

2024 Linda F. Hayward Florida Veterinary Scholars Program Faculty Application

Name	Adesola Odunayo
Email address	odunayoa@ufl.edu
Proposed project title	Evaluation of Restraint System Utilized for Transportation of Dogs and Cats to a Veterinary Facility
Will you provide matching student stipend funding (\$3250)?	Uncertain if I can
Source of project/research funding	Uncertain

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

CLASS	STUDENT	PROJECT TITLE	STATUS
2022	Nicole Blystone	Accuracy of Weight Estimation in a Veterinary Emergency Room	Completed. One paper published in JAVMA, second paper submitted and under review
	I have mentored other students in research in other universities. Noted below		
2020	Katherine Hedges	Canine peripheral IV catheter longevity in an ER	Published
2020	Katherine Hedges	Evaluation of a famotidine CRI on intragastric pH	Published

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

LAST NAME	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	
IRB Registration and Training	Yes	Yes
Biological Agent Registration	No	
Biopath Registration	No	
Veterinary Hospital Research	Yes	Yes
FERPA Training	No	
Biohazardous Waste Training	No	
Laboratory Safety Training	No	

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

Introduction

Dogs and cats are often involved in vehicular accidents that sometimes lead to life-threatening injuries.¹ Dogs and cats who become critically ill secondary to the injuries sustained during vehicular accidents are at high risk for humane euthanasia due to the severity of their injuries and the high cost associated with their care. An international pet insurance company- Trupanion- reports that in 2022, 1619 claims were filed for dogs and cats who were in a car during a vehicular crash (unpublished data). It is unknown how many animals were restrained in the car during the vehicular accidents. While the use of vehicular restraints has been demonstrated to reduce injuries and death in humans, the impact of restraints or the frequency of their use is poorly documented in veterinary patients.²⁻⁴ The goal of this study is to document the type and utilization of vehicular restraints in dogs and cats who present to the Primary Care facility at the University of Florida.

Research hypothesis and specific objectives

We hypothesize that **1.** Vehicular restraints will be uncommonly used in dogs and cats who are visiting a veterinary facility for routine non-emergent care and **2.** Cats would be more likely to be restrained in a vehicle compared to dogs.

Materials and Methods

This study is designed as a prospective observational study performed in the Primary Care service of the Small Animal Hospital at the University of Florida. All clients who own dogs and cats presenting for routine wellness evaluation or scheduled sick appointment are eligible to be enrolled in the study. Dogs and cats who are presenting to the Primary Care service for emergency evaluation will be excluded from the study. Clients will be asked to fill out a form evaluating the mode of transport of their pet to the veterinary hospital and the type of restraint used (if any) during the transport. This will include the use of crates, harnesses, seat belts and carriers. The data will be collected throughout the duration of the FVSP with data analysis occurring after data collection.

Student Role

The FVSP student will be involved in all aspects of the study. The FVSP student will interact with the client to collect the data, organize the data in a spreadsheet for statistical analysis and will be involved in the interpretation of the data. The student will also have an opportunity to write the study for publication in a scientific journal at the conclusion of the project.

References

1. Powell, Lisa L., et al. "A retrospective analysis of pulmonary contusion secondary to motor vehicular accidents in 143 dogs: 1994-1997." *Journal of Veterinary Emergency and Critical Care* 9.3 (1999): 127-136.
2. Rice, Thomas M., and Craig L. Anderson. "The effectiveness of child restraint systems for children aged 3 years or younger during motor vehicle collisions: 1996 to 2005." *American Journal of Public Health* 99.2 (2009): 252-257.
3. Conn, Judith M., et al. "Effectiveness of safety-belt use: A study using hospital-based data for nonfatal motor-vehicle crashes." *Journal of safety research* 24.4 (1993): 223-232.
4. Brasel, Karen J., et al. "Seat belts are more effective than airbags in reducing thoracic aortic injury in frontal motor vehicle crashes." *Journal of Trauma and Acute Care Surgery* 53.2 (2002): 309-313.

