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2010 Research and Commercialization Council approves grants

PIERRE, S.D. - Gov. Mike Rounds announced today that four university-based research centers will be funded by nearly \$2.8 million in state funds in a first-ever initiative aimed at growing the state's economy by targeting investments in specialized research at South Dakota public universities.

"This is an exciting step for South Dakota," said Gov. Rounds. "University research and development are a catalyst for economic development, and these grants are the state's seed money, investing in areas that have the most likelihood for commercialization."

The four 2010 Research Centers, the location of their research activity, and first-year funding are:

- * **Center for Infectious Disease Research and Vaccinology, SDSU Department of Veterinary Science, \$780,000** - This center will foster research leading to the development of novel therapeutic and diagnostic technologies and products for infectious diseases in humans and domestic animals. Research targets include vaccines for diarrheal diseases of livestock and humans, an improved vaccine for Porcine Reproductive and Respiratory Syndrome (PRRS), and improved diagnostic tests for Transmissible Spongiform Encephalopathies, such as BSE in cattle and Chronic Wasting Disease in deer. The center's principal investigator is David H. Francis.
- * **South Dakota Signal Transduction Center, USD Cardiovascular Research Institute, \$900,000** - Cardiovascular disease and cancer are the most frequent causes of death in modern society. This center will examine the pathways that regulate cell growth and differentiation, cell death, response to stress, and the maintenance of constant physiological conditions. Understanding the abnormalities that can occur in cells will lead to improved detection and treatment of a range of serious heart and cancer conditions. The principal investigator is Martin Gerdes.
- * **Center for Accelerated Applications at the Nanoscale, SDSMT Department of Materials and Metallurgical Engineering, \$585,000** - The National Nanotechnology Initiative is expected to create new applications based on special properties that exist when materials are scaled down to near-molecular dimensions. This center will focus on research in the areas of

nanoparticles and associated nanosensors, with particular emphasis on South Dakota mineral development. Principal investigator is Jon Kellar.

- * **Center for the Research and Development of Light-Activated Materials, USD Department of Chemistry, \$503,741** - The center will perform both basic and developmental research on materials with light-activated properties. The research is important to medical applications such as human tissue bonding, drug delivery, and anti-tumor agents, and is important to developing phosphors for sensors, new laser materials, and thin films that impart special properties and characteristics to the materials they coat. The center's principal investigator is Stanley May.

"These proposals will make a substantial initial impact on the state's research infrastructure and personnel," Rounds said. A total of seven new senior scientists, eight post-doctoral students, seven Ph.D. students, eight graduate associates, and 11 technicians will be brought into the state university system in the first two years of this grant activity. Another 24 university scientists, whose salary is supported by their respective institutions, will also be associated with the projects.

The council selected the four research centers after reviewing 11 proposals submitted by faculty at South Dakota public universities.

Members of the 2010 Research and Commercialization Council are: Jason Dilges, James Hagen, Homer Harding, and Tad Perry, all of Pierre; Kathryn Johnson, Hill City; Pat Lebrun, Rapid City; David Link, Sioux Falls; Brad Wheeler, Lemmon; and Lisa Bryan, Spearfish.