



**School of Animal
Sciences**

Disclosures AG-2013-02

Detection of Spongiform Encephalopathy

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Description:

This invention is a novel method of detecting transmissible spongiform encephalopathies (TSE) in blood and other bodily fluid. TSE covers mad cow disease, scrapie in sheep, chronic wasting disease in deer, and Creutzfeldt-Jacob disease in humans that have been linked with infection by spiroplasma bacteria. The detection method uses a novel group of nucleotide primers, or pieces of DNA specific to spiroplasma, to determine the presence and type of Spiroplasma spp. in fluid. Other studies show prion amyloid proteins are deposited in tissues affected by TSE during the course of infection. Although prion detection is useful for postmortem detection of disease, the development of a workable ante-mortem, or living, test for detection of prion in blood and other bodily fluids has not been successful.

Advantages:

- More accurate TSE detection
- Superior clarification of disease subtypes
- Can be used in living subjects

Commercial Uses:

- Mad cow disease
- Chronic wasting disease
- Scrapie
- Creutzfeld-Jacob disease

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