

SWINE HEALTH

Title: Interaction of PRRSV and Porcine Dendritic Cells: Potential Role in Viral Persistence - **NPB# 04-196**

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Abstract

Porcine reproductive and respiratory syndrome virus (PRRSV) may persist in lymphoid tissue of pigs for months. It is possible that a subset of porcine dendritic cells sequester the virus and transport it to the draining lymph node where the virus is able to persist within the dendritic cell network. We have provided the first isolation and characterization of porcine pulmonary dendritic cells (PDCs). These cells were phenotypically and functionally compared to monocyte-derived dendritic cells (MDDCs). Our data indicates that PDCs are phenotypically and functionally distinct when compared to MDDCs. Furthermore, the MDDCs were shown to be more susceptible to PRRSV infection than are PDCs. We next sought to determine whether we could track the trafficking of PDCs to the draining lymph node using the dye dye carboxyfluorescein diacetate succinimidyl ester (CFSE). We were unable to detect labeled PDCs in the draining lymph nodes by flow cytometry or by immunohistochemical staining of lung or lymph node tissues.

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