

EDUCATION

Doctor of Philosophy in Veterinary Medical Sciences Aug. 2019 - Dec. 2024

Department of Large Animal Clinical Sciences, University of Florida (UF), FL, USA

GPA: 3.78/4.0

Doctoral dissertation: “Emerging Pathogens in Farmed White-tailed Deer (WTD) in Florida”

Projects: “*Trueperella pyogenes* and antimicrobial resistance in farmed WTD in Florida”

“Genome characterization of bovine viral diarrhea virus (BVDV) in farmed WTD in Florida”

“Epidemiological features of mule deer pox virus (DPV) in farmed WTD in Florida”

Advisor: Dr. Juan M. Campos Krauer

Master of Science in Life Science Sep. 2014 - Jan. 2017

Department of Life Science, National Taiwan University (NTU), Taiwan

GPA: 3.9/4.3

Thesis: “Gut Microbiota Study of Folivorous Rodents”

Projects: “Gut microbiota, body-size, metabolism, and dietary niche of folivorous flying squirrels”

“Gut microbiota of Siberian flying squirrels and seasonal phenological changes in the forest”

Advisor: Dr. Hon-Tsen Yu

Student Exchange Program Jul. 2016 - Sep. 2016

Department of Evolution and Ecology, University of California, Davis, CA, USA

Bachelor of Science in Horticulture, minor in Sociology Sep. 2009 – Jun. 2014

Department of Horticulture, National Taiwan University (NTU), Taiwan

GPA: 3.3/4.3

RESEARCH EXPERIENCES

Postdoctoral Researcher Jan. 2025 - Present

Research Assistant & Lab Manager Aug. 2019 - Dec. 2024

Department of Large Animal Clinical Sciences, College of Veterinary Medicine, UF, USA

Cervidae Health Research Initiative (CHeRI), UF, USA

Principal Investigator: Dr. Juan M. Campos Krauer

- Independently perform on-site white-tailed deer necropsy on deer farms in Florida.
- Coordinate research projects on deer pathogens and epidemiology with collaborative teams.
- Establish laboratory equipment settings and new laboratory protocols.
- Independently design and execute comprehensive data analyses, lead manuscript drafting and submission for peer-reviewed publication.

Research Assistant, High Throughput Genomics Core Aug. 2017 - Apr. 2019

Biodiversity Research Center, Academia Sinica, the National Academy of Taiwan, Taiwan

Principal Investigators: Dr. Wen-Hsiung Li and Dr. Mei-Yeh Lu (Core Manager)

- Independently conducted Illumina DNA/RNA sequencing library preparation and sequencing.

Research Assistant, Department of Life Science, NTU, Taiwan Sep. 2014 – Jun. 2016

Principal Investigator: Dr. Hon-Tsen Yu

- Investigated the relationship between weather changes and FS’s gut microbiota in Hokkaido, Japan.
- Performed gut microbial community composition analysis using vegan package with R.

Summer Intern, Institute of Plant and Microbial Biology in Academia Sinica, Taiwan Jul. 2013 - Sep. 2013

Project: “Amino Acid Sensing and Signaling in *Arabidopsis*”

Advisor: Dr. Ming-Hsiun Hsieh

- Conducted large-scale genetic screening of *Arabidopsis* on medium containing a sole nitrogen source.

Summer Intern, Institute of Molecular Biology in Academia Sinica, Taiwan

Jul. 2010 - Sep. 2010

Project: “The Study of Sex Differentiation in Zebrafish, *Danio Rerio*”

Advisor: Dr. Bon-chu Chung

- Established a genetic screening system for zebrafish sex determination.

RESEARCH PUBLICATIONS

Cheng, A.-C., Viadanna, P. H. O., Moquin, T. L., Roldan, L., Lednicky, J. A., Wisely, S. M., Subramaniam, K., and Campos Krauer, J. M. Gross pathology and epidemiological features of mule deerpox virus infections in farmed white-tailed deer (*Odocoileus virginianus*) in Florida. *Veterinary Microbiology*. **2025**.

