

## NOVEL BRACHYSPIRA spp. ASSOCIATED WITH HEMORRHAGIC COLITIS IN PIGS

### Opportunity

Researchers at the University of Saskatchewan identified new species of *Brachyspira* (Sask30446) associated with hemorrhagic colitis in pigs.

### Invention features

A method of culturing a *Brachyspira* sp. Sask30446 organism comprising inoculating a solid media and/or a liquid media with a sample comprising the *Brachyspira* sp. Sask30446 organism

\* *Brachyspira* sp. Sask30446 is the former name for the organism now provisionally named "*Brachyspira hampsonii*" clade II (strain 30446)

### Publications

Costa, M.O., Hill, J.E., Fernando, C., Lemieux, H.D., Detmer, S.E., Rubin, J.E. and Harding, J.C.S. 2014. Confirmation that "*Brachyspira hampsonii*" clade I (Canadian strain 30599) causes mucohemorrhagic diarrhea and colitis in experimentally infected pigs. BMC Veterinary Research, 10:129

Rubin JE, Costa MO, Hill JE, Kittrell HE, Fernando C, Huang Y, O'Connor B, Harding JCS. Reproduction of mucohaemorrhagic diarrhea and colitis indistinguishable from swine dysentery following experimental inoculation with "*Brachyspira hampsonii*" strain 30446. PLOS One February 2013 8(2): 57146

### Background

Swine dysentery is an economically significant disease that most often affects grow-finisher pigs. *Brachyspira* spp. vary by degree of virulence and in the severest form, cause swine dysentery (mucohaemorrhagic colitis) and spirochetel colitis. Morbidity and mortality associated with *Brachyspira* infection depend on the virulence of the strain and other host and environmental factors.

From 2009-2013, the most common *Brachyspira* species identified in western Canada were: *B. hyodysenteriae*, *B. pilosicoli*, *B. murdochii*, and a recently characterized species "*B. hampsonii*" of which there are two strains, 30599 (clade I) and 30446 (clade II). "*B. suanatina*", a recently discovered species associated with mucohaemorrhagic diarrhea in Europe, has not been detected or isolated in Canada.

**Inventors: Dr. Harding, Dr. Hill, Dr. Rubin, Dr. Chirino-Trejo**

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For more information:  
Innovation Enterprise  
Life Sciences Portfolio Manager

ie.contact@usask.ca  
+1 306 966 1465

250 – 15 Innovation Blvd  
Saskatoon, SK  
S7N 2X8 Canada



UNIVERSITY OF SASKATCHEWAN

**Innovation Enterprise**

OFFICE OF THE VICE-PRESIDENT RESEARCH  
RESEARCH.USASK.CA/IE