to the surface of red blood cells. Credit: School of Veterinary Sciences, University of Bristol

Haemoplasmas are a group of blood borne bacteria found in a wide range of mammals, including domestic and wild cats, and can cause severe anaemia. The findings of a new study have significantly advanced researchers' knowledge of immunity for these pathogens.

The study led by researchers at the University of Bristol's School of Veterinary Sciences and published in the journal *Clinical and Vaccine Immunology* (CVI), investigated the haemoplasma *Mycoplasma haemofelis*.

Information about the immune responses that occur in animals following haemoplasma infection is relatively unknown, largely due to the fact that researchers struggle to study these bacteria as they are unable to grow them in the laboratory. Antibiotics do not consistently clear infection and without correct treatment the [anaemia](#) can be fatal. Recently haemoplasma associated anaemia has been reported in a human too.

The aim of the study was to determine whether cats who had previously recovered from *M. haemofelis* infection were protected from re-infection. The researchers found that they were, representing a significant advancement in scientists' knowledge of immunity for haemoplasma infections.

The exact methods of protective immunity could not be clearly identified despite extensive investigations, but the study's results suggest that a vaccine, using a weakened form of the bacteria, may offer protection against haemoplasma infection.

Dr Séverine Tasker, Reader in Feline Medicine in Companion Animal Studies, who led the study, said: "This is the first study to demonstrate [protective immunity](#) against *M. haemofelis* reinfection and it provides important information for a possible future hemoplasma vaccine.

"Our findings could help prevent the disease in cats and could also be of particular importance to farm animal species where haemoplasma infections can cause huge financial losses."

The study recommends future research should explore whether the

bacterial animal [infection](#) could be transmitted to humans and how the immune system targets the pathogen.

More information: 'Protective immunity against infection with *Mycoplasma haemofelis*' by Chelsea Hicks et al in *Clinical and Vaccine Immunology*.

Provided by University of Bristol

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