Pranav PANDIT
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🔬 RESEARCH INTERESTS

> Disease spillover and animal-human interface
> Drivers of disease emergence : Impact of climate change and anthropogenic activities on disease distribution
> Surveillance systems for public and animal health
> One Health framework for mathematical models for infectious diseases

☰ KNOWLEDGE

Scientific	Infectious disease epidemiology, disease surveillance, disease transmission, population health
Epidemiological	Experimental design, diagnostic test validation, research in low-middle income countries
Analytical	Mathematical and machine learning models in epidemiology
Diversity and leadership	Sustainable solutions to underprivileged communities through scientific solutions, leading student and postdoc groups, student outreach

💼 CURRENT POSITION

Current March 2021	**Assistant Researcher, ONE HEALTH INSTITUTE,** School of Veterinary Medicine, University of California Davis
Current September 2021	**Lecturer, SCHOOL OF VETERINARY MEDICINE, UNIVERSITY OF CALIFORNIA DAVIS,** Instructor on record for > Applied Vet Population Statistics (MPM 204/VEM 298) > Principles of Epidemiology (EPI 205/MPM 205)

🎓 EDUCATION AND TRAINING

2016-2021	**Postdoctoral Researcher**, EpiCenter for Disease Dynamics, One Health Institute, School of Veterinary Medicine, University of California Davis.
2012-2015	**Ph.D. Epidemiology**, École Nationale Vétérinaire, Agroalimentaire et de l'Alimentation, Nantes,ONIRIS/ French National Institute of Agricultural Research (INRAE) **Thesis :** Regional spread and control of Q fever in dairy cattle herds : a multiscale modeling approach.
2011-2012	**Master of Preventive Veterinary Medicine**, School of Veterinary Medicine, University of California Davis **Thesis :** Modeling highly pathogenic avian influenza transmission in wild birds and poultry in West Bengal, India.
2005-2010	**Bachelor of Veterinary Science and Animal Husbandry**, Maharashtra Animal and Fishery Science University, India.

🏆 AWARDS AND ACHIEVEMENTS

2020-2021	**Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES):**, Invited expert for workshop on modelling Nature Futures scenarios.Selected as one of 30 experts around the world by IPBES to develop models and scenarios relevant to biodiversity and ecosystem services.
2015	**Scotland's Rural College Award (SRUC Price), SVEPM 2015, Ghent Belgium**, Best oral presentation award for early career scientists, awarded in the annual conference of Society of Veterinary Epidemiology and Preventive Medicine 2015.
2011	**Narotam Sekhsaria Fellowship**, Competitive higher education scholarship awarded by Narotam Sekhsaria Foundation, India for the education in University of California Davis.
2010	**Ravi Shankaran Fellowship by Inlaks Foundation, India** Scholarship for the externship in Abu Dhabi Falcon Hospital.
2007-2010	**Kishor Vaigyanik Protsahan Yojana (KVPY) Fellow** A prestigious national fellowship program by the Department of Science and Technology Govt. of India for the development of young promising scientists.

📖 PUBLICATIONS

Journal Articles

Google Scholar profile here.

1. **PRANAV PANDIT**, ANTHONY, S., GOLDSTEIN, T., OLIVAL, K., DOYLE, M., GARDNER, N., BIRD, B., SMITH, W., WOLKING, D., GILARDI, K., MONAGIN, C., KELLY, T., UHART, M., EPSTEIN, J., MACHALABA, C., ROSTAL, M., DAWSON, P., HAGAN, E., SULLIVAN, A., LI, H., CHMURA, A., LATINNE, A., LANGE, C., O'ROURKE, T., OLSON, S., KEATTS, L., MENDOZA, A. P., PEREZ, A., DE PAULA, C. D., ZIMMERMAN, D., VALITUTTO, M., LEBRETON, M., MCIVER, D., ISLAM, A., DUONG, V., MOUICHE, M., SHI, Z.-L., MULEMBAKANI, P., KUMAKAMBA, C., ALI, M., KEBEDE, N., TAMOUFE, U., BEL-NONO, S., CAMARA, A., PAMUNGKAS, J., COULIBALY, J. K., ABU-BASHA, E., KAMAU, J., SILITHAMMAVONG, S., DESMOND, J., HUGHES, T., SHIILEGDAMBA, E., AUNG, O., KARMACHARYA, D., NZIZA, J., NDIAYE, D., GBAKIMA, A., SIJALI, Z., WACHARAPLUESADEE, S., ROBLES, E. A., SSEBIDE, B., SUZÁN, G., AGUIRRE, L., SOLORIO, M., DHOLE, T., HITCHENS, P., JOLY, D., SAYLORS, K., FINE, A., MURRAY, S., KARESH, W., DASZAK, P., MAZET, J., CONSORTIUM, P., AND JOHNSON, C. **Predicting the potential for zoonotic transmission and host associations for novel viruses**. *Communications Biology 5*, 844 (2022)

