

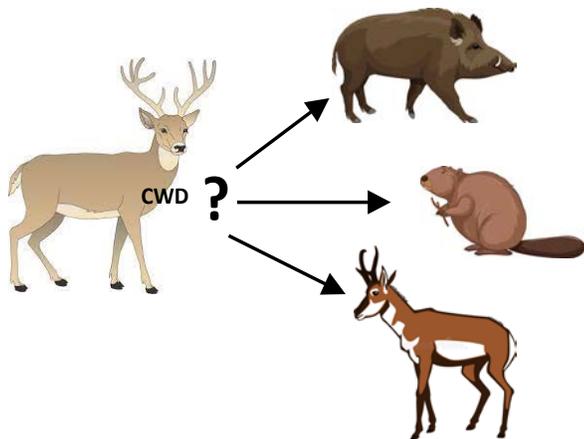
Clean Resources

Smart Agriculture and Food

FUNDING DETAILS

Chronic wasting disease transmission to sympatric species

Chronic wasting disease (CWD) is a fatal brain disease affecting deer, elk and moose across the U.S. and Canada and parts of Europe and Korea. Infected deer spread prions in feces, saliva and urine. Prions remain infectious in soil for many years. CWD infection rates are increasing, with impacts on agriculture and economies (deer farming, exports of related agricultural products and tourism). There is concern CWD will be transmitted to other animals that interact with deer, which may act as a route for infection to livestock and humans. This project will address the questions whether CWD can infect other animals. Further, the project team will investigate whether prions generated in laboratory models might be transmissible to cattle, pigs or humans. The outcome of the project will be relevant for assessing the risk CWD poses to agriculture, the crop industry and public health.



RECIPIENT:

University of
Calgary

PI: Dr. Sabine Gilch



PARTNERS:

Results Driven
Agriculture
Research



TOTAL BUDGET:

\$312,000



AI FUNDING:

\$249,500



PROJECT DATES:

Jan 2022 –
Dec 2023

APPLICATION

This project aims to fill a significant gap in knowledge about the role of transmission between distinct species in the molecular biology and ecology of CWD. Potential transmission between different species sharing habitat with CWD-infected cervids, and the consequence of potential transmission may pose a further expansion of the CWD host range. Knowledge of the susceptibility of transmission will be important in the development of risk assessments for animal and human health.



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PROJECT GOALS

- Analyze transmission of CWD strains both in vitro and in vivo to animal species that live in the same geographic range, namely pronghorn antelope, beavers and wild boar.
- Determine potential transmission of CWD from pronghorn antelopes, beavers or wild boar to livestock, cervids with some degree of genetic resistance, and humans.
- Generate data that will be translational and applicable for wildlife management, livestock industry and public health.
- Improve on collaborations within the international scientific community and key stakeholders and organizations affected by the outcome of this CWD research.
- Highly qualified and skilled personnel will be trained at the Prion Centres at the University of Alberta and the University of Calgary.

BENEFITS TO ALBERTA

- The project will assist in the CWD policy development and management of the spread of CWD between animal species and geographic regions.
- Outcomes from this project are relevant for farmers, the crop and hay industry, outfitters, trappers and hunters, as well as wildlife managers, public health and food safety authorities and communities reliant on hunting as their primary food source.
- The research will benefit government in the development of public and health policy regarding the management of CWD.



2-3 Project Jobs



2-3 Future Jobs



3-4 Publications



3 Students Trained

**CURRENT
STATUS**

This project will commence on January 1, 2022.