

SUNIL MORE

Assistant Professor
Veterinary Pathobiology
Oklahoma State University
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🌐 4224 W Country Cl. Dr. Stillwater, OK 74074



EDUCATION & CERTIFICATION

2019	DACVP	Residency, Anatomic Pathology, University of Florida (UF)
2016	PhD	Veterinary Biomedical Sciences, Oklahoma State University (OSU)
2009	MVSc	Animal Genetics and Breeding, Nagpur Veterinary College
2007	BVSc & AH	Veterinary Medicine, Nagpur Veterinary College

CURRENT POSITION

2019 – Current Assistant Professor, Veterinary Pathobiology, Oklahoma State University

TEACHING

August 2019 - Current Assistant Professor I College of Veterinary Medicine, OSU
Veterinary Diagnostics Rotation (VCS 7072)
General Pathology (VMED 7264)
Veterinary Virology (VMED 7454)
Cardiopulmonary System (VMED 7614)
Veterinary Biomedical Sciences (CBSC 5023)
Molecular Virology (CBSC 5110)
Moderator: Gross rounds (show and tell) for DVM students
Moderator: Gross pathology rounds, Pathology slide conference

July 2016 – July 2019 Teaching Assistant I College of Veterinary Medicine, UF
General Pathology (VEM 5161)
Systemic Pathology (VEM 5162)
Anatomic Pathology Clerkship (VEM 5751)

August 2010 – August 2014 Teaching Associate I College of Veterinary Medicine, OSU
Gross and developmental anatomy (VMED 7144)

RESEARCH GRANTS / PROJECTS

Current

1. P20GM103648 (More, PI) 10/01/2023 – 06/30/2025
NIH, CoBRE
Oklahoma Center for Respiratory and Infectious Diseases (OCRID)
\$79,000
Interferon-Mediated Impairment in Macrophage Antibacterial Activity during SARS-CoV-2 and *Klebsiella pneumoniae* Co-Infection

Completed

1. Research Advisory Committee Seed Grant (More, PI) 10/1/2020 - 08/30/2021
Oklahoma State University
\$10,000
Co-infections and host gene expression in human SARS-CoV-2 (COVID-19) patients:
The major goal of this pilot study was to determine what types of coinfection COVID-19 patients have. This project identified *K. pneumoniae* as a major coinfecting pathogen and formed the basis of mice model development in More laboratory.
2. Research Advisory Committee Seed Grant (More, PI) 10/1/2022 - 08/30/2023
Oklahoma State University
\$15,000
Pathogenesis of acute and chronic (long-COVID) SARS-CoV-2 and *K. pneumoniae* coinfection: The major goal of this pilot study was to determine how acute and long COVID impacts *K. pneumoniae* coinfection.
3. P20GM103648 (More, PI) 10/01/2021 – 06/30/2022
NIH, CoBRE
Oklahoma Center for Respiratory and Infectious Diseases (OCRID)
\$497,420 (Funded: 50,000)
Pathogenesis of SARS-CoV-2 and *Klebsiella pneumoniae* coinfection: Our project aims to develop a mice model to study pathogenesis of *K. pneumoniae* and SARS-CoV-2 coinfection
4. United States Department of Agriculture (Zhang, PI) 07/01/2020 - 06/30/2023
Epigenetic Regulation of Host Defense Peptide Synthesis
\$200,000
The overall goal of this seed grant is to evaluate the efficacy of newly identified epigenetic compounds in HDP induction and bacterial clearance in a chicken model of necrotic enteritis, paving the way for their further development as novel alternatives to antibiotics.
Role: Co-PI
5. Oklahoma Center for the Advancement of Science and Technology (Zhang, PI) 2019 - 2021
Epigenetic Regulation of Host Defense Peptide Synthesis
\$90,000
The long-term goal of our research is to develop HDP-inducing compounds as next-generation antibiotic alternatives for livestock use
Role: Co-PI