2. GALVIN, A., **PRANAV PANDIT**, ENGLISH, S., QUOCK, R., BANDIVADEKAR, R., COLWELL, R., ROBINSON, B., ERNEST, H., BROWN, M., SEHGAL, R., AND TELL, L. **Evaluation of Minimally Invasive Sampling Methods for Detecting Avipoxvirus : Hummingbirds as a Case Example**. *Frontiers in Veterinary Science 9*, 924854 (2022)

3. SANCHEZ, J. N., MUNK, B. A., COLBY, J., TORRES, S. G., GONZALES, B. J., DEFORGE, J. R., BYARD, A. J., KONDE, L., SHIRKEY, N. J., PANDIT, P. S., ET AL. **Pathogen surveillance and epidemiology in endangered peninsular bighorn sheep (ovis canadensis nelsoni)**. *Conservation Science and Practice* (2022), e12820

4. SINGH, J., **PANDIT, PRANAV**, MCARTHUR, A. G., BANERJEE, A., AND MOSSMAN, K. **Evolutionary trajectory of SARS-CoV-2 and emerging variants**. *Virology journal 18*, 1 (2021), 1–21

5. **PANDIT, PRANAV S**, WILLIAMS, D. R., ROSSITTO, P., ADASKA, J. M., PEREIRA, R., LEHENBAUER, T. W., BYRNE, B. A., LI, X., ATWILL, E. R., AND ALY, S. S. **Dairy management practices associated with multi-drug resistant fecal commensals and Salmonella in cull cows : a machine learning approach**. *PeerJ 9* (2021), e11732

6. KELLY, T. R., **PANDIT, PRANAV S**, CARION, N., DOMBROWSKI, D. F., ROGERS, K. H., MCMILLIN, S. C., CLIFFORD, D. L., RIBERI, A., ZICCARDI, M. H., DONNELLY-GREENAN, E. L., ET AL. **Early detection of wildlife morbidity and mortality through an event-based surveillance system**. *Proceedings of the Royal Society B 288*, 1954 (2021), 20210974

7. **PANDIT, PRANAV S**, BANDIVADEKAR, R. R., JOHNSON, C. K., MIKONI, N., MAH, M., PURDIN, G., IBARRA, E., TOM, D., DAUGHERTY, A., LIPMAN, M. W., ET AL. **Retrospective study on admission trends of Californian hummingbirds found in urban habitats (1991–2016)**. *PeerJ 9* (2021), e11131

8. WOLKING, D., KARMACHARYA, D., BISTA, M., SHRESTHA, R., **PANDIT, PRANAV**, SHARMA, A., MANANDHAR, S., SHRESTHA, B., BAJRACHARYA, S., BHATTA, T., ET AL. **Vulnerabilities for Exposure to Emerging Infectious Disease at Urban Settlements in Nepal**. *EcoHealth 17*, 3 (2020), 345–358

9. BAEK, H. E., BANDIVADEKAR, R. R., **PANDIT, PRANAV**, MAH, M., SEHGAL, R. N., AND TELL, L. A. **TaqMan quantitative real-time PCR for detecting Avipoxvirus DNA in various sample types from hummingbirds**. *PloS one 15*, 6 (2020), e0230701