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: Adesola Odunayo

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

POSITION TITLE: Michael Schaer Endowed Professor of Emergency and Critical Care

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)	Start Date MM/YYYY	Completion Date MM/YYYY	FIELD OF STUDY
University of Oklahoma, Norman, OK	B. S	1999	2001	Zoology
Oklahoma State University, Stillwater, OK	D.V.M	2001	2005	Veterinary Medicine
University of Missouri, Columbia, MO	M.Sc.	2007	2010	Veterinary Clinical Science

A. Personal Statement

I am currently a clinical track associate professor at the University of Florida with my appointment primarily focused on teaching. I spend about 32-34 weeks working as a critical care veterinarian in the small animal hospital, teaching students, interns and residents. I also provide didactic education for pre-clinical veterinary students. I enjoy my job as a clinician educator, but I have also actively participated in research during my academic career. I enjoy answering questions that are immediately relevant to clinical patients and while my research focus resolves around acid suppressant therapy and transfusion medicine, the wide variety of cases I see gives me opportunities to answer other questions through research. I have published over 50 peer-reviewed manuscripts throughout my career and continue to seek out ways I can utilize research to provide better care for my patients. My clinical and research training as well as my publication record demonstrates my ability to contribute meaningfully to this project.

B. Positions, Scientific Appointments and Honors

Professional Positions

Date	Institution	Position
2023-	University of Florida, Gainesville, FL	Michael Schaer Distinguished Professor of Emergency and Critical Care
2021-	University of Florida, Gainesville, FL	Clinical Associate Professor
2018-2022	University of Tennessee, Knoxville, TN	Clinical Associate Professor
2012-2018	University of Tennessee, Knoxville, TN	Clinical Assistant Professor
2010-2012	Auburn University, Auburn, AL	Clinical Instructor
2007-2010	University of Missouri, Columbia, MO	Emergency and Critical Care Resident
2006-2007	Animal Emergency Center, Milwaukee, WI	Emergency and Critical Care Intern

Honors

Date	Institution	Award
2023	University of Florida, Gainesville, FL	Department of Small Animal Clinical Sciences Sponsor of the Month
2017	University of Tennessee, Knoxville, TN	Brandy Memorial Award in Recognition of Outstanding Teaching in Small Animal
2005	Oklahoma State University, Stillwater, OK	Phi Kappa Phi Honor Society
2005	Oklahoma State University, Stillwater, OK	Ethel Peters Award
2004	Oklahoma State University, Stillwater, OK	Salsbury Award
2004	Oklahoma State University, Stillwater, OK	SCAVMA Award
2004	Oklahoma State University, Stillwater, OK	Phi Zeta Veterinary Honor Society
2003	Oklahoma State University, Stillwater, OK	Ethel Peters Award
2002	Oklahoma State University, Stillwater, OK	Weedn Scholarship
2001	University of Oklahoma, Norman, OK	College of Arts and Science Leadership Scholar

