

ANTIVIRAL THERAPY TARGETING VIRUSES WITHIN PARASITIC PROTOZOANS

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Background: Parasitic infections remain global health threats and often lead to high death rates in endemic countries. Found in 98 countries, the Leishmania parasite is particularly dangerous and accounts for an estimated 2 million cases and 50,000 deaths per year across the world. However, Leishmania infections can have a wide variety of health effects, and more severe manifestations can cause relapse after initial healing. Increased disease severity is correlated with the parasitic factor, Leishmania virus (LRV), that can enhance virulence of the host parasite. A member of the Totoviridae family, LRV can also infect Giardia and Trichomonas vaginalis and poses a significant health threat.

Technology Description: The technology is based on antiviral nucleoside analogs which inhibit Leishmania virus (LRV). These inhibitors disturb virus life cycle by blocking viral RNA-dependent RNA polymerase, and are the first known drugs identified to act against LRV1. The inhibitors may also be used against viruses such as Giardia and Trichomonas vaginalis. It is anticipated that our compounds have the potential to be used in combination with standard anti-leishmanial treatments for infected patients.

Advantages:

- First-in-class Totoviridae inhibitors
- Large target market size
- Potential for further anti-parasite virus therapy development
- Extensive pre-clinical testing