10. JOHNSON, C. K., HITCHENS, P. L., **PANDIT, PRANAV S**, RUSHMORE, J., EVANS, T. S., YOUNG, C. C., AND DOYLE, M. M. **Global shifts in mammalian population trends reveal key predictors of virus spillover risk**. *Proceedings of the Royal Society B 287*, 1924 (2020), 20192736

11. YOUNG, S. L., **PANDIT, PRANAV**, AND HAN, B. A. **Rise of machines in disease ecology**. *Bulletin of the Ecological Society of America 101*, 1 (2020), 1–4

12. PANDIT, PRANAV S, DOYLE, M. M., SMART, K. M., YOUNG, C. C., DRAPE, G. W., AND JOHNSON, C. K. Predicting wildlife reservoirs and global vulnerability to zoonotic Flaviviruses. *Nature communications 9*, 1 (2018), 1–10

13. BANDIVADEKAR, R. R., PANDIT, PRANAV S, SOLLMANN, R., THOMAS, M. J., LOGAN, S. M., BROWN, J. C., KLIMLEY, A. P., AND TELL, L. A. Use of RFID technology to characterize feeder visitations and contact network of hummingbirds in urban habitats. *PloS one 13*, 12 (2018), e0208057

14. PANDIT, PRANAV, HOCH, T., EZANNO, P., BEAUDEAU, F., AND VERGU, E. Spread of Coxiella burnetii between dairy cattle herds in an enzootic region : modelling contributions of airborne transmission and trade. *Veterinary Research 47,* 1 (2016), 48

15. PANDIT, PRANAV S, BUNN, D. A., PANDE, S. A., AND ALY, S. S. Modeling highly pathogenic avian influenza transmission in wild birds and poultry in West Bengal, India. *Scientific reports 3*, 1 (2013), 1–8

16. PANDE, S., PADHYE, A., DESHPANDE, P., PONKSHE, A., PANDIT, PRANAV, PAWASHE, A., PEDNEKAR, S., PANDIT, R., AND DESHPANDE, P. Avian collision threat assessment at 'Bhambarwadi Wind Farm Plateau' in northern Western Ghats, India. *Journal of Threatened Taxa 5*, 1 (2013), 3504–3515

17. BANDIVADEKAR, R., PANDIT, R., PONKSHE, A., AND PANDIT, PRANAV. Veer dam as important winter migratory ground for Bar-headed Geese Anser indicus (Latham, 1790) Family : Anatidae, with special reference to observations of tagged Bar-headed Geese. *ZOO's PRINT 27*, 1 (2012)

18. PANDIT, PRANAV, BANDIVDEKAR, R., GEEVARGHESE, G., PANDE, S., AND MANDKE, O. Tick infestation on wild snakes in northern part of Western Ghats of India. *Journal of medical entomology 48*, 3 (2011), 504–507

19. PANDE, S., PANDIT, P, PONKSHE, A., MONE, R., PAWAR, S., AND MISHRA, A. Behavioural and virological studies on a rescued Oriental White-backed Vulture Gyps bengalensis from western Maharashtra, India. *Journal of Threatened Taxa 3*, 1 (2011), 1490–1492

20. PANDIT, PRANAV, PAGE, J., KAHSNIS, M., AND PONKSHE, A. Spirurid infestation in Green Keelback (Macropisthodon plumbicolor) : a case study. *Newsletter of the South Asian Reptile Network* (2010), 19

21. PAWAR, S., PANDE, S., JAMGAONKAR, A., KORATKAR, S., PAL, B., RAUT, S., NANAWARE, M., RAY, K., CHAKRABARTI, A., KODE, S., THITE, V., KHUDE, M., RANDIVE, S., BASU, A., PAWASHE, A., PONKSHE, A., PANDIT, PRANAV, AND DESHPANDE, P. Avian influenza surveillance in wild migratory, resident, domestic birds and in poultry in Maharashtra and Manipur, India, during avian migratory season 2006–07. *Current Science* (2009), 550–554

Articles under communication

1. R. D. Shrestha, D. Karmacharya, M. Bista, A. Sharma, R. Napit, S. Pradhan, S. Raut, J. Joshi, J. Joshi, B. Shrestha, A. Shrestha, D. Puri, C. C. W. Young, N. R. Gardner, P S. Pandit, B. R. Smith, T. Goldstein, J. Mazet, C. K. Johnson. One Health surveillance at the human-wildlife interface in rural Nepal *[Under review]*

