

**Foundation for Food and Agriculture Research**  
**Veterinary Student Research Fellowships**  
**Summer 2020**

**UPDATE: Please Note Important Changes to Research Areas Supported, Program Structure and Funding sections below. Look for the “UPDATE” notation in red font.**

**BACKGROUND**

Veterinary medicine is critical to addressing global challenges that include food security, economic well-being and public health. Several of the U.N.’s Sustainable Development Goals (including No Poverty and Zero Hunger) are unattainable without livestock health programs and research. Veterinary science will be key to solving challenges involving livestock production practices, population growth, climate change and transboundary diseases; yet veterinary students have limited opportunities to gain experience in the research approaches that will be used to address these issues.

The FFAR Veterinary Research Fellowships provide support for veterinary students to pursue research and gain experience in the agricultural sciences. Eligible research topics can include, but are not limited to, novel approaches to control animal diseases that impact food security, animal-environmental interactions, socioeconomic studies, gene-editing and precision breeding, precision technologies or metagenomic approaches to improving animal health and productivity. Training in these areas will prepare students for a variety of important public service and research careers. Importantly, these Fellowships would fulfill a critical unmet need and provide an exciting opportunity for students looking to expand their skills and knowledge.

Colleges of veterinary medicine (CVMs) in the U.S. have well-established summer research programs for veterinary students, facilitating mentored research with established researchers in their colleges or at partner institutions. At the end of the summer, veterinary student scholars participate in the widely attended National Veterinary Scholars Symposium (NVSS). FFAR’s Veterinary Student Research Fellowships were developed to integrate with existing CVM summer research student programs and the NVSS. The Association of American Veterinary Medical Colleges (AAVMC) is collaborating with FFAR to administer the Fellowship program.

**UPDATE:** The COVID-19 pandemic has made it clear that the FFAR Veterinary Student Research Fellowships should also support work on agricultural pathogens that have the potential to cause widespread, economically disruptive and medically important diseases in humans. Like coronavirus, certain pathogens of food animals, such as high-path avian influenza (H5N1) and swine flu (H1N1), have potential for transmission to humans with significant consequences. Research at the interface of food-animal production and the medical sciences is critical to understanding - and preventing - these emerging threats.

**UPDATE: RESEARCH AREAS SUPPORTED**

**Agricultural Production Research Area**

- Diseases affecting livestock, especially those affected by challenges such as the alteration of existing ecosystems/agroecosystems, shifts in land-use, climate change, increased trade and movement of people or animals and civil unrest. Projects that focus on foreign animal diseases, including tick-borne diseases, are also eligible.

- Animal productivity and environmental sustainability.
- Socioeconomics, including producer economic viability.
- Novel tools, techniques and computational approaches applied to agriculture research.

#### **Zoonotic Disease Research Area**

- Research to better prepare for animal disease outbreaks before these threats cross into the human population. Projects must focus on pathogens that present a significant threat to both agricultural productivity and human health. Projects focusing on pathogens with the potential to cause widespread, economically disruptive and medically important diseases in humans and animals are highly encouraged.
- Students are highly encouraged to perform research related to animal health policy, animal protein supply chain logistics, economics and how the livestock industry can maintain continuity of business during crises. This area may include computational and other types of modeling studies.

#### **UPDATE: PROGRAM STRUCTURE**

The Fellowships will provide stipend support for up to **15** students per year to perform research with a qualified mentor, travel support to attend and present a poster at the National Veterinary Scholars Symposium. As before, 10 Fellowships are available in Agricultural Production research. An additional 5 Fellowships are available in Zoonotic Disease research.

Each college may nominate up to two students (total): One student in the **Agricultural Production** research area and one student in the **Zoonotic Disease** research area. Colleges may only nominate one student per research area.

Funds may be used for reasonable travel and accommodations associated with access to research sites. CVMs are responsible for matching potential applicants with a qualified mentor and selecting the most qualified student according to the program objectives described here. Research need not be performed at the student's "home" institution. International projects are allowable if within the budget requirements.

Students will be required to participate in the NVSS and submit a two-page final report on their project and their experience at the conclusion of the Fellowship.

