



Proceedings



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Foetal periventricular leucomalacia as the main lesion in abortions during the acute phase of ovine toxoplasmosis**S25**

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Toxoplasmosis is a major opportunistic disease of immunocompromised patients. It also represents a serious threat during pregnancy, causing severe foetal abnormalities or potentially leads to problems in childhood or later adult life. Undercooked or raw meat containing infective tissue cysts are a significant source of human infection. The production of *T. gondii* tissue cyst free meat could reduce the risk of human exposure to *T. gondii*. In two different animal studies a group of 23 pigs and 32 lambs were used to determine the efficacy of a commercially available vaccine, with an aim to reduce tissue cyst formation. Results from mouse bioassays, using a variety of porcine tissues, resulted in a 100% survival of mice that received tissues from vaccinated/challenged pigs. While bioassays of tissues from non-vaccinated pigs resulted in a survival rate of 51%. Parasite DNA was also identified in the homogenate used in bioassays from the non-vaccinated/challenged group but not in the vaccinated/challenged pigs. In a similar experiment, *T. gondii* DNA was tested for in the tissues of lambs. Following vaccination and challenge with 100,000 oocysts of the Moredun M4 strain, the parasite was detected at significantly lower levels in heart and skeletal muscle samples from the vaccinated/challenged group (0% and 5.9% respectively), when compared to the non-vaccinated/challenged animals (75% heart, 87.9% skeletal muscle). The results demonstrate that vaccination of pigs and lambs with the S48 attenuated *T. gondii* strain can reduce the formation of tissue cysts, resulting in potentially safer meat for human consumption.



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