2023 HOUSE APPROPRIATIONS

HB 1525

2023 HOUSE STANDING COMMITTEE MINUTES

Appropriations Committee
Brynhild Haugland Room, State Capitol

HB 1525
2/14/2023

BILL for an Act to provide an appropriation to the university of North Dakota and to North Dakota state university.

3:44 PM Chairman Vigesaa- Meeting was called to order and roll call was taken:

Members present; Chairman Vigesaa, Representative Kempenich, Representative B. Anderson, Representative Brandenburg, Representative Hanson, Representative Kreidt, Representative Martinson, Representative Mitskog, Representative Meier, Representative Mock, Representative Monson, Representative Nathe, Representative J. Nelson, Representative O'Brien, Representative Pyle, Representative Richter, Representative Sanford, Representative Schatz, Representative Schobinger, Representative Strinden, Representative G. Stemen and Representative Swiontek.

Member not Present- Representative Bellew

Discussion Topics:

- Bioscience Research
- Services Maintenance Contracts
- Ongoing Funding

Representative Murphy, District 43- Introduces the bill (Testimony #20780)

Bruce Bollinger, NDSU- Testifies in favor. (Testimony #20801)

Additional written testimony: Andrew Armacost, University of ND #20816, Richard Glynn, Bioscience Association of ND #20646

Chairman Vigesaa Closed the meeting for HB 1525 @ 4:13 PM

Risa Berube, Committee Clerk

2023 HOUSE STANDING COMMITTEE MINUTES

Appropriations Committee
Brynhild Haugland Room, State Capitol

HB 1525
2/15/2023

BILL for an Act to provide an appropriation to the university of North Dakota and to North Dakota state university.

7:21 PM Chairman Vigesaa- Meeting was called to order and roll call was taken:

Members present; Chairman Vigesaa, Representative Kempenich, Representative B. Anderson, Representative Bellew, Representative Brandenburg, Representative Hanson, Representative Kreidt, Representative Martinson, Representative Mitskog, Representative Meier, Representative Mock, Representative Monson, Representative Nathe, Representative J. Nelson, Representative O'Brien, Representative Pyle, Representative Richter, Representative Sanford, Representative Schatz, Representative Schobinger, Representative Strinden, Representative G. Stemen and Representative Swiontek.

Discussion Topics:

- Scientific instruments
- Maintenance

Representative Sanford moves for Do Not Pass

Representative Schatz seconded the motion.

Roll Call Vote

Representatives	Vote
Representative Don Vigesaa	Y
Representative Keith Kempenich	Y
Representative Bert Anderson	Y
Representative Larry Bellew	Y
Representative Mike Brandenburg	Y
Representative Karla Rose Hanson	Y
Representative Gary Kreidt	Y
Representative Bob Martinson	Y
Representative Lisa Meier	Y
Representative Alisa Mitskog	Y
Representative Corey Mock	Y
Representative David Monson	Y
Representative Mike Nathe	Y
Representative Jon O. Nelson	Y
Representative Emily O'Brien	Y
Representative Brandy Pyle	Y
Representative David Richter	Y

Representative Mark Sanford	Y
Representative Mike Schatz	Y
Representative Randy A. Schobinger	Y
Representative Greg Stemen	Y
Representative Michelle Strinden	Y
Representative Steve Swiontek	Y

Motion Carries 23-0-0 Representative Nathe will carry the bill.

7:24 PM Chairman Vigesaa Closed the meeting

Risa Berube, Committee Clerk

REPORT OF STANDING COMMITTEE

HB 1525: Appropriations Committee (Rep. Vigesaa, Chairman) recommends **DO NOT PASS** (23 YEAS, 0 NAYS, 0 ABSENT AND NOT VOTING). HB 1525 was placed on the Eleventh order on the calendar.

TESTIMONY

HB 1525

Bioscience Association of North Dakota
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BioND

TESTIMONY OF RICHARD GLYNN
CHIEF OPERATING OFFICER OF THE
BIOSCIENCE ASSOCIATION OF NORTH DAKOTA

February 13, 2023

Dear Chairman Nathe and the Esteemed Members of the House Appropriations Education and Environment Committee:

The following is testimony to this Committee in support of HB 1525 "A BILL for an Act to provide an appropriation to the university of North Dakota in the sum of $425,000, or so much of the sum as may be necessary, to the University of North Dakota for the purpose of maintaining equipment and facilities housing scientific instruments, for the biennium beginning July 1, 2023, and ending June 30, 2025.

