

Chlamydophila pecorum (a.k.a. *Chlamydia pecorum*)

Bacterium Type. Gram-negative, small, coccoid.

Nature/growth. Requires a living host cell for growth and cannot be grown in traditional laboratory media. *C. pecorum* is grown in cell culture or fertile hens eggs in the laboratory. The growth cycle is approx. 48hrs, however yields are low and it is a difficult, expensive and time-consuming process to grow sufficient quantities for research studies.

Disease. Pathogenically diverse species causing a wide range of infections/disease such as, enteritis, polyarthritis, conjunctivitis, pneumonia, encephalomyelitis, metritis, salpingitis, mastitis, and infertility.

Host species. A wide range of mammals are affected by *C. pecorum* such as sheep, goats, cattle, pigs and koalas.

Prevalence. The enteric subtype of *C. pecorum* is believed to commonly infect sheep and cattle in the UK and other countries. Similarly, in Australia, *C. pecorum* has been shown to be highly prevalent in koalas. However, in general, little is known regarding the prevalence of the subtypes.

Epidemiology. Enteric subtypes transport the pathogen through the intestines and then excrete organisms onto pasture, however it is not known how major a role this plays in maintaining *C. pecorum* infection.

Zoonotic? Not known.

Food-borne? No evidence.

Diagnosis. *C. pecorum* subtypes, particularly those from the intestinal tract, are frequently difficult to isolate in culture, growing initially then dying out on serial passage and the organism can be difficult to detect using conventional diagnostic methods.

Serological detection of *C. pecorum* agents using the complement fixation test (CFT) is problematic because the organism is very common in ruminants and antibodies to it cross-react with other chlamydiae, particularly *C. abortus*.

Given the problems of antigenic cross-reactions, there is a strong incentive to use DNA-based techniques, where a clear distinction can be made between *C. pecorum*, *C. abortus* and other chlamydial species.

Treatment/vaccines. Diagnosed cases of chlamydial polyarthrititis or conjunctivitis in sheep or cattle can be treated with tetracycline. This reduces disease in a flock but does not prevent it. Cattle infected with the encephalitis subtype of *C. pecorum* are slow to respond to treatment and can suffer a loss of condition.

There are no commercial vaccines available for *C. pecorum*.

For further information please contact Dr David Longbottom