2. D. Zimmerman, E. Hardgrove, S. Sullivan, S. Mitchell, E. Kambale, J. Nziza, B. Ssebide, R. Muvunyi, C. Shalukoma, M. Cranfield, P. Pandit, S. P. Troth, T. Callicrate, P. Miller, K. Gilardi, and R. Lacy, Projecting the impact of an ebola virus outbreak on an endangered mountain gorilla population *[Under review]*

Manuscripts under preparation

1. P. S. Pandit, A. Packham, M. Aleman, C. Finno, K. Woolard, M. Plancarte, A. Marsh, W. Smith, N. Pusterla. A fresh look at the SarcoFluor antibody test for the detection of specific antibodies to Sarcocystis neurona, agent of equine protozoal myeloencephalitis *[Under preperation]*

Thesis and book chapters

1. PANDIT, PRANAV. Regional spread and control of Q fever in dairy cattle herds. PhD thesis, ONIRIS- École nationale vétérinaire, agroalimentaire et de l'alimentation …, 2015

2. MAHABAL, A., PANDE, S., PANDIT, PRANAV, AND PONKSHE, A. Zool. Surv. India Fauna of Maharashtra, State Fauna Series, 20 (Part 1) : 147-188, 2011

Editorial contributions : visit my Web of Science/Publons profile here peer review details.
Review Editor on the Editorial Board of Veterinary Infectious Diseases (specialty section of **Frontiers in Veterinary Science**)
Peer-reviewed for :
Nature Communications, Proceedings of Royal Society B, Ecological Modeling, Zoonosis and Public Health, Animal Behavior, Preventive Veterinary Medicine, PeerJ, Social Science and Medicine, PLOS Neglected Tropical Diseases, Applied and Environmental Microbiology, Journal of Wildlife Diseases

🎤 SELECTIVE TALKS

1. **Pandit, P.**, Invited panelist for : Mini-Symposium on Digitization and Innovation in Animal Health. Center for Analytics and Technology in Society,University of Maastricht and University of California Davis. 9 November 2021, UC Davis, CA, USA.

2. **Pandit, P.**, Doyle, M., Young, C., Johnson, C. Machine learning for large scale surveillance of emerging zoonotic viruses in wildlife. 2nd Bay Area Ecology and Evolution of Infectious Disease Conference, 29 Feb 2020, UC Berkeley, CA, USA.

3. **Pandit, P.**, Kelly, T., Dombrowskli, D., Carion, N., Rogers, K., McMilin, S., Clifford, D., Riberi, A., Ziccardi, M., Johnson, C.K. Early detection of health events through temporal anomalies in wildlife admissions at rehabilitation centers. 68th Annual International Conference of the Wildlife Disease Association, 4 - 9 Aug 2019, Tahoe City, CA USA.

4. **Pandit, P.**, Doyle, M., Young, C., Johnson, C. Where to look for Flaviviruses in Wildlife? Machine learning to inform large scale surveillance of wildlife for emerging Flaviviruses. 68th Annual International Conference of the Wildlife Disease Association, 4 - 9 Aug 2019, Tahoe City, CA USA.

5. **Pandit, P.**, Mazet, J.K., Johnson, C.K. PREDICT Project : Global Insights. Workshop on Zoonotic Disease Pandemic Preparedness for South Asia, Using One Health Platform. Kathmandu, Nepal, 13-15th March 2017.

6. **Pandit, P.**, Ezanno, P., Vergu, E., Dutta, B.L, Arnoux, S., Beaudeau, F., Hoch, T. Dynamic between herd model for Q-fever spread in dairy cattle to quantify the impact of different transmission pathways at the regional scale. 2015 Annual meeting of the Society for Veterinary Epidemiology and Preventive Medicine (SVEPM 2015), 25-27th March 2015.

