Vaccine to prevent equine laminitis

Market need
Laminitis is an equine inflammatory disease of the foot which eventually leads to mechanical failure of the hoof.

With an incidence rate of about 13%, laminitis is usually career-ending and often life-threatening to the affected horse, leading to anxiety and financial loss to horse owners.

Currently there is no effective permanent treatment, nor are there reliable preventative options.

Our solution
Scientific evidence suggests links between clinical laminitis, excessive starches in the equine hindgut, and the digestive microbiome.

We developed a trivalent exotoxin vaccine on the evidence that active microbial involvement by *streptococcus* and other bacterial species can be a causative factor in the development of laminitis, and that prophylactic vaccination will reduce the incidence of the disease.

Our vaccine neutralizes exotoxins such as thermolysin and cysteine proteinase that activate enzymes involved in the degradation of proteins in the hoof, and are believed to be specifically implicated in laminitis.

To date, our research in an experimental laminitis horse model has confirmed that our vaccine induces an immune response that is protective against the disease.

Benefits to our vaccine
- Prolonged health and survival of horses, and possibly other hooved animals such as cattle.
- Low volume and simple formula.
- Easy to use.
- Demonstrated effective prophylaxis against laminitis in a carbohydrate overload challenge model in horses. Results indicate protection for about 80% of the horses, making it an attractive solution for this catastrophic syndrome.
- Ease the economic burden on horse owners.

Active patents/Applications
Priority date: June 2014
- US patent application no.15/320,159
- European patent application no. 15809210.6
- Canadian patent application no. 2,988,165

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