(FOR IMMEDIATE RELEASE)

BEES SUBJECT OF NEW MULTI-STATE STUDY

(FARGO, ND) Researchers from three states, headed by NDSU’s Dr. Julia Bowsher, have been awarded a $2.85 million NSF EPSCoR Track-2 grant, studying *Insect Cryobiology and Ecophysiology (ICE) Network: Integrating Genomics, Physiology, and Modeling*. Principal investigator Bowsher, an NDSU associate professor in biology, along with Dr. Joseph Rinehart, a research biologist with the Agriculture Research Service of the USDA; Dr. Kendra Greenlee, NDSU associate professor in insect physiology and immunology; Dr. Giancarlo Lopez-Martinez from New Mexico State University’s biology department; and Dr. Michael Dillon, associate professor in zoology and physiology at the University of Wyoming, will be collaborating on the study.

According to the cooperative agreement’s abstract, “The goal of the Insect Cryobiology and Ecophysiology (ICE) Network is to understand how bees overcome harsh winter conditions to successfully emerge and reproduce in spring. North American bees spend most of their lives overwintering in a physiological state that protects them from damage caused by low temperatures and conserves resources necessary for reproduction during the growing season. Regulation of this overwintering state determines key elements of bee lifecycles, including when these critical pollinators are available in natural and agricultural ecosystems.” The ICE Network brings together experts in genomics, gene regulation, physiology, and ecological modeling to predict how each of three species will respond to changes in temperature. Faculty from land-grant universities in North Dakota, Wyoming, and New Mexico will collaborate with the USDA Agricultural Research Service, setting the stage for improved management of three agriculturally-relevant bee species, and more accurate forecasting of wild and agricultural bee populations.
In addition to benefits from the research, this four-year effort will also support the development of early-career faculty members, and involve students from diverse backgrounds in the research efforts, including students from tribal colleges.

“As one of only eight national NSF EPSCoR Track II awards given in this grant round, it speaks to the high quality research being done at these institutions,” noted Kelly Rusch, executive director of North Dakota EPSCoR. “The critical research on these agricultural-essential pollinators will provide insights that help support North Dakota’s primary industry.”

The North Dakota Established Program to Stimulate Competitive Research (ND EPSCoR) has a mission to increase research competitiveness in science, technology, engineering and mathematics (STEM) throughout North Dakota. EPSCoR was founded in 1978 by the National Science Foundation for states like ND that have traditionally lacked strong research efforts, to allow them to compete more successfully for merit-based grants/contracts from several federal research agencies that support STEM research.

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