



BioND

Bioscience Association of North Dakota
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Dear Chairman, Wanzek and Members of the Senate Appropriations Government Operations Committee

The following is **testimony** to this Committee in support of **SB 2009, "A BILL for an Act to provide an appropriation for defraying the expenses of the agriculture commissioner; and to provide for a transfer"**.

North Dakota is being recognized as an upcoming leader in the Biotech Industry for agriculture, biofuels, biomaterials and healthcare. -The ND Bioscience Association wishes to expand the Biotech industry in this State. The Agriculture Budget contains an increased request for \$12,000,000 (Gov. budget is \$5.5 million) for the **Bioscience Innovation Grant fund** for the biennium beginning July 1, 2023 and ending June 30, 2025.

In partnership with the Department of Agriculture, the Bioscience Association expanded the Bioscience Industry in North Dakota through the Bio Innovation Grant program by making grants to companies either recruited from outside the State or by helping companies located in the State develop their technology and commercialize their products. To date, these companies have created or are projected to create 214 new jobs. The average salary for an employee in companies such as these is \$73,531 a year. Therefore, the State of North Dakota is slated to receive, or has received, at least \$15,735,634 a year in new salary benefits.

As Stated in an article published by the Greater Fargo Moorhead Economic Development Corp., December 19, 2022, By Meghan Feir Walker; "Bioscience holds tremendous promise for the greater Fargo-Moorhead region as the world continues to look to innovators to create complex lifesaving technologies and investors continue to inject record levels of venture capital into this space," said Chief Business Development Officer Ryan Aasheim of the GFMEDC.

The Gross Regional Product (GRP) contributed by the bioscience industry in the Fargo-Moorhead MSA (alone) has grown from less than \$50 million in 2011 to over \$208 million in 2021. The growth of bioscience occupations in the FM metro has grown 40.9 percent in that same period, eclipsing the national growth rate of 23.4 percent."

But there is more to this story than the economic benefits that have resulted from supporting these companies. It is "WHAT" they are doing in this state that is having a nationwide, even a worldwide impact, and putting North Dakota on the Biotech map. I have selected 3 Companies as examples. The first example is **Lincoln Therapeutics**.

Lincoln Therapeutics came from Chicago, Illinois, and is developing and fielding "Intranasal Ketamine as a Non-Narcotic Far Forward Battlefield Analgesia/Anesthesia Solution". Lincoln Therapeutics is collaborating with the DOD and Thrifty White Pharmacy, a company that employs over 200 people in the Fargo Moorhead area, to

develop an Intranasal Ketamine as a non-Narcotic analgesic for forward military use and civilian use. This creates an important countermeasure to the worldwide opioid epidemic. This collaboration will create the only GMP pharma production facility in ND. Thrifty White's current employee base will increase by the addition of 40 more jobs. A training program for Advanced Technology Pharmaceutical Training is being developed in Fargo as part of this project. This project will collaborate with national emergency planners to stock intranasal non-narcotic analgesics and other vital medications from the Fargo factory into the Strategic National Stockpile (SNS). But more importantly it could reduce addiction rates and suicide rates among Veterans who have been wounded in combat and then given opioids. In many cases this leads to a lifetime of addiction and, in a lot of cases, suicide.

The second example is CorVent Medical, Inc. a privately held medical device startup, which is committed to developing and manufacturing versatile, lifesaving ventilators for critical care. Richard Walsh, President and CEO of CorVent, uprooted and transplanted his entire company from California to the NDSU Research Park in Fargo in January 2022. Corvent is currently working with ComDel, Inc., to develop and manufacture their product here in North Dakota, and currently employ 17 people in North Dakota. In 3 years Corvent hopes to have their own dedicated manufacturing facility, which Walsh says, ". . . will bring 100 jobs to the region". Currently, Corvent has furnished Humanitarian aid to the Ukraine. The company has donated over 1,100 life-saving resuscitation bags via the Ukrainian-American Crisis Response Committee and have sold 32 of their RESPOND ventilators with a 1-month reserve of disposable supplies via Nova Ukraine.

The third example is SafetySpect, Inc., a California-based bio-tech company, who moved their headquarters to Grand Forks, N.D. They currently employ 16 people. They are working with Dr. Kouhyar Tavakolian of UND's College of Engineering and Mines and School of Medicine & Health Sciences where they employ 7 graduate students. Their product is a CSI-D+ device which stands for "Contamination and Sanitization Inspection and Disinfection Plus". It is a device which detects, disinfects, and documents contaminants, as well as saliva and respiratory droplets without the use of chemicals. They are engaged in multiple projects.