The goal of Bioscience Association of North Dakota is to build a vibrant, growing, life sciences industry in North Dakota. In order to do that, North Dakota needs to not only develop its resources from within and convince them to remain in the State but to recruit companies from outside the State to come and establish their businesses within the State. The competition for life sciences development is fierce, and other states, regions, and nations are making significant investments to advance their life science industries and leverage comparative advantages. The other States use their Research Universities as a "drawing card" to entice companies to come and do their research and development therein.

We are no exception. We use the "talent" we have in our Research Universities to draw companies within and without the State to come and collaborate with our Research Universities in the development of their products. But it is not only our "Intellectual Talent" that draws them there, it is the facilities available and the equipment that is located therein. This saves the company money in that it means that the company does not have to make a "major capital investment" to obtain the tools it needs to complete their research and development. In most cases they "Lease" or enter into a "collaborative agreement" to have access to not only the intellectual talent they need but to gain access to the facilities and equipment necessary to complete their research and development.

This bill provides maintenance of equipment and facilities that will aid the Association in recruiting bioscience companies to our State. UND"s microscope and mass spec facilities are actually very good and the mass spec is directed by a very solid scientist. These are surprising excellent research ecosystems that provide expertise and instrumentation allow smaller companies the ability to have their research efforts in ND. This is a true "selling point" when the Association has research universities that can offer this type of equipment and facilities. A lot of out of State companies, and even local ones, are unaware that this type of equipment is available (we are trying to remedy that!) and are more willing to relocate here or, if a local company, expand their products.

By adding this investment in the facilities and maintenance of equipment used in the research and development of bioscience and biotechnology products we could have the leading edge in attracting biotech firms to North Dakota as well as encouraging those firms already here to "dive in" and make the investment to expand their businesses. This leads to the creation of high-skill, high-wage jobs that diversify the state's economy, modernizes facility operations, and supports the creation of improved standard of living and state and local taxes to support K-12 education, public safety, and other budget priorities.

The Association urges the Committee to make a "DO PASS" recommendation to the full House of Representatives.

Respectfully Submitted

Richard Glynn
Executive Director
Bioscience Association of North Dakota
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701-317-2483

Testimony for Hearing on HB1525
Eric J. Murphy, District 43

Thank you, Chairman Vigessa and my honorable colleagues on the Appropriation Committee. For the record, my name is Eric James Murphy, representative from District 43, Grand Forks.

In the 1950's, a group of visionaries envisioned a research park situated between Duke University, North Carolina State University, and University of North Carolina. Today we know this 7,000 acre region of pine forest as Research Triangle, home to 300 companies and 55,000 employees. Pharmaceutical giant GlaxoSmithKline has located their largest R&D facility in the park and Cisco System's campus has about 5,000 employees.

Why did Research Triangle Park come to fruition? Because these visionaries recognized the changing economy post-World War II would diminish the economy of North Carolina. Couple this with a bunch of academics who thought leveraging the research prowess of these three universities in the region would enable private-public partnerships and provide an ecosystem that would foster research and development. In addition, they envisioned an opportunity for their graduates to stay within the state, while being employed in a vibrant community. No longer would their best and brightest have to leave the state to find gainful employment.

Fast forward to today. In the early 2000's Senator Dorgan had a similar vision of the I-29 research corridor. Focusing this vision to North Dakota, our two research universities are located within 76 miles of each other and anchor a unique set of research expertise. How do we utilize this expertise and open the potential that clearly exists? Now is the time to really begin to enhance our economy by growing the bioscience sector and materials science sector in the Red River Valley.

Let me focus on the biosciences.

Aldeveron is anchored in Fargo and has grown from a small company in the basement of a building at North Dakota State University to having a 14 acre campus in Fargo. The success of Aldeveron demonstrates that a bioscience company can have success in North Dakota. But what about future companies in the pharmaceutical space or in the agriculture space? How do we foster spin outs from our universities? How do we attract companies from out of state to establish a footprint in North Dakota?

HB1525 is a small step toward building a research ecosystem that provides instrumentation critical for these startup companies that lack the funds to acquire the needed instrumentation and may not have the ability to staff such instruments. For instance, to establish a meaningful mass spectrometry facility, a company is looking at a minimal investment of $0.75-1.5M in instrumentation, with annual salaries around $200,000 and operations costs around $75,000. This is out of reach for many startups, yet such a center exists at UND with over $2.5M in instrumentation with a full-time director and technician.

Although critical for these companies' success, the cost of these instruments, the limited use, and the cost of staff preclude them from having these instruments in house Hence, these companies will seek locations that can provide this instrumentation and access to the

instrumentation via collaborative efforts. To attract bioscience companies and to enhance retention of spinout companies, we must provide a research ecosystem that broadly supports the biosciences.