PUBLICATIONS

1. Sporotrichosis: Feline Case Report. **Sunil More**, Timothy A. Snider, and Akhilesh Ramachandran. Accepted: Emerging Infectious Diseases. Sept 2024
2. Crystal Villalva, Girish Patil, Sai Narayanan, Debarati Chanda, Roshan Ghimire, Timothy Snider, Akhilesh Ramachandran, Rudragouda Channappanavar, **Sunil More**. *Klebsiella pneumoniae* Co-infection Leads to Fatal Pneumonia in SARS-CoV-2-infected Mice. Accepted. Frontiers in Virology. Sept 2024
3. Hugo A. Gonzalez-Jassi, Julie Fithian, Greta Doden, **Sunil More**, Akhilesh Ramachandran, Brianne Taylor, A. Giselle Cino-Ozuna, Alexa Hunter, Scott Mitchell, Rebecca Wilkes, João

- Brandão. Vaccine-induced distemper in domestic ferrets (*Mustela putorius furo*): 5 cases (2022). *Journal of Exotic Pet Medicine*, Volume 51, 2024, Pages 20-26, ISSN 1557-5063.
4. Gunasekara S, Tamil Selvan M, Murphy CL, Shatnawi S, Cowan S, **More S**, Ritchey J, Miller CA, Rudd JM. Characterization of Neutrophil Functional Responses to SARS-CoV-2 Infection in a Translational Feline Model for COVID-19. *Int J Mol Sci*. 2024 Sep 19;25(18):10054.
 5. Ashley R. Hoover, **Sunil More**, Kaili Liu, Connor L. West, Trisha I. Valerio, Coline L. Furrer, Ningli Yu, Crystal Villalva, Amit Kumar, Lu Alleruzzo, Samuel S. K. Lam, Tomas Hode, Meng Zhao, James F. Papin, Wei R. Chen. A novel biopolymer for mucosal adjuvant against respiratory pathogens. *Acta Biomaterialia*. Volume 175, February 2024, Pages 279-292.
 6. Ambat A, Antony L, Maji A, Ghimire S, Mattiello S, Kashyap PC, **More S**, Sebastian V, Scaria J. Enhancing recovery from gut microbiome dysbiosis and alleviating DSS-induced colitis in mice with a consortium of rare short-chain fatty acid-producing bacteria. *Gut Microbes*. 2024 Jan-Dec;16(1):2382324
 7. Supapit Wongkuna, Achuthan Ambat, Sudeep Ghimire, Samara Mattiello, Abhijit Maji, Roshan Kumar, Linto Antony, Surang Chankhamhaengdech, Tavan Janvilisri, Eric Nelson, Kinchel Doerner, **Sunil More**, Melissa Behr, and Joy Scaria. Identification of a microbial sub-community from the feral chicken gut that reduces *Salmonella* colonization and improves gut health in a gnotobiotic chicken model. *Microbiol Spectr* 12:e01621-23.
 8. Ashar H, Singh A, Ektate K, **More S**, Ranjan A. Treating methicillin-resistant *Staphylococcus aureus* (MRSA) bone infection with focused ultrasound combined thermally sensitive liposomes. *Int J Hyperthermia*. 2023;40(1):2211278.
 9. Kerr CM, Parthasarathy S, Schwarting N, O'Connor JJ, Pfannenstiel JJ, Giri E, **More S**, Orozco RC, Fehr AR. PARP12 is required to repress the replication of a Mac1 mutant coronavirus in a cell- and tissue-specific manner. *J Virol*. 2023 Sep 28;97(9):e0088523.
 10. Alhammad YM, Parthasarathy S, Ghimire R, Kerr CM, O'Connor JJ, Pfannenstiel JJ, Chanda D, Miller CA, Baumlin N, Salathe M, Unckless RL, Zuñiga S, Enjuanes L, **More S**, Channappanavar R, Fehr AR. SARS-CoV-2 Mac1 is required for IFN antagonism and efficient virus replication in cell culture and in mice. *Proc Natl Acad Sci*. **121**, 15, (2024)
 11. Ashar H, Singh A, Kishore D, Neel T, **More S**, Liu C, Dugat D, Ranjan A. Enabling Chemo-Immunotherapy with HIFU in Canine Cancer Patients. *Ann Biomed Eng*. 2023 May 10. doi: 10.1007/s10439-023-03194-1. Epub ahead of print. PMID: 37162696.
 12. Roshan Ghimire, Titus Patton, Rakshya Shrestha, Debarati Chanda, **Sunil More**, Rudragouda Channappanavar; Differential role of TLR7 signaling in SARS-CoV-2-induced antiviral and inflammatory responses. *J Immunol* 1 May 2023; 210 (1_Supplement): 72.17.
 13. Reesman, C, Sullivan, G, Danao, M, Pfeiffer, M, **More, S**, Mafi, G & Ramanathan, R. (2023) 'Use of High-Pressure Processing to Improve the Redness of Dark-Cutting Beef', *Meat and Muscle Biology*. 7(1) :1-12. doi: 10.22175/mmb.15716
 14. Guo Y, Bamunuarachchi G, Vaddadi K, Zhu Z, Gandikota C, Ahmed K, Pushparaj S, **More S**, Xiao X, Yang X, Liang Y, Mukherjee S, Baviskar P, Huang C, Li S, Oomens AGP, Metcalf JP, Liu L. Axin1: A novel scaffold protein joins the antiviral network of interferon. *Mol Microbiol*. 2022 Dec;118(6):731-743. doi: 10.1111/mmi.14995. Epub 2022 Nov 5. PMID: 36308071; PMCID: PMC9789182.
 15. Channappanavar R, Selvaraj M, **More S**, Perlman S. Alveolar macrophages protect mice from MERS-CoV-induced pneumonia and severe disease. *Vet Pathol*. 2022 Jul;59(4):627-638. doi: 10.1177/03009858221095270. Epub 2022 May 2. PMID: 35499307.

