

FVSP Faculty Application Checklist-**DUE 1/19/2024 5PM EST**

- ☐ Completed cover page with prior mentorship history
- ☐ Training/Registration requirements needed
- ☐ Abstract of proposed work
- ☐ NIH-format biosketch

Submission Instructions

Convert the application to **one .pdf document**. Name the file using your last name, followed by an underscore, and your first initial. For example: Martyniuk_C.pdf

Submit the following pages, via email attachment, to Dr. Chris Martyniuk (cmartyn@ufl.edu). The subject line should read “FVSP Faculty Application”.

The FVSP Research Program runs 5/27/2024 to 8/07/2024 with final research presentations prior to the national symposium.

2024 Linda F. Hayward Florida Veterinary Scholars Program Faculty Application

Name	Juan M. Campos Krauer
Email address	jmcampos@ufl.edu
Proposed project title	
Will you provide matching student stipend funding (\$3250)?	Yes
Source of project/research funding	This project will be funded by the UF/IFAS Cervidae Health Research Initiative.

Prior student research mentees (last 5 years, if applicable):

CLASS	STUDENT	PROJECT TITLE	STATUS

If project qualifies for Morris Animal Foundation Student Scholarship Funding and you have identified a specific interested student, please provide their name and email address

LASTNAME	FIRST NAME	EMAIL ADDRESS

I agree to obtaining all necessary approvals (e.g. IACUC/IRB/EH&S/VHRRRC – see below for specifics) to conduct the project with the student PRIOR to the commencement of the summer program, as well as submitting documentation of these approvals to the FVSP board by 5/11/2024

YES/NO

I agree to assisting my student prepare for the summer program during the Spring semester, which will include preparation of a study outline, and training in relevant laboratory techniques

YES/NO

I agree to plan for commencing the experiment/data collection by the beginning of the summer program (5/22/24)

YES/NO

I agree to be available to the student throughout the summer to assist with the experiment/data collection, preparation of the manuscript and poster.

YES/NO

	Needed (Yes/No)	Approval by 5/11/24 (Yes/No)?
IACUC Approval and Training	No	No
IRB Registration and Training	No	No
Biological Agent Registration	No	No
Biopath Registration	No	No
Veterinary Hospital Research	No	No
FERPA Training	No	No
Biohazardous Waste Training	Yes	Yes
Laboratory Safety Training	Yes	Yes

Abstract of proposed student project (1 page limit. This should mirror the aims page of a grant and CLEARLY indicate the student’s role.)

Identifying *Pasteurella multocida* serotypes involved in co-Infections with Epizootic Hemorrhagic Disease Virus and Bluetongue virus in farmed white-tailed deer in Florida.

The deer farming industry is one of the fastest-growing industries in rural America. The industry's total impact on the nation's economy, combining the breeding and hunting components, is \$7.9 billion annually. Presently, Florida has an estimated 400 licensed deer farms in 65 of the 67 counties, with an estimated 32,000 farmed deer. Due to Florida's unique characteristics in terms of climate and topography, deer farming has challenges unique to Florida in terms of animal health. *Pasteurella multocida* has been isolated from various wild animals, including deer. In deer, *P. multocida* has been associated with respiratory infections. The bacteria can be found in the nasal cavities and upper respiratory tracts of healthy deer, but in cases of infection, it can lead to severe respiratory signs and death. *P. multocida* is known to cause coinfections, where it can infect in combination with other microorganisms. In animals, *P. multocida* coinfections are commonly seen in association with viral infections such as bovine respiratory syncytial virus (BRSV), parainfluenza 3 virus (PI3V), and bovine herpesvirus-1 (BHV-1) in cattle and sheep. Currently, we have identified multiple cases of coinfections with Epizootic Hemorrhagic Disease Virus (EHDV) and Bluetongue Virus (BTV) in farmed white-tailed deer from Florida. Coinfections involving viruses are being recognized to influence the disease pattern that occurs relative to that with a single infection.

Prevention and control of *P. multocida* infections in deer populations can be difficult. In captive deer, good hygiene, sanitation, and biosecurity practices may help to reduce the spread of the bacteria. However, currently, there is limited information on which serotypes are most likely involved in deadly coinfection with EHDV and BTV in white-tailed deer. Different serotypes of *P. multocida* have been identified, and they are grouped into several main types: A, B, D, E, F, and L, with distinct prevalence in different species of animals.