#### **ELIGIBILITY**

The program is open to students currently enrolled in a DVM or VMD degree program, including those in combined degree programs (e.g. DVM/PhD, DVM/MS, DVM/MPH). Students that have completed their veterinary degree, including those in a residency program, are not eligible for consideration. Students who are currently supported by a Federal grant (e.g. T35, T32, F05, F30 or F31) are not eligible. Prior research experience is not necessary.

CVMs must select only two students per year for nomination. CVMs are encouraged to consider students and mentors from historically underrepresented backgrounds in veterinary medicine. Collaboration with industry is also highly encouraged.

The students' research project should be consistent with the scientific method, enabling the construction of a testable hypothesis, collection of data and description of results in an abstract or oral presentation. Clinical, laboratory and in silico based projects are eligible for support, however any projects that do not involve testing a specific hypothesis and data collection as the primary activities will

not be supported. Use of innovative tools and technologies (e.g. computational models, metagenomics, high-throughput sequencing) is strongly encouraged.

All research will be conducted in accordance with the university's research compliance requirements (e.g., IACUC, IRB). If human subjects are involved, the student should be trained in culturally appropriate methods to reach the target population and the mentor must have IRB approval for the project.

**UPDATE: FUNDING**

Matching funds are no longer required for this program. FFAR funds will be provided at the start date of the award and must be used specifically for the designated student's stipend and travel (including travel and accommodations to attend the NVSS), and equipment or supplies for the student's project. Funds may be used anytime within one year of the project start date; any remaining funds one year later must be returned. The AAVMC will disperse FFAR funds directly to the CVM.

FFAR will provide the following funds:

- \$8,000 student trainee support per award (stipend and travel)
- \$8,000 research support per award (supplies and equipment)
- No matching funds required

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Veterinary Student Research Fellowships to  
Address Global Challenges in Food and Agriculture  
Summer 2020**

**I. NOMINATION SUBMISSION REQUIREMENTS**

**CVM Summer Program Directors are to answer the questions provided and submit their nominations via SM Apply by May 6, 2020.**

1. Institutional Contact Information
2. Additional Information:
  - a. College of Veterinary Medicine:
  - b. Student:
  - c. Mentor:
  - d. Mentor website:
  - e. Summer Program Director:
  - f. Summer Program Director email:
  - g. Summer Program Director phone:
  - h. Summer Program alternate contact:
  - i. Summer Program alternate contact email:

**II. PROPOSAL SUBMISSION REQUIREMENTS**

**Fellowship Applicants are to work with their Program Directors to answer the questions provided and submit their applications via SM Apply by May 27, 2020.**

1. Description of the research project hypothesis and objectives. (150 words)
2. How does the proposed research project address a major challenge in food and agriculture? (100 words)
3. How does the student's project fit FFAR's mission: "to build unique partnerships to support innovative science addressing today's food and agriculture challenges"? (150 words)
4. Describe the student's career interests and motivations. Why is the student interested in the proposed research project? (150 words)
5. Describe the relevant experience and resources of the faculty mentor and external collaborators/advisors. (150 words)
6. Associated activities: Briefly describe any extracurricular activities associated with the summer research program (e.g., journal clubs, research seminars, training workshops). (100 words)
- ~~7. Please describe the amount and source of the non-Federal matching funds. (75 words)~~

## SCORING RUBRIC:

### Total 100 points

1. **Project Fit:** The project is an excellent fit for the FFAR Veterinary Research Fellowship based on the selected research topic and description of the project. **25 points**
2. **Student Merit:** The student is an excellent candidate for the Fellowship based on their interests in the agricultural sciences and career aspirations. Selecting this student may increase under-represented viewpoints, perspectives and backgrounds in veterinary research or contribute to diversity (racial, sexual, ethnic, socioeconomic, geographic) in the agricultural sciences. **25 points**
3. **Advisor Merit:** The faculty mentor(s) and relevant external collaborators/advisor(s) have a track record of success and the resources to support a student. **25 points**
4. **Associated Activities:** The host environment and associated summer program activities (e.g., journal clubs, research seminars, training workshops) will enhance the student's experience. **25 points**