

EXECUTIVE SUMMARY [NON-CONFIDENTIAL, NON-TECHNICAL ABSTRACT FOR PUBLIC INFORMATION OR PROGRAM PROMOTION]: State the application's broad, long-term objectives and specific aims, making reference to the potential public benefits of the project relevant to California. Do not include proprietary or confidential information. This may be distributed before the funding decision has been finalized.

Bovine immunodeficiency virus (BIV) is an RNA virus related to Human immunodeficiency virus (HIV). In these viral infections, viral replication is dependent on the interaction of a transactivation protein (Tat) with a region of viral RNA called transactivation region (TAR). Drugs that interrupt this interaction would be useful for treating viral infections. Using computational/theoretical modeling, we have designed Tat peptides that should bind better to TAR than the wild-type Tat peptide. We are doing experiments to verify the strength of these interactions. This may lead to the development of therapeutic agents for the prevention and treatment of viral diseases like HIV. Students working on this project will be trained in biotechnology techniques that will make them attractive candidates for jobs in local biotechnology companies.