C. Contributions to Science

1. **Odunayo, A.**, Wolf, J., Marshall, K., Osterbur, K., & Maxwell, K. (2023). Outcomes, including death, in dogs with pneumothorax following nasogastric feeding tube misplacement in the tracheobronchial tree: 13 cases (2017–2022). *Journal of the American Veterinary Medical Association*, 1(aop), 1-7.
2. Benson S, **Odunayo A**, Chumbler S. Dogs and the Opioid Epidemic: Emergency Protocols for Field Stabilization, In-hospital Treatment and Prognosis for Canine Opioid Overdoses. *DVM360*. August 2023
3. Blystone N, **Odunayo A**, Ng Z, Lanaux T, Goncalves R, Zhu X (2023). Pet owners provide a more reliable weight estimate for dogs compared to veterinary professionals in an emergency setting. *Journal of the American Veterinary Medical Association*
4. **Odunayo, A.**, Galyon, G., Price, J., Hecht, S., & Tolbert, M. K. (2022). Evaluation of a long-acting injectable formulation of omeprazole in healthy dogs. *Journal of Veterinary Internal Medicine* 36.4 (2022): 1416-1421.
5. Krawec, P., Marshall, K., & **Odunayo, A.** (2022). A Review of High Flow Nasal Cannula Oxygen Therapy in Human and Veterinary Medicine. *Topics in Companion Animal Medicine*, 46, 100596.
6. Gilday, C., **Odunayo, A.**, & Hespel, A. M. (2021). Spontaneous Pneumothorax: Pathophysiology, Clinical Presentation and Diagnosis. *Topics in Companion Animal Medicine*, 100563.
7. Gilday, C., **Odunayo, A.**, & Hespel, A. M. (2021). Spontaneous Pneumothorax: Management and Prognosis. *Topics in Companion Animal Medicine*, 100582.
8. Davidow, E.B., Blois, S.L., Goy-Thollot, I., Harris, L., Humm, K., Musulin, S., Nash, K.J., **Odunayo, A.**, Sharp, C.R., Spada, E. and Thomason, J., 2021. Association of Veterinary Hematology and Transfusion Medicine (AVHTM) Transfusion Reaction Small Animal Consensus Statement (TRACS). Part 1: Definitions and clinical signs. *Journal of Veterinary Emergency and Critical Care*, 31(2), pp.141-166
9. Davidow, E.B., Blois, S.L., Goy-Thollot, I., Harris, L., Humm, K., Musulin, S., Nash, K.J., **Odunayo, A.**, Sharp, C.R., Spada, E. and Thomason, J., 2021. Association of veterinary hematology and transfusion medicine (AVHTM) transfusion reaction small animal consensus statement (TRACS) part 2: prevention and monitoring. *Journal of Veterinary Emergency and Critical Care*, 31(2), pp.167-188.
10. **Odunayo, A.**, Nash, K.J., Davidow, E.B., Blois, S.L., Goy-Thollot, I., Harris, L., Humm, K., Musulin, S., Sharp, C.R., Spada, E. and Thomason, J., 2021. Association of Veterinary Hematology and Transfusion Medicine (AVHTM) transfusion reaction small animal consensus statement (TRACS). Part 3: Diagnosis and treatment. *Journal of Veterinary Emergency and Critical Care*, 31(2), pp.189-203
11. Bush K., **Odunayo, A.**, Hedges, K., Guieu, LV., Smith, R., & Okafor C (2020). Peripheral Intravenous Catheter Complications in Hospitalized Cats: An Observational Pilot Study. *Topics in Companion Animal Medicine*. (2020): 100456
12. Kuhl, A., **Odunayo, A.**, Price, J., Hecht, S., Marshall, K., Steiner, J., & Tolbert, M. K. (2020). Comparative analysis of the effect of IV administered acid suppressants on gastric pH in dogs. *Journal of Veterinary Internal Medicine* 34(2), 678-683.
13. Nystrom M, **Odunayo A**, Okafor C. Evaluation of Hydromorphone and Dexmedetomidine for Inducing Emesis in Cats. *Journal of Veterinary Emergency and Critical Care* 2019 Jul;29(4):360-365. [Mentoring Author](#)

