

Project: Animal Biosciences Research Facility

Brief Description: Montana State University requests support from USDA ARS for construction of an Animal Biosciences Research Facility that would include research laboratories, specialized facilities and technology transfer capabilities. The research facility would be part of a larger teaching and research complex. The MSU College of Agriculture has pledged, cash and a MSU Foundation commitment that total over \$12M towards the construction of an allied and complementary teaching and distance learning facility with additional private sources being identified and solicited to complete the project fundraising goal of \$15M. The MSU facility is under construction and is scheduled to be operational in Spring 2010.

Executive Summary: Agriculture is the largest basic industry in the Montana economy and the livestock industry is its largest segment. The progressive evolution of animal and range sciences has generated increasingly complex opportunities for research, teaching and outreach. Montana is a global leader in the production of high quality seedstock, resource stewardship and exports resources around the world. The research facility scientific collaborations and programmatic efforts will use the bovine genome sequence to identify ways to improve the economic and environmental sustainability in the production of safe, high quality and consistent beef products by: identifying genes and their function, developing tools to control disease, improving nutrient utilization, management and production efficiency and enhancing the nutrient composition of a safe supply of beef for the consumers in the United States and abroad. Enhancing the strong relationships with USDA ARS at Fort Keogh and MSU scientists will strengthen research and teaching outcomes in animal and range sciences. This research and teaching complex combination will be unique to Montana and the intermountain region.

Congressional Action Needed: Appropriations for construction (\$16M) of the research facility. This will match the Montana commitment and greatly enhance this unique partnership.

Importance to Montana: The production of high quality livestock and the unique seedstock industry significantly contribute to Montana's and the region's economy. Cutting-edge research, teaching and outreach programs are essential to ensure the long-term sustainability of livestock production and profitability. An Animal Biosciences Research Facility would bring the combined federal and state genomic expertise together in a location and using unique herds and large-scale rangeland facilities to increase the quality of Montana seedstock and the commercial livestock industry. At the same time, this will improve northern Great Plains cattle and range production practices, management and enhance food safety and quality for consumers everywhere, through collaborative research and outreach activities for the range-livestock sector of Montana agriculture.

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Connection with Agency/Government Identified Priority: Beef cattle genomics, functional genomics, and proteomics are part of the long-term vision of USDA ARS and strongly support on-going and potential growth areas in the College of Agriculture with applications to the Montana beef seedstock industry and beef cattle production in the northern Great Plains.

Animal Biosciences Research Facility – Talking Points

- This modern 36,000 ft² facility will provide a collaborative environment for federal and state scientists from multiple disciplines to provide beef cattle genomics research and outreach.

- A facility unique to Montana and the intermountain region will provide new frontiers for research and outreach in molecular biology, genomics and proteomics.

- There is tremendous opportunity to make discoveries in the knowledge of livestock genes, and their functions, and apply this information to genetic improvement.

- This is a collaborative effort with MSU College of Agriculture and the Montana Agricultural Experiment Station, USDA ARS in Miles City, MT at the Fort Keogh Livestock and Range Research Laboratory, the U.S. Meat Animal Research Center in Clay Center, NE and the University of Nebraska-Lincoln.

- Montana is a global leader in the production of seedstock, exporting genetic resources around the world. Technologies developed through genomics and proteomics represent the keys to the next generation of genetic advances in the livestock industry.

- MSU's College of Agriculture has secured \$12M towards a goal of \$15M from private grants and pledges and the MSU Foundation towards the teaching facility as a part of the two building complex. Montanans that have donated to the teaching facility (\$12M) encourage and support the Federal delegation's completion of this effort.