16. Dijkman R, Verma AK, Selvaraj M, Ghimire R, Gad HH, Hartmann R, **More S**, Perlman S, Thiel V, Channappanavar R. Effective Interferon Lambda Treatment Regimen To Control Lethal MERS-CoV Infection in Mice. *J Virol.* 2022 Jun 8;96(11):e0036422. doi: 10.1128/jvi.00364-22. Epub 2022 May 19. PMID: 35588276; PMCID: PMC9175626.
17. Pushparaj S, Zhu Z, Huang C, **More S**, Liang Y, Lin K, Vaddadi K, Liu L. Regulation of influenza A virus infection by Lnc-PINK1-2:5. *J Cell Mol Med.* 2022 Apr;26(8):2285-2298. doi: 10.1111/jcmm.17249. Epub 2022 Feb 24. PMID: 35201667; PMCID: PMC8995437.
18. Ramanathan R, Mancini RA, Konda MR, Bailey K, **More S**, Mafi GG. Evaluating the failure to bloom in dark-cutting and lactate-enhanced beef longissimus steaks. *Meat Sci.* 2022 Feb;184:108684. doi: 10.1016/j.meatsci.2021.108684. Epub 2021 Sep 24. PMID: 34656000.
19. **More S**, Narayanan S, Patil G, Ghosh P, Pushparaj S, Cooper E, Ritchey J, Cheruvu VK, Kaul A, Ramachandran A. Pooling of Nasopharyngeal Swab Samples To Overcome a Global Shortage of Real-Time Reverse Transcription-PCR COVID-19 Test Kits. *J Clin Microbiol.* 2021 Mar 19;59(4):e01295-20. doi: 10.1128/JCM.01295-20. PMID: 33500363; PMCID: PMC8092752.
20. Narayanan S, Ritchey JC, Patil G, Narasaraju T, **More S**, Malayer J, Saliki J, Kaul A, Agarwal PK, Ramachandran A. SARS-CoV-2 Genomes From Oklahoma, United States. *Front Genet.* 2021 Feb 3;11:612571. doi: 10.3389/fgene.2020.612571. PMID: 33613621; PMCID: PMC7886813.
21. Sai Narayanan, Girish Patil, **Sunil More**, Jeremiah Saliki, Anil Kaul, Akhilesh Ramachandran. First detection and report of SARS-CoV-2 Spike protein N501Y mutations in Oklahoma USA. doi: <https://doi.org/10.1101/2021.01.26.21250584>
22. Ranjan A, Kishore D, Ashar H, Neel T, Singh A, **More S**. Focused ultrasound ablation of a large canine oral tumor achieves efficient tumor remission: a case report. *Int J Hyperthermia.* 2021;38(1):552-560. doi: 10.1080/02656736.2021.1903582. PMID: 33784931; PMCID: PMC8189657.
23. Teluguakula Narasaraju, **Sunil More**, Marko Radic, Vincent TK Chow. A Pathologic Perspective of COVID-19: Parallels with Severe Influenza Virus Pneumonia. 2020/5. OSF Preprints.
24. Sai Narayanan, John C Ritchey, Girish Patil, Teluguakula Narasaraju, **Sunil More**, Jerry Malayer, Jeremiah Saliki, Anil Kaul and Akhilesh Ramachandran. SARS-CoV-2 genomes from Oklahoma, USA. *Front. Genet.*, 03 February 2021
25. Huynh, E., Heard, D., Christman, J., **More, S.**, Farina, L. L., and Vilaplana Grosso, F. (2021) What Is Your Diagnosis? *Journal of the American Veterinary Medical Association* 259, 471-474.
26. Howell, S. E., Neihaus, S., **More, S.**, and Craft, W. F. (2021) Pathology in Practice, *Journal of the American Veterinary Medical Association* 258, 467-470.
27. Townsend S, Regier PJ, **More SN**. Successful Treatment of Urinary Bladder Hemangiosarcoma by Partial Cystectomy in a Dog. *J Am Anim Hosp Assoc.* 2020 Jul/Aug;56(4):231-235. doi: 10.5326/JAAHA-MS-6910. Epub 2020 May 15. PMID: 32412336.
28. **More, S. N.**, Hernandez, O., and Castleman, W. L. (2019) Mycotic Rhinitis and Sinusitis in Florida Horses, 56, 586-598.
29. Sanjoy Kundu, N. G., Bailey Hendrickson, **Sunil More**, Sathyanarayanan Aakur. (2020) Benchmark and Evaluation of Low Resource Object Detection in Biomedical Images, In *IEEE Workshop on Applied Imagery and Pattern Recognition*.