The student will retrospectively identify and confirm cases of coinfections in white-tailed deer by *P. multocida* with EHDV and BTV. Stored samples from confirmed cases will be analyzed using conventional PCR and, if possible, qPCR followed by Sanger sequencing to identify serotype prevalence, and the corresponding data analysis will be carried out. Obtained results will significantly improve our understanding and help identify the infection's source, predict the infection's clinical outcome, and help us choose appropriate antibiotics and treatment strategies.

OMB No. 0925-0001 and 0925-0002 (Rev. 11/16 Approved Through 10/31/2024)

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME:

Juan Manuel Campos Krauer

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Assistant Professor. Department of Large Animal Clinical Sciences & Department of Wildlife Ecology & Conservation.

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
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Kansas State University	PHD	2009	Population genetics and ecology
Universidad Nacional de Asunción	DVM	1998	Large animals and wildlife
Colegio Internacional de Asunción.	BS	1991	Science and letters

A. Personal Statement

I am an Assistant Professor at the University of Florida College of Veterinary Medicine Department of Large Animal Clinical Sciences & Department of Wildlife Ecology & Conservation. I am part of the UF Cervidae Health Research Initiative as a Research and Extension Veterinarian. I hold a DVM and Ph.D. in Biology, and have over 20 years of experience in captive breeding, health, and management of ungulates. Currently, my research and extension program focuses on identifying the most common pathogens affecting young and adult captive White-tailed deer in Florida. I am working on developing fast field diagnostic procedures to help identify viral diseases and reduce reaction time to implement treatment and preventive measures by deer farmers. I am also conducting research on bacterial resistance and the emergence of potential diseases among White-tailed deer. In addition to this, I am working towards enhancing the health and conservation of the endangered Chacoan peccary and Tapirs in the Chaco region of Paraguay, South America. Finally, I have expertise in the study of Capybaras, which are the world's largest rodents.

B. Positions and Honors

2017 – Present: Assistant Professor. Department of Large Animal Clinics & Department of Wildlife, Ecology and Conservation. University of Florida. Gainesville, FL.

2015 – Present: Member (Level II), National Science and Technology Council (CONACYT), Paraguay.

2009 - Present: Adjunct professor. Division of Biology at Kansas State University, Manhattan, KS. USA.

2009 - 2017: Executive director. Chaco Center for Conservation and Research (CCCR). Non-for-profit organization, Boquerón, Paraguay.

2012 - 2014: Courtesy Associate Professor with graduate faculty status. Department of Wildlife Ecology and Conservation at the University of Florida. Gainesville, FL. USA.

C. Contributions to Science

The deer farming industry is one of the fastest-growing industries in rural America. The industry's total impact on the nation's economy, combining the breeding and hunting components, is \$7.9 billion annually, supporting an estimated 56,320 jobs, mostly in rural counties. Florida currently has an estimated 400 licensed deer farms in 65 of the 67 counties. Despite the large number of deer farms nationwide, only a few veterinarians work in the deer farming industry. Due to Florida's unique characteristics in terms of climate and topography, deer farming has challenges unique to Florida in terms of animal health, management, and nutrition.

My research primarily focuses on the Florida deer farming industry. At present, I have been able to secure over \$500,000 to continue my research. My contribution is tightly linked to both my research and extension program in the Cervidae Health Research Initiative (CHeRI), where I direct the field necropsy and diagnostic service for Florida deer farmers.

At present, my research priorities and goals are:

- Investigate the effects, prevalence, morbidity, and mortality of Viral Hemorrhagic Diseases such as Epizootic Hemorrhagic Disease Virus (EHDV) and Blue Tongue Virus (BTV) in the populations of farmed and wild white-tailed in the state of Florida.
- Identify the most common pathogenic bacteria and parasites that affect deer and promote the health of the deer among our stakeholders by improving disease detection, treatment, and preventive measures.
- Investigate how different forage species can improve deer nutrition, prevent parasite infections, and reduce feeding costs for deer farmers.

Thanks to my interdisciplinary collaborative work with CHeRI, my work has proven to be vital in identifying animals with unique symptoms, postmortem lesions, and signs that have allowed the identification of diseases affecting deer. Via this collaboration, we have discovered seven viruses with high pathogenic potential, some new to science. Similarly, I have identified and estimated the prevalence of pathogenic bacteria that are a significant problem in the industry. My collaborative work has resulted in over a dozen peer-reviewed manuscripts. Besides these publications, I have published articles in deer farming magazines and, most importantly, in UF/IFAS EDIS publications. These publications allow my research to impact the applied science that supports the deer farming community significantly.

