

Enhancing research, education, diversity and workforce development in North Dakota through collaborations between research universities, primarily undergraduate institutions and tribal colleges

Outcome: Researchers at the four North Dakota (ND) Primarily Undergraduate Institutions (PUIs) and five Tribal Colleges (TCs) located in ND are collaborating to reduce barriers to research competitiveness in ND, which include geographic isolation of colleges and universities; demographics; insufficient human, fiscal, and physical infrastructure resources; and institutional structural weaknesses. These collaborations are improving research, education, diversity and workforce development within the state. Under the current award, PUI and TC researchers are collaborating with researchers from the state's two research universities to expand studies on climate change and biomaterials, two factors that impact agriculture and the extractive energy industry in ND.

Impact/Benefits: An array of research, education and support activities throughout ND, designed and driven by collaborations between faculty and students from every type of college and university, are addressing the education, diversity and workforce development challenges of the ND STEM pipeline. These activities are helping to captivate students early in the STEM pipeline and foster self-efficacy and skill development in STEM. Moreover, these activities are designed to help all underrepresented groups, with an emphasis on Native Americans and women.

Explanation: During the first year of the award, TC researchers, identified by their campus president, joined either the Grand Forks-based Center for Regional Climate Studies (CRCS) or the Fargo-based Center for Sustainable Materials Science (CSMS) and researchers from ND's PUIs competed for seed awards to join either the CRCS or CSMS group. In the second year of the award, undergraduate students at the PUIs and TCs will compete for research experience for undergraduates (REU) funds for opportunities to work with CRCS or CSMS faculty either on their home campus or at one of the two research universities.



A TC student conducting research at United Tribes Technical College (UTTC), Bismarck, ND. Credit: Dr. Mandy Guinn, UTTC faculty, 2015.

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