30. Gou, X., Zhang, Q., **More, S.**, Bamunuarachchi, G., Liang, Y., Haider Khan, F., Maranville, R., Zuniga, E., Wang, C., and Liu, L. (2019) Repeated Exposure to *Streptococcus pneumoniae* Exacerbates Chronic Obstructive Pulmonary Disease, *The American Journal of Pathology* 189, 1711-1720.
31. **More, S.**, Zhu, Z., Lin, K., Huang, C., Pushparaj, S., Liang, Y., Sathiaselvan, R., Yang, X., and Liu, L. (2019) Long non-coding RNA PSMB8-AS1 regulates influenza virus replication, *RNA Biology* 16, 340-353.
32. Stern JK, Christman J, **More SN**, Williams M. What is your diagnosis? Fine-needle aspiration from the left humerus of a common marmoset (*Callithrix jacchus*). *Vet Clin Pathol.* 2020 Sep;49(3):491-493. doi: 10.1111/vcp.12890. Epub 2020 Aug 13. PMID: 32789976.
33. Wu, W., Wang, X., Zhang, W., Tian, L., Booth, J. L., Duggan, E. S., **More, S.**, Liu, L., Dozmorov, M., and Metcalf, J. P. (2018) RIG-I Signaling via MAVS Is Dispensable for Survival in Lethal Influenza Infection In Vivo, *Mediators of Inflammation* 2018, 6808934.
34. Wang, X., Wu, W., Zhang, W., Leland Booth, J., Duggan, E. S., Tian, L., **More, S.**, Zhao, Y. D., Sawh, R. N., Liu, L., Zou, M.-H., and Metcalf, J. P. (2017) RIG-I overexpression decreases mortality of cigarette smoke exposed mice during influenza A virus infection, *Respiratory Research* 18, 166.
35. Bhaskaran, M., Xi, D., Wang, Y., Huang, C., Narasaraaju, T., Shu, W., Zhao, C., Xiao, X., **More, S.**, Breshears, M., and Liu, L. (2012) Identification of microRNAs changed in the neonatal lungs in response to hyperoxia exposure, 44, 970-980.
36. Mishra, A., Guo, Y., Zhang, L., **More, S.**, Weng, T., Chintagari, N. R., Huang, C., Liang, Y., Pushparaj, S., Gou, D., Breshears, M., and Liu, L. (2016) A Critical Role for P2X7 Receptor–Induced VCAM-1 Shedding and Neutrophil Infiltration during Acute Lung Injury, 197, 2828-2837.
37. **More, S.**, Yang, X., Zhu, Z., Bamunuarachchi, G., Guo, Y., Huang, C., Bailey, K., Metcalf, J. P., and Liu, L. (2018) Regulation of influenza virus replication by Wnt/ β -catenin signaling, *PLOS ONE* 13, e0191010.
38. Narasaraaju, T., Shukla, D., **More, S.**, Huang, C., Zhang, L., Xiao, X., and Liu, L. (2015) Role of MicroRNA-150 and Glycoprotein Nonmetastatic Melanoma Protein B in Angiogenesis during Hyperoxia-Induced Neonatal Lung Injury, 52, 253-261.
39. Wu, W., Zhang, W., **More, S.**, Booth, J. L., Duggan, E. S., Liu, L., Zhao, Y. D., and Metcalf, J. P. (2014) Cigarette smoke attenuates the RIG-I-initiated innate antiviral response to influenza infection in two murine models, 307, L848-L858.
40. **Sunil More**, Aghav, D. V., Shrikhande, G. B. Incidence of helminths parasites in cattle in and around of Bhandara district, Maharashtra. *Veterinary World*, Vol. 6, No. 2 October 2007
41. **Sunil More**, Karle, A. S., Ladukar, N. L., Shankpal, V. D., Lende, S. R. Microarchitecture of skin of spotted deer (*Axis axis*). *Indian Journal of Field Veterinarians*. Page No.33 –35, January – March 2007, No. 3
42. **Sunil More**, Shankpal, V. D., Ladukar, N. L., Karle, A. S., Ladukar, O. N. Histological comparison of thyroid gland in layers & broilers. *Indian Journal of Field Veterinarians* Vol. 2 April – June 2007 No. 4
43. B. M. Khati, B. R. Colte, R. C. Shendare, S. M. Mandlekar, H. S. Palave, **Sunil More** and D. V. Aghav. Effect of low protein level supplement with and without yeast (*Sacchromyces cervisiae*) on growth performance of broiler quails. *Veterinary World*, Vol. 6, No. 1 October 2007