HB1525 requests funds for the University of North Dakota and North Dakota State University that will be used to purchase service contracts for existing scientific instruments. These service contracts are critical to maintain these complex instruments in optimal condition for use by private industry, thereby fostering private-public collaboration.

As such, these instruments will be used primarily in preclinical studies focused on developing early drug candidate performance data and absorption, distribution, metabolism, and excretion (ADME) studies, critical for drug development. Pharmacokinetic experiments, critical in the preclinical studies can be done and imaging experiments can used to determine critical signaling pathway activation using advanced microscopy systems. Please note that some of these facilities are already doing clinical work, so it is not without thought that human clinical studies can be done as well.

Currently I can think of two drug development projects using the mass spectrometry center and the imaging center at UND SMHS. One is focused on a drug for treating stroke that has produced some exciting results. The analysis of the drug in the brain is assessed via measuring its levels using mass spectrometry, while its impact on brain angiogenesis (blood vessel growth) is imaged over time (serially) in the intact brain (very cool!!). Another drug is focused on mitigating damage to and speeding healing of mucosal and epithelial cells in the gastrointestinal tract, essentially focused on finding a novel treatment for inflammatory bowel disease. Again, pharmacokinetics and drug levels are assessed using mass spectrometry.

So, let's all sit back and have a vision. That vision is that we have an opportunity to leverage existing instrumentation, often purchased with federal resources, and existing expertise to help foster a ecosystem that is conducive for research and development.

Now, imagine instrumentation that is not functional. Not functional because there are limited resources in higher education to support the service agreements. This bill is focused on providing funding for these service agreements. This has been an ongoing issue that I had identified when I was on the State Board of Higher Education, but NDUS was just reluctant to ask for money for service agreements. Now is the time to change our way of thinking. Now is the time to provide a small amount of funding to maintain these instruments in optimal condition that will be required to private-public collaborative efforts.

For full disclosure, I am a professor at UND in the SMHS, I am a partner in CamBioGene, a plant sciences company established in late 2022 in North Dakota, and acquiring operations in Helsinki, Finland, and am CEO of Krampade, a company focused on enhancing options for dietary potassium intake and other key macronutrients. I spent time in the pharmaceutical industry in southern California, where as a small company we used private-public collaborations to help drive our research program and provide targeted expertise.

North Dakota State University

HB 1525

House Appropriations Committee
Bruce Bollinger, Vice President for Finance and Administration
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Like all specialized equipment, scientific instruments need regular maintenance and occasional repair for peak operating performance and minimal downtime.

Routine professional maintenance keeps instruments available for use, assures analytical accuracy, and extends their lifetime.

NDSU instruments are heavily used by NDSU researchers, industry partners, and other universities including UND.

NDSU faculty and students perform high-level research in basic and applied fields that are important to the state and nation, areas like agriculture, engineering, coatings, and pharmacy. Students who graduate with transportable skills for operating complex analytical equipment are more valuable in the workforce.

Industry partners use NDSU instrumentation for their own R&D on a for-fee basis. Industries with local and regional impact include John Deere Electronic Solutions, Marvin Windows, Aldevron, SESVanderhave, Anchor Ingredients, Tecton Products, and Elinor Coatings. These industries contribute to the area economy and hire graduates of North Dakota universities.

To summarize why it is important to invest in maintenance contracts for scientific research instrumentation at NDSU:

- Analytical equipment directly supports state and federal investments in research and training of students for the workforce
- Service contracts are a fiscally responsible way to ensure the availability and increased lifetime of complex and expensive scientific instrumentation
- Service contracts assure optimal performance and research accomplishment by minimizing lost operating time

This concludes this testimony.

Neutral Testimony for House Bill 1525
Andrew P. Armacost
President, University of North Dakota

Chair Vigesaa and Members of the House Appropriations Committee:

In my earlier testimony before this committee in favor of House Bill 1379, I shared how the two research universities play a pivotal role in creating new knowledge, inventions, and technology. This benefits the State of North Dakota with opportunities for economic diversification, for attracting faculty and students to the two universities, and for training the high-tech workforce.

Although UND was involved in neither the creation nor the advocacy of this bill, we appreciate the bill sponsors' support and their acknowledgement of the importance of research at our two research universities and the role it plays in the state. We encourage members of the House Appropriations Committee to examine how this bill contributes to our state's university research infrastructure along with other bills that support that same infrastructure.