They are engaged in a project with the US Army, NASA, USDA-ARS and UND called the "SpaceAG" project. They are developing 1). A holistic food system technology platform for habitat and long duration space flight; 2). an autonomous growth chamber technology platform; and 3). Developing a handheld imaging and spectroscopy device platform using machine learning and Fusion AI for long duration ration assessment and food safety and quality analysis. In the Ag area, they are also developing a multimode imaging system that can be mounted on drones or permanently field-deployed to watch for and automatically identify plant diseases such as rust, root and stem rot, or leaf blight. They are also involved in the 1). Food Safety Area, i.e., Fast Food and Meat Production; 2). Transportation, i.e., united Airlines; 3). Health Care, Long Term Care facilities as Hospital Clean Rooms. They are engaged right now with Edgewood Management Groups in Grand Forks, in their long term care facility.

These are just three of the companies we have either recruited to the state or expanded their commercialization helped through the program. Below are additional companies which have also participated in the program.

- 1). Genovac Antibody Discovery, LLC –to support the commercial development and production of multiple therapeutic, diagnostic and research antibody products. Came here from Frieberg, Germany.
- 2). Agathos Biologics creating new materials and methods for research and biomanufacturing and use them for drug development to address unmet medical needs and increase the availability of genetic medicines to more patients. Locally created company, former Aldevron employees.
- 3). Checkable Medical - creating the first over-the-counter test for Strep A and Covid home test kits. – was recruited from Eden Prairie, MN to focus on delivering innovative at-home diagnostic testing to employers and individuals.
- 4). Krampade - manufactures a high protein, high potassium powdered drink mixes and a high protein, high fiber powdered drink mixes and a high potassium bar. Has a manufacturing facility in Grand Forks and came here from Lincoln, Nebraska.

- 5). National Agriculture Genotyping Center upgrading the current biotechnology used for variety identification and certification of spring wheat and barley. Came here from New Mexico.
- 6). Wound Exam Corp - developing WoundAssure, a multi-mode imaging technology that will monitor changes in wounds in patients at high risk of complications from diabetic ulcers. Local company.
- 7). Cotys, Inc. - developed a "trucking app" that streamlined the process of pickup and delivery for small trucking companies. Came here from California.
- 8). New Age Farming and Distributing, LLC - distributes a product containing mycorrhizal fungi technology, to enhance root growth and soil health and maximize crop growth and increases yields.
- 9). ImmunoPrecise Antibodies, Ltd - from Canada to develop a therapeutic antibody with US headquarters in Fargo.
- 10). Access Point Technologies - is a medical device company locating in Horace, ND focused on the production of Catheters. Moved from Rogers, Minnesota.
- 11). BiomedProtection, LLC -of Fargo designs and manufactures vaccines utilizing Biomed's' unique and proprietary electronic Biology Platform. Moved from Galveston, Tx. Utilizes Aldevron to manufacture their product.
- 12). Core Health Strategies - of Mandan are developing a Naturopathic Immunological Wellness and Therapy Program for the prevention and treatment of COVID19.

But we are still recruiting and there are a number of companies we are working with, one of which is Imricor, Inc, from Burnsville, Minnesota. Imricor has quickly grown to be the first and only company in the world to bring commercially viable and safe iCMR products to the catheter ablation market. Basically, what they have done is developed a catheter which they run up your arm and over to your heart and perform a procedure to treat atrial fibrillation. This is called "Ablation". It uses small burns or freezes to cause some scarring on the inside of the heart to help break up the electrical signals that cause irregular heartbeats. This can help the heart maintain a normal heart rhythm. The difference between this treatment and standard ablation treatment is that there use an MRI machine instead of an X-ray machine to watch the catheter as it progresses through the body and into the heart. It also allows more proficient positioning of the catheter in order to perform its burning or freezing. The success rate now is about 40% using the standard old method. The success rate utilizing this system is 90%. Imricor will move its R&D and manufacturing from Burnsville to North Dakota. This will create 40 to 50 new jobs,

This is one of many companies that BioND is recruiting to the State. The Bio Innovation fund presents an incentive to these companies to move and also encourages local companies to expand their operations within this State. \$5.5 million appropriated last session was utilized in the first year. We believe \$12 million will be utilized in less than 18 months.

It is the Associations hope that this Committee passes the Agricultural Budget with the \$12 million request to refund the Bio Innovation Fund program so that we can continue to expand and grow biotech companies.

Thank you for your time and attention.

Richard Glynn
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Bioscience Association of North Dakota