

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Development of a Protocol to Evaluate Remotely Administered Ballistic Implants as a Vaccine Delivery System for Bison in Yellowstone National Park
Type of Project: Research
Funding Agency: National Park Service, Yellowstone National Park
Effective Dates: 1 September 2002 - 1 July 2003
Funding Amount: \$24,725
Investigators and Agency Representative: Dr. Charlotte Quist, Montana State University, (406) 835-2163 Dr. Allen Harmsen, Montana State University Rick Wallen - Wildlife Biologist, Yellowstone Center for Resources, Yellowstone National Park, (307) 344-2207, Rick.Wallen@nps.gov
Project Abstract: A long-term goal identified in the Interagency Bison Management Plan for the State of Montana and Yellowstone National Park is to implement a brucellosis vaccination program within the National Park. In order for the National Park Service (NPS) to complete this program, an environmental planning process must be completed. The internal scoping process has identified that an environmental impact statement will be the procedure of choice for documenting the decision on how to proceed. Data on the safety parameters of remote ballistic implants as a vaccine delivery system is necessary to complete the environmental analysis. This proposal describes a project to develop a protocol for evaluating remotely delivered ballistic implants (biobullets) as they relate to the following characteristics: (a) penetration capability; (b) acute traumatic injury; (c) accuracy requirements (i.e., definition of the safe target zone on bison); and (d) biobullet payload deposition. The project will be conducted as a collaborative effort among NPS scientists, Researchers at Montana State University, and Wildlife Health Associates, Inc. Dr. Charlotte Quist of Wildlife Health Associates, Inc. is a Veterinary Pathologist who is currently assisting Yellowstone National Park in compiling the literature on this issue and preparing an outline for the development of a study plan.
Outcomes with completion dates: A report will be prepared and submitted to the appropriate NPS scientists that will describe and discuss the observations of the experiment.
Keywords: Yellowstone National Park, bison, brucellosis vaccination
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