Salmonella choleraesuis in a herd of feeder pigs

Peter G. Moisan
Food Animal Disease Specialist
Herd Demographics

600 pigs
8-16 weeks-of-age
Appalachia
AIAO was not practiced
Practitioner now is involved

Permission granted only for viewing on SEVPAC website
Herd Signalment
Fall 2015

mucohemorrhagic diarrhea
loss of condition
Necropsy Findings

sepsis

subcutaneous hemorrhage

bronchointerstitial pneumonia
Necropsy Findings
enterocolitis

chronic, adherent
fibrinonecrotic
pseudomembranous
Histopathology
Histopathology (cont.)

bronchointerstitial pneumonia

panophthalmitis optic nerve, caudal globe
Salmonella choleraesuis gains access to the host via entry into dome epithelium of the Peyer’s patches
Type III secretory system

This is part of the SP-1 pathogenicity island that includes genes for multiple virulence factors. There are 4 other *Salmonella* pathogenicity islands (SP islands 2-5) and a plasmid unique to *Salmonella* species that carry genes for multiple virulence factors.
In other words, these virulence factors, mixed and matched in these islands on the genome and on the plasmid, give Salmonella species entry to cells and unique attributes of the disease, based on species specificity.
picture of the type III secretory system
Questions?

Special thanks to:
Dr. David Malarkey
Dr. Mac Law
4th year student rotation VMD 804

Permission granted only for viewing on SEVPAC website