Methods and Compositions for Prevention and Treatment of Apicomplexan Infections

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Technology description

Unmet Need: Effective treatment options to combat Apicomplexan parasitic infections
Diseases caused by apicomplexan parasites, such as cryptosporidiosis and malaria are among the most devastating to humans and their domestic animals. Ongoing discovery and development of new drugs to treat these diseases is a medical and veterinary imperative. For example, cryptosporidiosis causes severe diarrheal disease in young children world-wide and is a major challenge to the beef and dairy industries as a primary cause of neonatal calf diarrhea, yet to date there are no drugs to control this infection.
The Technology: A natural product with high efficacy against Apicomplexan parasites
Researchers at WSU recently discovered a natural product that exhibits nanomolar to picomolar efficacy against a broad range of apicomplexan parasites, including Cryptosporidium, Plasmodium (the causative agent of malaria), Toxoplasma (a cause of birth defects in humans and abortion in cattle), Sarcocystis (a cause of neurological disease in horses), Babesia and Theileria (malaria-like pathogens of horses and cattle). Promising results were obtained for treatment of cryptosporidium infection in both mouse models and lambs.

Application area

• Veterinary therapeutic to treat cryptosporidiosis in livestock

Advantages

• High efficacy –more effective than any other investigational anti-cryptosporidial drug yet
• Broad spectrum – shows action against a wide variety of apicomplexan parasites

Institution

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