🔬 RESEARCH EXPERIENCE

Current 2025	Climate-driven models to predict future risk of arenavirus spillover, WELLCOME TRUST, UK, ❯ Develop a semi-automatic data collection pipeline for key datasets associated with arenaviruses : which will include detections of viruses in vertebrate hosts, spatiotemporal distribution of human cases validated through regional experts and associated ecological metadata. ❯ Develop climate-based risk prediction models specific to new-world and old-world arenaviruses. Climate change · Ecological modeling · Health Policy · Online tool · *Arenavirus*
Current 2022	Model-Driven Data Fusion for Disease, TRIAD NATIONAL SECURITY LLC, LOS ALAMOS NATIONAL LABORATORY, ❯ Develop climate driven models for vectorborne viruses to understand effect of host diversity on disease transmission. West Nile virus · Climate change · Disease distribution models
Current 2021	Equine Protozoal Myeloencephalitis : Investigation of the diagnostic accuracy of the serum to CSF antibody titer ratio against Sarcocystis neurona, CENTER FOR EQUINE HEALTH, UC DAVIS, ❯ To investigate the diagnostic accuracy of serum/CSF antibody ratio to *S. neurona* using contemporary samples from horses with EPM, horses with non-EPM neurologic disorders, and healthy horses. Test validation · Sensitivity · Specificity · Likelihood ratio of positive test
Current 2020	Centers for Research in Emerging Infectious Diseases (CREID) : EpiCenter for Emerging Infectious Disease Intelligence (EEIDI), NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASE, ❯ The EpiCenter for Emerging Infectious Disease Intelligence (EEIDI) brings together a consortium of leading research partners to advance an understanding of viral emergence from wildlife in forests and rapidly urbanizing environments. ❯ The work will enhance preparedness for disease emergence events in the Congo and Amazon Basin forest regions and support response efforts at the source of emergence. Our multidisciplinary team has expertise in infectious disease epidemiology, virology, human and animal health, medical entomology, disease modeling, and capacity strengthening. Disease ecology · Disease modeling · Data management · Database development · Surveillance
2020 2016	PREDICT 2 Pandemic Influenza and Other Emerging Threats, USAID, ❯ The goal of the project was to characterize the biological, ecological, and behavioral risk of zoonotic viral transmission and evolution among wild animals, amplification in livestock, and spread using the One Health approach to disease surveillance and control. ❯ Developed collaborative surveillance network with host country governments in 30 resource-limited countries. Disease surveillance · Wildlife health · Risk prediction · One Health

2017	Modeling Health Capacity and Governance for Zoonotic Disease Outbreak Prediction, DEFENSE THREAT REDUCTION AGENCY, DoD
2016	❯ This study provided a data-driven framework for zoonotic disease prediction and applications for data sharing to estimate the risk of zoonotic disease spillover.

Machine learning   Zoonotic risk prediction   Risk prediction   Bio-surveillance

2017	Anticipating a sylvatic cycle for Zika virus : Identifying animal hosts in Latin America, VECTOR-BORNE DISEASE PILOT FUNDING PROGRAM–2017, UC Davis
2016	❯ A pilot study to survey and develop epidemiological data on the prevalence of Zika virus in wildlife hosts in South America.

Bio-surveillance   Mixed models

2015	MIHMES : Multi-scale modelling, from animal Intra-Host to Metapopulation, of mechanisms of pathogen spread to Evaluate control Strategies, EUROPEAN REGIONAL DEVELOPMENT FUND (ERDF),
2012	❯ Multi-scale modeling, from animal intra-host to metapopulation, of mechanisms of pathogen spread, to evaluate control strategies..

Agent-based mathematical modeling   Network models

💵 GRANTS AND CONTRACTS

Current research support

CLIMATE-DRIVEN MODELS TO PREDICT FUTURE RISK OF Arenavirus SPILLOVER   2022 - 2025
Digital Technology Development Award in Climate Sensitive Infectious Disease Modelling, The Wellcome Trust, UK

Principal investigator $659 318

MIDWEST VIRTUAL LABORATORY OF PATHOGEN TRANSMISSION IN HEALTHCARE SETTINGS (MVL-PATHS)   2022 - 2023
Centers for Disease Control, Building Mathematical Modeling Workforce Capacity to Support Infectious Disease and Healthcare Research