A significant result of my interdisciplinary collaborative research and deer necropsy sample collecting work has been identifying and fully sequencing the genome of the three Epizootic Hemorrhagic Disease Virus serotypes that circulate in Florida and kill thousands of deer every year. This critical information and field trial collaborative work with two vaccine-producing companies have led to the availability of a new experimental vaccine in the market and available for deer farmers. As a result of my work, this vaccine will save thousands of deer in Florida and the country, saving millions of dollars for the deer farming industry. Finally, through my research, I have been able to translate science-based research into educational efforts to transfer knowledge and suggest recommendations directly to producers effectively. This has allowed me to gain the trust of deer farmers in Florida and the country and has opened the doors for clear communication and collaboration, allowing me to effectively continue with my research and extension work with clear objectives, understanding the limitations and concerns of the deer farming industry.

D. Additional Information: Research Support and/or Scholastic Performance **Current and past grants**

- Florida State Legislature. Academic Appropriation. University of Florida, Cervidae Health Research Initiative (CHeRI). Total funds \$2,000,000. Sub funded. Funds to cover three, year intern employees, field necropsies and diagnostics and research expenses, and one PhD student. PI. Dr. Juan M. Campos Krauer. July 2023 – June 2024. \$220,556.00
- Florida State Legislature. Academic Appropriation. University of Florida, Cervidae Health Research Initiative (CHeRI). Total funds \$2,000,000. Sub funded. Funds to cover three, year intern employees, field necropsies and diagnostics and research expenses, and one PhD student. PI. Dr. Juan M. Campos Krauer. July 2022 – June 2023. \$192,981.46

- USDA. National Institute of Food and Agriculture. Sponsor Award ID: 2022-46401-37743. Developing A National Program for Providing Extension Resources in Spanish. Ellington, E. H. PD/PI, Acevedo Torres, M. Co-PD/PI, Campos Krauer, J. M. Co-PD/PI. AWD12719 September 2022 – September 2023. \$100,000.
- United States Department of Agriculture (USDA) Renewable Resources Extension Act. Providing Wildlife Extension Documents and Programming in Spanish. Hance Ellington. PI, Armando Ubeda. Co-PI, Miguel Acevedo. Co-PI, Juan M. Campos Krauer. Co-PI. Sep 2021 - June 2022. \$15,000.
- Florida State Legislature. Academic Appropriation. University of Florida, Cervidae Health Research Initiative (CHeRI). Total funds \$2,000,000. Sub funded. Funds to cover three, year intern employees, field necropsies and diagnostics expenses, and one PhD student. PI. Dr. Juan M. Campos Krauer. July 2021 – June 2022. \$160,000
- Florida State Legislature. Academic Appropriation. University of Florida, Cervidae Health Research Initiative (CHeRI). Total funds \$2,000,000. Sub funded. Funds to cover three, year intern employees, field necropsies and diagnostics expenses, and one PhD student. PI. Dr. Juan M. Campos Krauer. July 2020 – June 2021. \$156,330
- IFAS – Emerging Enterprise. Development Integration Teams (SEEDIT). Sheep and Goat Production Assessment and Production Chain Development. July 2020 – June 2021. PI. Marcelo Wallau, CoPI. Juan M. Campos Krauer. \$73,454.00
- United States Department of Agriculture (USDA) Renewable Resources Extension Act (Deer Farmer workshop) Sep 2019 - June 2020. PI: Dr. Juan Campos Krauer and Dr. Samantha Wisely Co-PI. \$3,000.
- Florida State Legislature. Academic Appropriation. University of Florida, Cervidae Health Research Initiative (CHeRI). Total funds \$2,000,000. Sub funded. Funds to cover three, year intern employees, field necropsies and diagnostics expenses, and one PhD student. PI. Dr. Juan M. Campos Krauer. July 2019 – June 2020. \$150,000.
- Southeast Trophy Deer Association. UF – IFAS Deer Education and Research Unit. PI: Wisely, S.M., Co-PI Campos Krauer J.M., Hooker, J.D. and Heinicka, K.M. 8/17/2018, \$25,000.
- Florida State Legislature. Academic Appropriation. University of Florida, Cervidae Health Research Initiative (CHeRI). Total funds \$2,000,000. Sub funded. Funds to cover two, year intern employees, field necropsies and diagnostics expenses. PI. Dr. Juan M. Campos Krauer. July 2018-2019. \$78,500.