<https://doi.org/10.1016/j.vetmic.2025.110608>.

Cheng, A.-C., Liu, T., Surphlis, A. C., Lednicky, J. A., Wisely, S. M., Subramaniam, K., Jeong, K. C., and Campos Krauer, J. M. Epidemiology, genome features, and antimicrobial resistance of *Trueperella pyogenes* isolated from farmed white-tailed deer in Florida. (under revision).

Cheng, A.-C., Viadanna, P. H. O., White, Z. S., Moquin, T. L., Loeb, J. C., Goodfriend, O. F., Wilson, K. N., Lednicky, J. A., Bittar, J. H. J., Waltzek, T. B., Wisely, S. M., Subramaniam, K., and Campos Krauer, J. M. Genome characterization and epidemiology of bovine viral diarrhea virus-2a (*Pestivirus tauri* genotype a) isolated from farmed white-tailed deer in Florida. (under revision).

Cheng, A.-C., DeRuyter, E., Viadanna, P. H. O., White, Z. S., Lednicky, J. A., Wisely, S. M., Subramaniam, K., and Campos Krauer, J. M. Bovine viral diarrhea virus-1 (*Pestivirus bovis*) associated with stillborn and mummified fetuses in farmed white-tailed deer (*Odocoileus virginianus*) in Florida. (under revision).

Sizemore, B., **Cheng, A.-C.**, Walden, D. S. H., Subramaniam, K., Wisely, S. M., and Campos Krauer, J. M. *Fascioloides magna* infection in a captive impala (*Aepyceros melampus*) in Florida, USA. *Veterinary Parasitology: Regional Studies and Reports* (accepted). **2025**.

Metrailler, M. C., **Cheng, A.-C.**, Bluhm, A. P., Jiranantasak T., Norris, M. H., Surphlis, A. C., Subramaniam, K., Jeong, K. C., Wisely, S. M., Campos Krauer, J. M., Blackburn, J. K. Phylogeographic patterns of *Escherichia coli* isolated from white-tailed deer, during necropsy in a farmed deer surveillance program. *bioRxiv*. **2024**. <https://doi.org/10.1101/2024.11.21.624738>

Cottingham, S. L., **Cheng, A.-C.**, Viadanna, P. H. O., Subramaniam, K., Craft W. F., Iredale. M. E., Wisely, S. M., and Campos Krauer, J. M. *Mycobacterium kansasii* infection in a farmed white-tailed deer (*Odocoileus virginianus*) in Florida, USA. *Animals*. **2024**. doi: 10.3390/ani14101511

Viadanna, P. H. O., Surphlis, A., **Cheng, A.-C.**, Dixon, C. E., Meisner, S., Wilson, K. N., White, Z.S., DeRuyter, E., Logan, T. D., Campos Krauer, J. M., Lednicky, J. A., Wisely, S. M., and Subramaniam, K. A novel bluetongue virus serotype 2 strain isolated from a farmed Florida white-tailed deer (*Odocoileus virginianus*) arose from reassortment of gene segments derived from co-circulating serotypes in the Southeastern USA. *Virus Genes*. **2024**. <https://doi.org/10.1007/s11262-023-02047-2>

Liu, P.-Y.*, **Cheng, A.-C.***, Huang, S.-W., Lu, H.-P., Oshida, T., Liu, W., and Yu, H.-T. “Body-size scaling is related to gut microbial diversity, metabolism and dietary niche of arboreal folivorous flying squirrels” *Scientific Reports* 10, 7809. **2020**. <https://doi.org/10.1038/s41598-020-64801-y>.

* These authors contributed equally to this work.

Liu, P.-Y., **A.-C. Cheng**, S.-W. Huang, H.-W. Chang, T. Oshida, and H.-T. Yu. “Variations in gut microbiota of Siberian flying squirrels correspond to seasonal phenological changes in their Hokkaido subarctic forest ecosystem” *Microbial Ecology* 78, 223–231. **2019**. <https://doi.org/10.1007/s00248-018-1278-x>.

