Recognizing the already notable reputation of the University of North Dakota’s biomedical research enterprise, the federal government awarded a $10.7 million grant to a group of scientists based at UND’s School of Medicine and Health Sciences (SMHS) to dig deeper into the many questions surrounding infectious diseases such as Lyme disease, HIV, and Zika.

The U.S. Department of Health and Human Services five-year grant is named “Center for Excellence in Host–Pathogen Interactions.” The principal investigators
are David Bradley, Malak Kotb, and Brij Singh, all of the SMHS. The grant is one of several COBRE grants awarded recently. COBRE (pronounced “KOH-bree”) is an acronym for the NIH’s Centers of Biomedical Research Excellence program.

“The objective of this COBRE grant is to gain further understanding of devastating infectious diseases including lung infections, neuro-inflammation and parasitic diseases,” said Singh, a Chester Fritz Distinguished Professor of Biomedical Sciences at the SMHS.

Five other SMHS scientists will work collaboratively on this COBRE research program: Catherine Brissette, Xuesong Chen, Bibhuti Mishra, Jyotika Sharma, and Min Wu.

Students are also an important part of this grant as several will be working alongside each of the SMHS scientists named.

Level playing field

The COBRE program was designed by the National Institutes of Health (NIH) to cultivate research expertise among junior faculty and strengthen the research infrastructure of states that do not receive as much NIH funding as some larger states.

“This COBRE award complements the two other COBRE grants currently active at UND and the SMHS, and will be a powerful engine to speed the development of further discoveries that can be applied at the bedside to help patients with infectious disease,” said Joshua Wynne, MD, MBA, MPH, UND vice president for health affairs and dean of the SMHS. “We are extremely proud of all of our faculty members who are part of this wonderful award.”

“This is a major coup for UND and a clear testament to the confidence that the Department of Health and Human Services has in our research capabilities,” said Grant McGimpsey, UND vice president of research and economic development.

“This also shows the high-impact research that is done by investigators at the School of Medicine and Health Sciences and UND,” Singh said.

This COBRE follows two others recently renewed for research projects at UND’s SMHS:
- COBRE Center for Neurodegenerative Disorder Research, $26 million
- COBRE Epigenetics Bioinformatics Core, $10.7 million

Legacy of funding

In 2002, the UND SMHS received a $10.4-million, five-year award from the NIH to establish a nationally recognized COBRE. That grant was renewed in 2007 for another five years at $10.1 million, and in 2012 for another five years at $5.1 million.

UND’s COBRE funding supports collaborative projects promoting research opportunities for biomedical investigators in North Dakota. These projects offer broad potential for understanding and treating pathophysiological and neurodegenerative diseases, and also provided funds to establish imaging and mass spectrometry facilities.

Additionally, the UND SMHS has received an INBRE grant—also recently renewed—for $13 million. ND INBRE (pronounced “in-BRAY”) is the North Dakota IDeA (Institutional Development Award) Network of Biomedical Research Excellence. It’s the NIH’s IDeA program, an effort to expand North Dakota’s research foundation by funding basic, clinical, and translational research; faculty development; and infrastructure improvements.

The UND SMHS biomedical research enterprise has current COBRE and INBRE grants totaling close to $45 million.