

Development of a serological Luminex assay for *Trichinella* and *Salmonella* in swine

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Abstract

In order to develop veterinary serological multiplex assays, a singleplex bead-based array on the Luminex platform was developed, and with this experience the study was expanded by building a multiplex serological assay. First a serological Luminex assay was developed for *Trichinella* in swine. As the developed assay performed comparable to commercial ELISA's, work on this platform was continued by developing a serological multiplex assay for *Salmonella* in swine. This assay is based on five LPS variants of the most important serogroups occurring in pigs. The serological multiplex assay for *Salmonella* performed comparable to a commercial ELISA. The results from this study demonstrate the feasibility of the Luminex platform for multiplex serology. Ultimately, this type of assay can be used for routine screening of porcine serum samples for immune responses against multiple pathogens in one assay.