ABSTRACTS / CASE PRESENTATIONS

1. Systemic mycosis in two captive red deer (*Cervus elaphus*)' – A Giselle Cino-Ozuna, Sai Narayanan, **Sunil More**, Scott Mitchell, Akhilesh Ramachandran. American Association for Veterinary Laboratory Diagnostics Annual Meeting, October 12-18, 2023, Washington DC
2. Crystal Villalva, Chakravarthi Rajamohan, Debarati Chandra, Roshan Ghimire, Rudra Channappanavar, and **Sunil More**. Coinfection of SARS-CoV-2 and *Klebsiella pneumoniae* Results in increased Macrophage Bacterial Load. Oral presentation at the Oklahoma State University College of Veterinary Medicine Annual Phi Zeta Research Day, Stillwater, OK, 2023.
3. Zachary Lott, Crystal Villalva, and **Sunil More**. Type I Interferon Facilitates *Klebsiella pneumoniae* Survival in Macrophages. Poster presentation at the National Veterinary Scholars Symposium 2023.
4. Crystal Villalva, Chakravarthi, Rajamohan, Debarati Chanda, Roshan Ghimire, Rudra Channappanavar, and **Sunil More**. Proinflammatory Response in Murine Macrophages Coinfected With SARS-CoV-2 And *Klebsiella pneumoniae*. Poster presentation at 10th OCRID Annual Retreat at Oklahoma State University, 2023
5. Crystal Villalva, Girish Patil, Debarati Chanda, Sai Narayanan, Anil Kaul, Akhilesh Ramachandran, Rudragouda Channappanavar, and **Sunil More**. SARS-CoV-2 challenged mice with secondary *Klebsiella pneumoniae* exhibits fatal lung injury. Oral presentation at 9th OCRID Annual Retreat at Oklahoma State University, 2022
6. **Sunil More**. Pathology of Respiratory System. Indian Association of Veterinary Pathologists Virtual International Veterinary Pathology Congress, 2021
7. Tularemia: an Oklahoma perspective. Scott Mitchell, Sai Narayanan, Giselle Cino, Akhilesh Ramachandran, and **Sunil More**. Oral presentation at INTERACT Research Symposium, Oklahoma State University, 2021
8. lncRNA SNHG15 regulates influenza A virus infection. Samuel Pushparaj, Chaoqun Huang, **Sunil More**, and Lin Liu. Oklahoma Center for Respiratory & Infectious Diseases 6th Annual Research Retreat, Stillwater, OK, 2019
9. *Curvularia lunata* rhinitis in a sheep a goat. **Sunil More**, Kamila Sandoval, Sarah S. Beatty, Erik Perez, Jim Wellehan and Michael J. Dark. 47th South Eastern Veterinary Pathology Conference, Tifton, GA, May 2019
10. Ganglioneuroma of the gallbladder and biliary tree in a two-year-old dog resulting in extrahepatic biliary obstruction. **Sunil More** and William Craft. ACVP Annual Meeting, 2018
11. Regulation of influenza A virus infection by lnc-PINK1-2, a novel cellular lncRNA. Samuel Pushparaj, Chaoqun Huang, **Sunil More** and Lin Liu. Keystone Symposia, Noncoding RNAs: Form, Function, Physiology (C2), CO, 2018
12. Color dilution alopecia in a Doberman pinscher. **Sunil More**, William Craft and Serena Craft. 46th South Eastern Veterinary Pathology Conference, Tifton, GA, May 2018
13. Myxobolus infection in Red Tail Hemiodus. **Sunil More** and Jennifer Dill-Okubo. 45th South Eastern Veterinary Pathology Conference, Tifton, GA, May 2017
14. Identification of novel cellular lnc-PINK1-2 transcripts during influenza infection. Samuel Pushparaj, Chaoqun Huang, **Sunil More** and Lin Liu. Oklahoma Center for Respiratory & Infectious Diseases 4th Annual Research Retreat, Stillwater, OK, 2017
15. RIG-I Knockout Or Overexpression Enhances Survival In Influenza Virus Infection. Wenxin Wu, Xiaqiu Wang, Wei Zhang, John L Booth, Elizabeth Duggan, **Sunil More**, Lin Liu, Ming-Hui Zou, Jordan Metcalf. American Thoracic Society, Washington, DC, 2017

