Title: Prevalence of slaughter house condemnation due to *Erysipelothrix* sp. and further characterization of isolates associated with these cases – NPB #07-072

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Scientific Abstract:

The objective of this study was to confirm the presence and investigate the identity of *Erysipelothrix* spp. in condemned tissues obtained from a regional abattoir. Tissue specimens from 70 carcasses with macroscopic lesions suspect of swine erysipelas were collected at a regional abattoir in Iowa from October 2007 to February 2009. *Erysipelothrix* spp. culture isolation procedures were performed and recovered suspect isolates were confirmed to be *Erysipelothrix* spp. by standard laboratory methods. The genotype and the surface protective antigen (Spa) type of selected isolates (one from each positive case) were determined by multiplex real-time PCR assays. *Erysipelothrix* spp. was isolated from 84.3% (59/70) of the carcasses. All of the isolates recovered from the same carcass were the same serovar. In the culture positive carcasses the following serovars were identified: Serovar 1 (40.7%; 24/59), serovar 2 (49.2%; 29/59) and untypeable (5.1%; 3/59). Fifty-seven of the 59 isolates from positive carcasses were determined to belong to *E. rhusiopathiae* and 2/59 of the isolates were determined to be *E. tonsillarum*. Spa A was detected in 57/59 isolates and 2/59 isolates were negative for all Spa types. *E. rhusiopathiae* serovars 1a and 2 continue to be the most commonly isolated serovars in pigs condemned due to erysipelas. *E. tonsillarum* on the other hand, previously reported to be of low pathogenicity for swine was identified in a few cases and may be more important than currently assumed.