CONFERENCE PRESENTATIONS (SELECTED)

Oral Presentations

Cheng A.-C., Liu, T., Jeong, K.C., Subramaniam, K., Bittar, J. H. J., Wisely, S. M., and Campos Krauer, J. M. Emerging bacterial pathogens in farmed white-tailed deer in Florida. *Congress of Animal Behavior and Ecology*, Taipei, Taiwan, **Jan. 2024**.

Cheng A.-C., Viadanna, P. H. O., Roldan, L., Logan, T. D., Subramaniam, K., Lednický, J. A., Bittar, J. H. J., Jeong, K.C., Wisely, S. M., and Campos Krauer, J. M. Mule deerpox virus and bovine viral diarrhea virus in farmed white-tailed deer in Florida. *Mitalk 2024*, Taipei, Taiwan, **Jan. 2024**.

Cheng A.-C., Liu, T., Viadanna, P. H. O., Subramaniam, K., Lednický, J. A., Bittar, J. H. J., Jeong, K.C., Wisely, S. M., and Campos Krauer, J. M. *Trueperella pyogenes* in farmed white-tailed deer in Florida. *American Society of Microbiology Microbe*. Houston, TX, USA. **Jun. 2023**.

Cheng A.-C., Liu, T., Viadanna, P. H. O., Subramaniam, K., Lednický, J. A., Bittar, J. H. J., Jeong, K.C., Wisely, S. M., and Campos Krauer, J. M. *Trueperella pyogenes*, a lethal pathogen of farmed white-tailed deer in Florida. *National Institute of Antimicrobial Resistance Research and Education Annual Conference*. Gainesville, FL, USA. **May 2023**.

Cheng A.-C., Viadanna, P. H. O., Roldan, L., Logan, T. D., Subramaniam, K., Lednický, J. A., Bittar, J. H. J., Jeong, K.C., Wisely, S. M., and Campos Krauer, J. M. Mule deerpox virus and bovine viral diarrhea virus, two possible emerging viral pathogens in farmed white-tailed deer in Florida. *Florida Cooperative Fish and Wildlife Research Unit Conference*. Gainesville, FL, USA. **Apr. 2023**.

Poster Presentations

Cheng, A.-C., Viadanna, P. H. O., DeRuyter, E., White, Z. S., Moquin, T. L., Loeb, J. C., Goodfriend, O. F., Wilson, K. N., Lednický, J. A., Bittar, J. H. J., Waltzek, T. B., Wisely, S. M., Subramaniam, K., and Campos Krauer, J. M. Genome characterization and epidemiology of bovine viral diarrhea virus-1 and bovine viral diarrhea virus-2 isolated from farmed white-tailed deer. *American Society of Microbiology Microbe*. Los Angeles, CA, USA. **Jun. 2025**.

Cheng, A.-C., Viadanna, P. H. O., Moquin, T. L., Roldan, L., Lednický, J. A., Wisely, S. M., Subramaniam, K., and Campos Krauer, J. M. Gross pathology and epidemiological features of mule deerpox virus infections in farmed white-tailed deer (*Odocoileus virginianus*) in Florida. *Ecology and Evolution of Infectious Diseases Conference*. Notre Dame, IN, USA. **Jun. 2025**.

Cheng A.-C., Viadanna, P. H. O., Roldan, L., Logan, T. D., Subramaniam, K., Lednický, J. A., Bittar, J. H. J., Jeong, K.C., Wisely, S. M., and Campos Krauer, J. M. Mule deerpox virus in farmed white-tailed deer in Florida. *Wildlife Disease Association Conference*. Athens, GA, USA. **Jul. 2024**.

