Extended release topical ointment for Tritrichomonas foetus in bulls

Auburn University is seeking a licensee or development partner for a topical treatment for Tritrichomonas foetus.

Overview: Auburn University is seeking a licensee or development partner for an extended release topical ointment for treating *Tritrichomonas foetus* (T. foetus) infection in bulls. Although a vaccine for female cattle exists, there is not a vaccine or FDA-approved treatment for bulls.

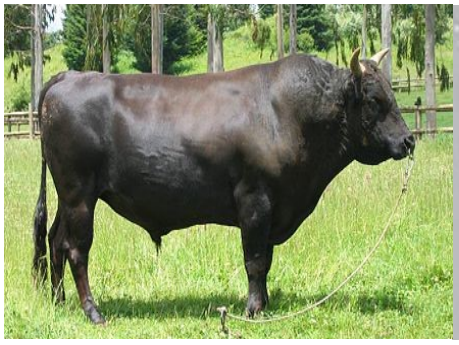
Advantages:

- **COST SAVING -** Provides an alternative to culling infected prize bulls and reduces occurrence of T. foetus-induced abortions
- **PREVENTATIVE -** Regular application with proper herd management could prevent or eliminate T. foetus in bulls, prevent spread to cows, and eliminate T. foetus in the herd.
- **EASILY APPLIED -** Topical application is simple and quick

Description: The prevalence of T. foetus at the herd level is anywhere from 10-40% with larger herds being most affected. Infection in females can lead to embryonic death and abortion, a significant financial loss to the farmer. The total economic impact of T. foetus is not well known, but assuming a 5% loss of calves due to T. foetus infection it is estimated that losses over $1B are seen annually in the US. A vaccine exists for females but there is no FDA-approved treatment available for bulls. Because infected bulls can spread T. foetus throughout a herd, they are usually slaughtered - a significant loss to the farmer of up to $100,000 or more for prized bulls. This gel-based formulation would allow topical treatment of bulls and avoid culling of infected animals. Efficacy *in vitro* and *in vivo* using benzimidazoles and ponazuril anti-microbials has been demonstrated, with elimination of detectable infection in a live bull. Further studies in live bulls are ongoing to optimize a final formulation and administration protocol.

Status:

- Subject of issued US Patent 11,160,867 and a pending continuation
- Formulation has been demonstrated to eliminate detectable infection in a live bull with two applications; further studies in bulls are ongoing
- This technology is available for exclusive or non-exclusive licensing



Bulls in need of a treatment for *T. foetus*. (Left) In the US, bulls infected with T. foetus are routinely quarantined and killed to prevent spread of infection (Picture taken from *https://en.wikipedia.org/wiki/Bull*). **(Right)** A picture of the microbe *Tritrichomonas foetus* (Picture taken from *http://blogs.cornell.edu/cornellsheltermedicine/2014/07/01/tritrichomonas-foetus-illu/*).

Early Stage → *Lab testing* → *Animal Studies* → *Field Trials*

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Reference:

- Master's Thesis (Link)

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