Co-Principal investigator $300 000

IMPACTS OF RAPID LANDSCAPE CHANGE AND BIODIVERSITY ON VIRUS HOST SPECIFICITY   2021 - 2026
National Science Foundation

Key personnel $2 500 000

EPICENTER FOR EMERGING INFECTIOUS DISEASE INTELLIGENCE   2020 - 2025
National Institute of Allergy and Infectious Diseases, Emerging Disease Research Centers grant. UO1

Lead disease ecology and modeling $8 171 076

CLIMATIC CONDITIONS AS A PREDICTOR FOR BRD IN PRE-WEANED DAIRY CALVES : A MACHINE LEARNING APPROACH.   2022 - 2023
United States Department of Agriculture

Co-investigator $20 000

PIPP PHASE 1:TRANS-DISCIPLINARY INNOVATION IN PREDICTIVE SCIENCE FOR EMERGING INFECTIOUS DISEASE AND SPILLOVER   2021 - 2023
National Science Foundation

Key personnel $1 000 000

Pending research support (Recent grant submissions)

CREATING THE CALIFORNIA WILDLIFE HEALTH COOPERATIVE (CWHC) TO MEET THE GOLDEN STATE'S INCREASING NEED FOR WILDLIFE HEALTH AND ZOONOTIC DISEASE SURVEILLANCE, MANAGEMENT AND RESPONSE CAPACITY   2022 - 2025
American Rescue Plan Act Zoonotic Disease Grant Program

Key Personnel $400 000

CREATING AN ALERTING SYSTEM FOR WILDLIFE MORBIDITY AND MORTALITY EVENTS   2022 - 2023
American Rescue Plan Act Zoonotic Disease Grant Program

Principal investigator $320 000

Previous research support

Anticipating a sylvatic cycle for Zika virus : Identifying animal hosts in Latin America.   2017 - 2018
Vector-borne disease Pilot Funding Program, UC Davis

Lead modeling | $25 000

PREDICT 2 Pandemic Influenza and Other Emerging Threats.   2014 - 2020
United States Agency for International Development

Postdoctoral fellow | Modeling and surveillance analytics | $121 000 000

Modeling Health Capacity and Governance for Zoonotic Disease Outbreak Prediction.   2016 - 2017
Defense Threat Reduction Agency DoD

Postdoctoral fellow | Modeling and surveillance analytics | $1 800 000

🎓 Teaching

Course teaching

Spring quarter	**Applied Vet Population Statistics** | VME 298/MPM 204 School of Veterinary Medicine, UC Davis, USA
	❯ Instructor on record
	❯ Developed advanced medical statistics class for graduate students from scratch.
	❯ Master of Preventive Veterinary Medicine (MPVM)
	❯ Student course evaluations : **4.10/5.00**
	Generalized linear models | Model selection | Count models | Survival analysis | Machine learning

Fall quarter	**Principles of Epidemiology** | EPI 205/MPM 205 School of Veterinary Medicine, UC Davis, USA
	❯ Co-lead (Instructor on record)
	❯ Course covering basics of epidemiology for graduate students
	❯ Master of Preventive Veterinary Medicine (MPVM), MPH, Graduate Group of Epidemiology
	❯ Student course evaluations : MPH :**4.60/5.00** ; MPVM :**4.46/5.00**
	Disease frequency | Properties of tests | Study Design | Bias | Surveillance

2022	**One Health Workforce Academies** | Epidemiology and Statistics modules, UC Davis, USA
	❯ Online asynchronous teaching course development
	❯ link : *One Health Workforce Academies*
	Introduction to Epidemiology | Properties of diagnostic tests | R for infectious disease epidemiology

2021 2016	**Mathematical modeling of infectious diseases** | EPI 277/PHR 277 School of Veterinary Medicine, UC Davis, USA
	❯ Agent based stochastic modeling and modeling disease
	❯ latency and heterogeneity
	❯ Student course evaluations : **4.67/5.00**
	Stochasticity | Agent based models | Python | Object oriented modeling

2021 2016	**Advanced Animal/human Health Leadership** | MPM 210 School of Veterinary Medicine, UC Davis, USA
	❯ Leadership development boot camp
	❯ Master of Preventive Veterinary Medicine
	Leadership | Communication | Science Policy