Cheng A.-C., Viadanna, P. H. O., Roldan, L., Logan, T. D., Subramaniam, K., Lednický, J. A., Bittar, J. H. J., Jeong, K.C., Wisely, S. M., and Campos Krauer, J. M. Emerging viral pathogens in farmed white-tailed deer in Florida. *American Society of Microbiology Microbe*. Houston, TX, USA. **Jun. 2023**.

Cheng A.-C., J. Bittar, K. C. Jeong, K. Subramaniam, S. Wisely, and J. M. Campos Krauer. Bacterial pathogens isolated from Florida farmed white-tailed deer during 2016-2022. *10th International Deer Biology Congress*. Osijek, Croatia. **Sep. 2022**.

Cheng A.-C., S. L. Cottingham, O. Goodfriend, Z. S. White, K. N. Wilson, J. C. Loeb, J. A. Lednicky, K. Subramaniam, H. D. S. Walden, T. B. Waltzek, S. M. Wisely, and J. M. Campos Krauer. Cause of death in Florida farmed white-tailed deer during 2017-2020 and their use as sentinels to monitor hemorrhagic diseases outbreaks. *Wildlife Disease Association Conference*. Virtual. **Aug. 2021**.

Cheng A.-C., Liu, P.-Y., Huang, S.-W., Oshida, T., and Yu, H.-T. Gut microbial diversity, metabolism and dietary niche of arboreal folivorous rodents. *103th Ecology Society of America Annual Meeting*. New Orleans, LA, USA. **Aug. 2018**.

Cheng A.-C., Liu, P.-Y., Huang, S.-W., Oshida, T., and Yu, H.-T. "Gut microbial diversity, metabolism and dietary niche of arboreal folivorous rodents." *102th Ecology Society of America Annual Meeting*. Portland, OR USA. **Aug. 2017**.

Cheng A.-C., Liu, P.-Y., Huang, S.-W., Oshida, T., and Yu, H.-T. "Using metagenomic approaches to study the composition of gut microbiota in flying squirrel." *16th International Symposium on Microbial Ecology*. Montreal, Canada. **Aug. 2016**.

GRANTS & AWARDS

Research Assistantship. Florida State Legislature. Academic Appropriation. University of Florida, Cervidae Health Research Initiative (CHeRI). \$30,000/year. **2019-2024**.

Certificate of Outstanding Merit. University of Florida International Center. **Nov. 2022**.

Wildlife Disease Association Student Travel Grant 2022. Wildlife Disease Association. \$1,000. **Jul. 2022**.

Graduate Student Poster Competition 3rd place. UF CVM Research and Phi Zeta Celebration. **Apr. 2022**.

International Student Achievement Awards. University of Florida International Center. \$1,000. **Nov. 2020**.

SELECTED SKILLS & TECHNIQUES

Mammal necropsy	Antimicrobial susceptibility testing	Real-time PCR/conventional PCR
Python & R programming	Illumina MiSeq & Hiseq sequencing	Illumina sequencing library preparation
NGS 16S rDNA data analysis	Whole genome sequence analysis	Molecular phylogenetics analysis

TEACHING EXPERIENCES

Department of Life Science, NTU, Taiwan

General Zoology	Feb. 2015 - June 2016	Genetics	Feb. 2015 - Jan. 2016
Student Service Education	July 2015 - Sept. 2015	General Biology Lab	Feb. 2014 - Jan. 2015

VOLUNTEER & LEADERSHIP

Treasurer. Veterinary Medicine Graduate Student Association (VGSA), UF 2022 - 2023

Manage the budget and expenses of UF VGSA

President. Midwest Taiwanese Biotechnology Association (MTBA), USA 2021 - 2022

Coordinated the MTBA annual symposium, webinar, and podcast

Emergency Medical Technician 2 (EMT2) volunteer. Taipei City Fire Department, Taiwan 2015 - 2018

Performed emergency medical treatment in ambulance

Lifeguard coach and team leader. Lifeguard team in NTU, Taiwan 2010 - 2017

Coordinated lifeguard team and lifeguard training