



THE UNIVERSITY of TEXAS

HEALTH SCIENCE CENTER AT HOUSTON

Office of Technology Management

INHIBITORS OF CYCLIC NUCLEOTIDE SYNTHESIS AND THEIR USE

Market: The over production of cyclic nucleotides such as cGMP and cAMP are critical factors in many diseases. The most common causes of diarrhea in humans and animals are mediated by elevated cGMP and are induced by toxins of pathogenic bacteria. The need for novel therapies for both the human and veterinary medical fields is tremendous. Diarrheal diseases are among the worlds leading causes of death, especially in children. The pathology resulting from edema factor of *B. anthracis* is mediated by cAMP and while antibiotics kill the organism itself, it is often the accumulated edema factor and other toxins that cause sickness and death. Other pathogens such as *Bordetella parapertussis* and *Yersinia pestis* also have a component of their pathology associated with elevation of cyclic nucleotides. A broad based inhibitor of the nucleotide cyclases could have a multitude of indications and play a critical role in the treatment of the many diseases.

The Technology: The inventors have identified and validated a class of compounds that inhibit the formation of both cGMP and cAMP. The inventors have tested the compounds in a variety of animal models where they have shown therapeutic effect for treating diarrhea, anthrax, whooping cough.

Publications:

Proc Natl Acad Sci U S A. 2008 Jun 17;105(24):8440-5. Epub 2008 Jun 16.

NON-CONFIDENTIAL TECHNOLOGY DESCRIPTION

The preceding is intended to be a non-confidential summary of a novel technology created at the University of Texas Health Science center at Houston (UTHSCH), for which the University has obtained patent protection.

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Patent Status: pending

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