

Testimony of Kathryn Uhrich, Distinguished Professor, University of California-Riverside

North Dakota Senate Appropriations Committee, Education and Environment Division

In Support of Expanding the Economic Diversification Research Fund

January 21, 2025

Introduction

Good morning, Chair Sorvaag and members of the North Dakota Senate Appropriations Committee, Education and Environment Division. My name is Kathryn Uhrich and I am currently a distinguished professor at the University of California-Riverside. As an inventor and innovator, distinguished professor and former dean, and leader in industrial collaborations, I understand the need to support research and the economic impact that research has on our communities. I am proud of my home state and wholeheartedly support the continuing allocation to the Economic Diversification Research Fund (EDRF) for its ability to initiate economic growth and diversify the State's economic base.

Background and Experience

While I spent the first 12 years of my life in the Black Hills of South Dakota, it's North Dakota - where my family moved when I was in junior high – that I consider home. After graduating from Grand Forks Central, I attended the University of North Dakota (UND) where I earned a Bachelor's degree in chemistry. During my time at UND, I worked at the USDA Nutrition Laboratory as well as the Energy Research Center to put myself through college. From UND, I went to Cornell University to earn my PhD and achieved my first US patent. After graduation, I worked at Bell Laboratories, where I achieved my second US patent. From there, I worked at MIT and then began an academic career as a professor at Rutgers University in NJ where I'm an inventor on nearly 40 issued US patents.

At Rutgers, I trained nearly 200 students – from high schoolers to PhD students - in my research laboratory. To train the next-generation of scientists, I've raised more than \$33M in federal and corporate research funding, working in close partnership with companies. While I've successfully translated creative science into impactful technologies through entrepreneurship (my first company, Polymerix, raised ~\$20M), I also partner with a broad range of companies (such as BASF, Chanel, Colgate-Palmolive, ExxonMobil, Johnson & Johnson, L'Oréal, and Merck) to move our inventions from the lab to the consumer. As a researcher, I can see the immediate impact of training researchers for jobs in agriculture, food, pharmaceuticals, cosmetics, and other industries.

I bring these research and entrepreneurial experiences to my role as Chair of the EDRF External Advisory Committee (EAC), created by the State Board of Higher Education to review the research activities funded by the EDRF. I also bring my administrative experience to the committee. Most recently, I served as the Dean of the College of Natural & Agricultural Sciences at University of California, Riverside where I oversaw an enterprise comprising nearly 1000 faculty, staff and researchers as well as over 8,000 undergraduate and graduate students, managed ~\$110M in operational budget, and raised >\$100M in philanthropic gifts. As an academic administrator in California, I can see the immediate impact of research in training first-generation students (like me) to join the workforce.

Perspective as EAC Chair

In October 2024, the External Advisory Board reviewed the proposals and processes supported by the 2023 allocation. From the EAC report, I focus on two items. First, our strong appreciation for the *“legislative vision to create and support the Economic Diversification Research Fund”*. The vision for North Dakota to invest in higher education will *“provide dividends for generations to come in terms of innovation, economic development, and meeting the workforce needs of the State.”* To achieve the legislative intent and the overall goal of economic diversification, however, financial support should be sustained, intentional, focused, and significant. Continued investment in people is fundamental to economic success, as investing in research will lead to new ideas and new businesses.

The initial funding of \$2.5M towards the EDRF is a reasonable starting point to establish protocols for project proposals and to define expected outcomes, timelines, and/or milestones. However, true economic impact will arrive with scale. The internal committee members suggested \$25M as potential target, whereas the EAC members reasoned that \$250M+ should be the target with levels of funding released as milestones are achieved. While this target may seem high, this investment would certainly “move the needle” for ND’s research enterprise and put us on par with other states with sovereign wealth funds.

Conclusion

With continuing allocations from EDRF, North Dakota can “move the needle” for the State’s research enterprise and economic diversification. While I know first-hand the grit and intelligence of North Dakotans, it has not - yet – translated into research and development in the form of small business award or patents. Through my research experiences in several land-grant institutions, I am concurrently jealous and proud of the opportunity that North Dakotans have for developing talent and improving local infrastructure through the EDRF. I strongly support an increase to \$25M for 2025-27, with continued allocations moving forward. The strategic investment in people will impact the State for decades to come.

Thank you for your time and consideration.