

PORK SAFETY

I. Title: Evaluation of Toxo TaqMan Assay for use in Detection of Swine Toxoplasmosis, NPB #01-082

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II. Abstract:

This grant was aimed at adapting technologies so that our molecular assay for detection of the foodborne parasite, *Toxoplasma gondii* (Tg), could be used for a wide range of pork tissues. Our previous data, developed by Jauregui (1) with NPB funding, proved that we could use a real time Tg polymerase chain reaction (PCR) assay, previously termed the Toxo TaqMan Assay, to detect Tg DNA in animal tissues with high sensitivity and specificity. In order to facilitate the work with a large number of samples, fast and simple commercial DNA extraction kits were evaluated and compared to the previous DNA preparation method. Two commercial kits, DNeasy and DNAzol, were tested and shown to produce good quality DNA. Using these kits real time Tg PCR assays were performed on Tg infected mouse, pig and chicken samples. Our results showed that these commercial kits could be used to produce the DNA samples to identify potential Tg contamination in different animal tissues using the real time Tg PCR assay.

These research results were submitted in fulfillment of checkoff funded research projects. This report is published directly as submitted by the project's principal investigator. This report has not been peer reviewed

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