2021 2017	**Basic Foundations : Population Health** | VET 401 School of Veterinary Medicine, UC Davis, USA
	❯ Problem based learning exercise
	❯ Outbreak investigation
	Outbreak | PBL | Investigation steps

Guest lectures
and seminars

2021	**Disease and Society** | SAS 13, UC Davis, USA
	❯ SARS-CoV2 spread in a classroom setting
	Disease modeling | SARS-CoV2

2019	Infectious Diseases of Humans | IDI 141, UC Davis, USA

> ❯ Predicting New Epidemics in Infectious Diseases

Disease emergence   One Health

2019	Topics in Public Health | SPH 190, UC Davis, USA

> ❯ Seminar : Data driven models for targeted wildlife surveillance of emerging zoonotic diseases.

Modeling   Wildlife health   Livestock health

2019	Ecology, Evolution, and Conservation Biology (EECB) Colloquium, San Francisco State University, USA

> ❯ Where to look for Flaviviruses in Wildlife?

Flaviviruses   Wildlife Health

2014	Basic Epidemiology| ONIRIS, École Nationale Vétérinaire, Agroalimentaire et de l'Alimentation, Nantes, France

> ❯ Master MAN-IMAL One Health Program
> ❯ Sampling in descriptive studies

Sampling   Study design

🎓 Mentoring and Workshops

Student mentoring

> ❯ Masashi Yamada, DVM, MPVMc *(MPVM project advisor)*
> ❯ Amanda Marie Gonzalez, DVMc *(STAR-2022 project advisor)*

2019	Introduction to PREDICT data using R | School of Veterinary Medicine, UC Davis, USA

> ❯ Workshop leader
> ❯ A week-long workshop to train field teams from 17 countries to analyze USAID PREDICT data collected over five years.

R   Descriptive data analysis   Hypothesis generation

2020 2016	EcoHealthNet 2.0 : One Health Approach to disease ecology research and education | School of Veterinary Medicine, UC Davis, USA

> ❯ NSF funded program for undergraduate and graduate level global research coordination network to bring together research scientist.
> ❯ Mentoring of undergraduate and graduate level students working on projects related to emerging infectious disease ecology.

Disease ecology   Undergrad mentoring

🎓 Service

2021	SARS-CoV2 modeling in classroom setting, UC Davis,

> ❯ Worked closely with the UC Davis Chancellor to understand risk of COVID spread due to in-person classes for Fall 2021 Quarter
> ❯ Developed COVID-19 testing policy using mathematical model describing spread of COVID-19 in classroom setting.
> ❯ COVID spread in classroom setting.

2020	Developed a dashboard compiling live daily SARS-CoV2 cases in counties in California| School of Veterinary Medicine, UC Davis, USA

> ❯ Developed a dashboard showing composite numbers of nearby counties of UC Davis
> ❯ Dean's office at the School of Veterinary Medicine UC Davis used it to track COVID-19 cases from areas where students and staff live.
> ❯ SARS-CoV2 cases in Californian counties.

🎙 Science Communication and media coverage

Selected media coverage

1. Podcast : CapRadio : Insight With Vicki Gonzalez : UC Davis Virus Spillover Tool
2. The New York Times : Which Animal Viruses Could Infect People ? Computers Are Racing to Find Out.
3. Wired Magazine : This AI Helps Detect Wildlife Health Issues in Real Time
4. How Wildlife Rescuers Can Protect Public Health
5. National Geographic : July 2021 Viral Spillover
6. Hindustan Times : Deforestation, exploitation of wildlife leads to pandemics like Covid-19
7. Understanding zoonotic diseases : 'Humans tend to be naive to emerging viruses'
8. Geographical Magazine : Predicting the unidentified carriers of zika, dengue and yellow fever
9. Earth Journalism Network webinar : How do scientists detect and prevent viruses with pandemic potential from emerging ?
10. From Animals to Humans : Understanding Zoonotic Diseases : Center for Science and Environment, Down to Earth, New Delhi.

❝ References

Christine Kreuder Johnson, VMD, Ph.D.
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