

NON-TECHNICAL ABSTRACT: *(State in layman's terms the application's broad, long-term objectives and specific aims, making reference to the potential public benefits of the project.)*

The proposed research is part of a long-term study directed towards the development and biological evaluation of a new class of carbohydrate-based HIV inhibitors as potential topical microbicide agents. These microbicides are being designed as safe, non-toxic compounds that can be used to prevent the sexual transmission of HIV. This is an especially critical need in resource-limited regions of the world such as sub-Saharan Africa, where 67% of the world's HIV-infected population resides, and where access to expensive HIV medicine is very limited. The successful development of a potent microbicide agent has the potential of preventing millions of new HIV infections worldwide, and consequently, slowing the growth rate of HIV infection. It is anticipated that the initial compounds developed in this proposal will lead to the development of additional HIV inhibitor microbicides with increased potency. The current studies will also allow for a valuable training experience for both undergraduate and Master's level graduate students at CSU Sacramento.