



## PhD Fellowship Training Program in Dairy Immunobiology

The [Abuelo Laboratory](#) at the [Michigan State University College of Veterinary Medicine](#) (MSU CVM) is excited to announce a new PhD fellowship training program in dairy cattle immunobiology. Fellowships will support training of PhD scientists capable of applying their research acumen to improve dairy health. This program is funded through the prestigious National Need Fellowship from the US Department of Agriculture.

### PhD Fellowship Program Description

The training program will provide Fellows with new competencies in dairy cattle health research through an integrated program of courses, research, and experiential learning in immunology, molecular biology, and epidemiology, as well as leadership training. Fellows will also complete internships with external stakeholders as well as an international research experience with one of the lab's collaborators. Fellows will graduate with the knowledge and leadership skills needed to enter the workforce and assume leadership roles related to animal agricultural biosecurity in academia, government, or industry.

Students accepted into the program will join the Abuelo Lab and complete a Ph.D. project utilizing immunology and epidemiology to study strategies to improve host resilience to infectious diseases in dairy calves and/or cattle. In addition to Dr. Abuelo's mentorship, Fellows will interact with experts from MSU or other academic or corporate organizations as part of their guidance committee and other formal mentorship agreements.

### Graduate Student Training Resources at the College of Veterinary Medicine

Michigan farmers produce more than 300 agricultural products, making it the second most agriculturally diverse state in the nation. Agriculture contributes more than \$101 billion to the state's economy. Michigan is the 18<sup>th</sup> largest producer of agricultural products, 6<sup>th</sup> in milk production, and 1<sup>st</sup> in milk yield/cow and milk quality. There is strong support from stakeholders and legislature for agricultural research. The MI State Legislature funds agricultural research projects in excess of \$3 million/year through the [Michigan Alliance for Animal Agriculture](#) funding mechanism, and farmers and commodity groups support the research endeavors of MSU CVM. This provides access to impressive resources and state-of-the-art tools to support dairy research and experiential learning.

Fellows will benefit from an academic and administrative environment that values and engages the CVM to promote animal health initiatives. For example, our Fellows will have unique opportunities through the Veterinary Diagnostic Lab (VDL). VDL diagnosticians routinely collaborate in research projects and graduate student mentoring. Importantly, the [MSU South Campus Animal Farms](#) support research opportunities, including the availability of animal isolation facilities. Moreover, the Abuelo Lab has established partnerships to undertake research activities with multiple commercial farms located 40 miles from campus. Thus, these resources will facilitate the integrated, real-world experiential learning needed to prepare better a scientifically grounded animal health workforce that can work across disciplines, regulatory agencies, and producers.

## **Applicant Requirements**

We seek students with the necessary intelligence, scientific aptitude, initiative, and enthusiasm for learning to complete this challenging and multifaceted program of study. Students must be citizens or permanent residents of the United States of America and must hold a DVM or B.S. in a relevant area of the life sciences. Preference will be given to students with advanced degrees and prior research experience in an area relevant to this program. Applications must be submitted to the [MSU College of Veterinary Medicine Comparative Medicine and Integrative Biology \(CMIB\) Graduate Program](#)

The Abuelo Lab believes that diversity of perspective, background and ability is key to creativity and innovation in science. We welcome trainees who are from underrepresented minorities (URM) to join our lab and thrive in our team-oriented culture that values excellence, rigor and respect. We pledge to foster an inclusive training environment that values and supports our peers who are women, immigrants, LGBTQI+, people with disabilities, and Black, Indigenous and People of Color (BIPOC).

## **East Lansing and surroundings**

Michigan State University is located on one of the nation's largest and most beautiful campuses, and the University is home to a diverse community of dedicated students and scholars, athletes and artists, scientists, teachers, and leaders. East Lansing's collegiate atmosphere is complimented by low cost of living with convenient access to large cultural centers such as Ann Arbor, Grand Rapids, Detroit, and Chicago. East Lansing and surrounding communities provide excellent public-school systems. In addition, Michigan, the Great Lakes State, with its numerous inland lakes and rivers, state and national parks, national lakeshores, world-class golf courses, and ample snowfall offers a broad variety of seasonal outdoor recreational activities. Visit the Pure Michigan® website <https://www.michigan.org/> for more details.

**For more information about this PhD fellowship program, please contact Angel Abuelo (Email: [abuelo@msu.edu](mailto:abuelo@msu.edu)).**