

NDSU Biopharmaceutical Center

Boosts Life Sciences Research

Researchers in a new NDSU Center for Biopharmaceutical Research and Production soon will be developing DNA vaccines and biotherapeutics in niche areas to address infectious diseases such as West Nile virus, inflammatory diseases and other unmet needs in the areas of ovarian cancer and transplant medicine.

The North Dakota Legislature established the Biopharmaceutical Center through a \$2 million Economic Development Centers of Excellence award. It will be located in the NDSU Research & Technology Park.

Biopharmaceutical Center Director Satish Chandran is a world-renowned leader in biopharmaceutical and vaccine research. He joined NDSU in May 2010 after serving as chief technology officer of the Nucleic Acid-Based Therapeutics Unit of the Biotherapeutics Division of Pfizer, Inc. Chandran is working to develop partnerships with biotechnology institutes across the country, area universities, biotech companies and contract research organizations.

“We are very excited to have Satish leading our

new Center, and we look forward to the opportunities he will create for NDSU and local private sector businesses in discovering new target vaccines and other biopharmaceuticals for the marketplace,” said Dr. Charles Peterson, NDSU dean of pharmacy, nursing, and allied sciences.

The Biopharmaceutical Center will boost biotechnology opportunities for students and companies in the Red River Valley. As internships and research programs are developed in the Center and through participating biotech partners, students will be better prepared to enter biotech careers. Meanwhile, the companies will have access to a highly trained workforce.

Tri-College University, which includes NDSU, Minnesota State University Moorhead and Concordia College, is

developing undergraduate and graduate degree courses in vaccinology. “We expect to have active research programs at the Biopharmaceutical Center that will complement the in-classroom programs within two years,” Chandran said.

Peterson said the vaccine market now stands at \$22 billion per year, with



NDSU’s biopharmaceutical efforts are based on a collaborative approach that:

- Enables North Dakota-based biotech companies to develop late-stage products and move them through product development into clinical development.
- Attracts biotech companies or their product development activities to the state. Identifies late-stage products or product concepts from area universities and others to enable bio-tech start-ups.
- Develops programs to train biotechnologists and vaccinologists through advanced degrees at participating universities.
- Contributes to North Dakota’s economic development by enhancing business and commercialization opportunities.

expectations that it will rise to \$36 billion per year. “This has the potential for having a huge impact on our program at NDSU and on North Dakota’s health and economy,” he said.

Peterson added that NDSU’s research capabilities and infrastructure are well positioned for future success in life sciences. According to the American Association of Colleges of Pharmacy, in 2009, NDSU’s program ranked ninth out of 120 schools of pharmacy in the nation for the percentage of doctoral research faculty (45.5 percent) with funding from the National Institutes of Health. NDSU is one of 120 schools of pharmacy nationally accredited by the Accreditation Council for Pharmacy Education. Each year nearly 100 pharmacists and pharmaceutical scientists graduate from NDSU.

The success of NDSU graduates such as Michael Chambers, CEO, president and co-founder of Aldevron in Fargo, who began his business by leasing space in an NDSU lab, illustrates the ability to generate opportunities here, Peterson said.

“With initiatives such as those underway by the NDSU Center for Biopharmaceutical Research and Production and by life science leaders in the community, we are on the verge of putting North Dakota and NDSU on the map for innovation and advancement of biotechnologies, vaccines, and other biopharmaceuticals.”



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