14. Hedges, K., **Odunayo, A.**, Price, J.M., Hecht, S. and Tolbert, M.K., 2019. Evaluation of the effect of a famotidine continuous rate infusion on intragastric pH in healthy dogs. *Journal of veterinary internal medicine* 2019.
15. Vose, J., **Odunayo, A.**, Price, J. M., Daves, M., Schildt, J. C., & Tolbert, M. K. (2019). Comparison of heparinized saline and 0.9% sodium chloride for maintaining central venous catheter patency in healthy dogs. *PeerJ*, 7, e7072
16. Dholakia, U., Seddighi, R., Odunayo, A., Cox, S. K., Jones, E. H., & Pypendop, B. H. (2019). Prolonged Anesthetic Recovery after Continuous Infusion of Midazolam in 2 Domestic Cats (*Felis catus*). *Comparative medicine*, 69(4), 321-326.
17. Golly, E., **Odunayo, A.**, Daves, M., Vose, J., Price, J., Hecht, S., & Tolbert, M. K. (2019). The frequency of oral famotidine administration influences its effect on gastric pH in cats over time. *Journal of veterinary internal medicine*, 33(2), 544-550
18. Deitschel, S. J., Harmon, M., **Odunayo, A.**, Chang, C., Honaker, A. R., & DeClue, A. E. (2019). Supraphysiologic parenteral ascorbic acid blunts the inflammatory mediator response to pathogen associated molecular patterns in dogs ex vivo. *Research in veterinary science*, 124, 228.
19. **Odunayo A**, Tobias K, Okafor C, Flatland B. Comparison of Native Whole Blood, EDTA Whole Blood and Plasma Ammonia Concentrations Using a Point-of-Care Ammonia Meter. *Am J Vet Res*. 78(11): 1239-1244
20. Arulpragasam S, Lux C, **Odunayo A**, Biskup J, Sun X. Evaluation of Pulse Oximetry in Healthy Brachycephalic Dogs. *Journal of American Animal Hospital Association*. 54.6 (2018): 344-350
21. **Odunayo A**, Garraway K, Rohrbach B, Rainey A, Stokes J. Incidence of Incompatible Crossmatch Results in Dogs Without a Prior Red Cell Transfusion. *J Am Vet Med Assoc*. 250(3): 303-308
22. Tolbert MK, Graham A, **Odunayo A**, Price J, Steiner JM, Newkirk K, Hecht S. Repeated Famotidine Administration Results in a Diminished Effect on Canine Intragastric pH Over Time. In press. *J Vet Intern Med*,31: 117-123
doi:10.1111/jvim.14615
23. **Odunayo, A.** Ng ZY, and Holford AL. "Probable vasovagal reaction following cystocentesis in two cats." *Journal of Feline Medicine and Surgery Open Reports* 1.1 (2015): 2055116915585021.
24. Tolbert MK, **Odunayo A**, Howell R, Peters E, Reed A. Efficacy of Intravenous Administration of Combined Acid Suppressants in Healthy Dogs. *J Vet Intern Med*. 2015;29:556-60.
25. Parkinson S, Tolbert K, Messenger K, **Odunayo A**, Brand M, Davidson G, Peters E, Reed A, Papich M. Evaluation of the effect of orally administered acid suppressants on intragastric pH in cats. *J Vet Intern Med*. 2015;29(1):104-12

D. Additional Information: Research Support and/or Scholastic Performance

- Louda Pharma Limited Research Grant. Investigation of a Long-Acting Injectable Omeprazole in Dogs. January 2021. **Odunayo A**, Hecht S. \$30,031
- Morris Animal Foundation Established Investigator Grant August 2020. Inter-Species Differences in GI Transit and pH: A Pathway to Predicting Oral Absorption in Cats. Tolbert MK, Simon, B, Papich M, Kathrani A, **Odunayo A**, Price J. \$36,138
- Winn Feline Foundation 2019 Miller Trust Grant (Co-PI). November 2019. Cats are Not Dogs: Addressing Drug Failure in Cats. Tolbert MK, Papich MG, Kathrani A, Simon B, Telles N, Steiner J, **Odunayo A**, Price J. \$21,294
- Winn Feline Foundation Miller Trust Grant. November 2018. Evaluating the Efficacy of Novel Gastroprotectants in Cats. Tolbert MK, **Odunayo A**, Hecht S, Price J. \$18,080
- Companion Animal Foundation. University of Tennessee. November 2018. A pilot study evaluating intermittent intravenous dosing of pantoprazole, esomeprazole and a constant rate infusion of famotidine on gastric pH in healthy dogs. Kuhl A, **Odunayo A**, Tolbert MK. \$5,000
- Site Savor Inc. Mulon PY, Anderson DE, McCormick, K, **Odunayo A**. Evaluating the use of a break-away device for the protection against intravenous catheter disruption in small and large animals. \$12,613
- Sechrist Veterinary Health. Olin S, Schildt J, **Odunayo A** et al. The effect of hyperbaric oxygen therapy on wound healing in dogs with snake bites. \$20,550
- Winn Feline Foundation Research Grants. Tolbert K, **Odunayo A**. April 2017. Evaluation of the prolonged use of famotidine in cats. \$19,668
- Companion Animal Fund. University of Tennessee. January 2016. Repeated Famotidine Administration Results in a Diminished Effect on Canine Intragastric pH Over Time. Tolbert K, **Odunayo A**. \$4000

- Companion Animal Fund. University of Tennessee. September 2015. Comparison of Native Whole Blood, EDTA Whole Blood and Plasma Ammonia Concentrations Using a Point-of-Care Ammonia Meter. **Odunayo A**, Tobias K, Okafor C and Flatland B \$4000

E. Student request or ranking
None at this time