16. Alteration in RIG-I expression affect mortality in influenza virus infection in mice. W Wu, X Wang, W Zhang, JL Booth, ES Duggan, **S More**, L Liu, M Zou, JP Metcalf. Midwestern Regional Meeting, Chicago, IL, 2017
17. An uncommon form of Feline Infectious Peritonitis in cats. **Sunil More** and Keith Bailey. The 34th Annual Meeting of Midwest Veterinary Pathologist, University of Kentucky, Lexington, KY, August 2015
18. A case of canine leptospirosis. **Sunil More**, Nicholas Sorenson, Keith Bailey, Jim Meinkoth, Lydia Gentry, Shane Lyon and Timothy Snider. 43rd South Eastern Veterinary Pathology Conference, Tifton, GA, May 2015
19. Streptococcus Pneumoniae Colonization In Lower Airways Accelerates The Progression Of Cigarette Smoke-Induced Chronic Obstructive Pulmonary Disease. X Gou, Q Zhang, **S More**, G Bamunuarachchi, Y Liang, F Khan, C Wang, L Liu. American Thoracic Society, San Francisco, CA, 2016
20. Presented paper on "Occurrence of Multidrug Drug Resistant Food Born Pathogens From Fish Products. **More, Sunil**; Katre, D. D., Shinde, S. V., Zade, N. N. 6th Annual Conference of Indian Association of Veterinary Public Health Specialists. Anand (Gujrat) 29 – 30 November 2007
21. Effects Of Antioxidants On Haematological And Histological Changes In Lead Exposed Rats" C.R. Jangde, Ankushreddy, Aghav Dhananjay, **More Sunil**, Bhandarkar, A.G,R.K. Motiani, Mehare Awesh, Vikas Karande. International Conference on Toxicology, Toxicogenomics and Occupational Health and 26th Annual Meeting of Society of Toxicology, Gwalior, 9-11, 2006
22. Histopathological Changes Induced In Rat Tissues By Oral Administration Of Mercury Chloride" Jangde C.R., Karande Vikas, R.K Motiani, Mehare Awesh, Bhandarkar, A.G, **More Sunil**, Aghav Dhananjay, Ankushreddy Patil. International Conference on Toxicology, Toxicogenomics and Occupational Health and 26th Annual Meeting of Society of Toxicology, Gwalior, 9-11, 2006

PAST PROFESSIONAL EXPERIENCE

Anatomic Pathology Resident

July 2016 – July 2019

College of Veterinary Medicine, University of Florida

Diagnostics: Necropsy and surgical biopsy examinations of domestic as well as exotic animal species, tissue sampling, identification of gross lesions, review of H&E-stained slides, composing written reports, and integrating gross and microscopic lesions with clinical pathology data and clinical history.

Teaching: Assisting and teaching sophomore and senior veterinary students necropsy techniques, interpretation of gross lesions, and tissue sampling and handling. Teaching assistant for general and special veterinary pathology.

Graduate Research Associate

August 2010 – May 2016

Veterinary Biomedical Science Program, College of Veterinary Medicine, OSU

Ph. D project: Role of long non-coding RNAs and Wnt signaling during Influenza infection. My project aims to clarify the role of these host factors in the molecular pathogenesis of influenza virus infection. Potential antiviral drug strategies against the influenza virus are being investigated.

Other Projects:

1. Mechanism of enhanced susceptibility of smokers to influenza virus infection. This project was in collaboration with Dr. Jordan Metcalf (PI) wherein my role was to create a short-term cigarette exposure mice model.
2. Stem cell treatment therapy for Chronic Obstructive Pulmonary Disease (COPD): Oklahoma Adult Stem Cell Research Group has a collaborative project investigating stem cell treatment therapy for COPD. My role is to create a long-term cigarette smoke and an elastase-induced mouse model of COPD.
3. Bronchopulmonary Dysplasia: Investigated the role of Glycoprotein Non-metastatic Melanoma Protein B (GPNMB) protein in angiogenesis during hyperoxia.
4. Influenza A virus and cellular microRNA: We have identified some cellular microRNA whose overexpression leads to inhibition of influenza virus replication.

Graduate Teaching Associate

August 2010 – August 2014

Gross and Developmental Anatomy, College of Veterinary Medicine, OSU

1. Duties included setting up the lab, instructing students, conducting dissection sessions, preparing instructional materials, promoting discussion among students, and preparing and grading exams.
2. We conducted a study on cats and found an incidental, previously unreported bicarotid arterial trunk. This clinically important variation was found in 27% cats that formed the cohort of this study. Once these findings are published, they can be incorporated into the course as a species difference between dogs and cats.

MENTORING EXPERIENCE

Name	Degree/Training	Role	Year
Girija Regmi	Anatomic Pathology Resident	Co-mentor	Current
Haley Furman	Anatomic Pathology Resident	Co-mentor	Current
Crystal Villalva	MS	Chair	Current
Emma Lathem	Undergraduate Researcher	Mentor	Current
Sankha Hewawasam	PhD	Committee member	Current
Quanjin Dang	PhD	Committee member	Current
Patil Basavraju	PhD	Committee member	Current
Keayla Harr	PhD	Committee member	Current
Xiaoming Zhang	PhD	Committee member	Current
Shoroq Shatnawi	PhD	Committee member	Current
Sai Sankaranarayan	Anatomic Pathology Resident	Co-mentor	Current
Adriana Villasenor	Anatomic Pathology Resident	Co-mentor	Current
Zachary Lott	DVM, summer student	Mentor	2023
Laura Centurion	Anatomic Pathology Intern	Co-mentor	2022-2023
Alexa Hunter	Anatomic Pathology Resident	Co-mentor	2021-2023
Scott Mitchell	Anatomic Pathology Resident	Co-mentor	2021-2023
Girish Patil	Anatomic Pathology Resident	Co-mentor	2022
Samuel Pushparaj	PhD	Committee member	2020
Bailey Hendrickson	DVM, summer student	Mentor	2020
Dah-Jiun Fu	Anatomic Pathology Resident	Co-mentor	2019-2022

Sierra Salopek	Anatomic Pathology Resident	Co-mentor	2019-2020
Erin Stayton	Anatomic Pathology Resident	Co-mentor	2019-2020
Adam Corcoran	Undergraduate Researcher	Junior mentor	2014-2016
Derek Hagan	DVM, summer student	Junior mentor	2014

EDITOR AND REVIEWER

1. Viruses, MDPI
2. Pathogens, MDPI
3. NeuroToxicology
4. Journal of Exotic Pet Medicine
5. AVMA - Journal of the American Veterinary Medical Association
6. Microbioz Journals- Journal of Microbiology and Biomedical Research
7. Veterinary World
8. Journal of Field Veterinarians, ISSN: 2395-1176
9. Frontiers in Veterinary Science