



Jose Pablo Gomez-Vazquez

DVM, MPVM, PhD.

website: <http://www.spablo-temporal.network>.

keywords: stochastic modeling; spatiotemporal statistics; agent based modeling; graph theory; data visualization

Education:

PhD in Epidemiology (2017-2021)

University of California Davis, California, United States

Master in Preventive Veterinary Medicine (2016-2017)

University of California Davis, California, United States

Medicina Veterinaria y Zootecnia [Veterinary Medicine & Zootechnics] (2010-2015)

UANL, Escobedo N.L., Mexico

Profesional Experience:

Post doctoral researcher - Department of Veterinary Medicine and Epidemiology, University of California Davis. Davis, California, United States, *January 2022 - Current*

Graduate Student Researcher - Department of Veterinary Medicine and Epidemiology, University of California Davis. Davis, California, United States, *June 2020 - December 2021*

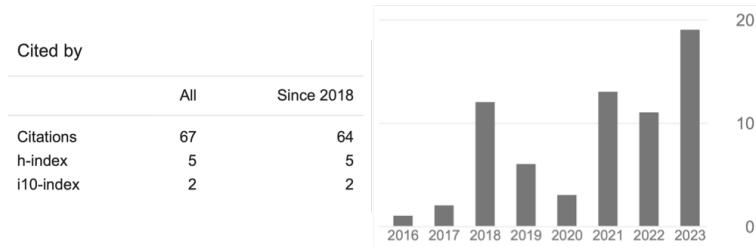
Graduate Student Researcher - Department of Population Health and Reproduction, University of California Davis. Davis, California, United States, *August 2019 - June 2020*

Graduate Student Researcher - One Health Institute, University of California Davis. Davis, California, United States, *January 2018 - March 2018*

Research experience:

Publications:

- Ngoshe YB, Etter E, **Gomez-Vazquez JP**, Thompson PN. Knowledge, Attitudes, and Practices of Communal Livestock Farmers regarding Animal Health and Zoonoses in Far Northern KwaZulu-Natal, South Africa. International Journal of Environmental Research and Public Health. 2023; 20(1):511. <https://doi.org/10.3390/ijerph20010511>



- Ball EE, Pesavento PA, Van Rompay KKA, Keel MK, Singapuri A, **Gómez-Vázquez JP**, et al. (2022) Zika virus persistence in the male macaque reproductive tract. *PLoS Negl Trop Dis* 16(7): e0010566. <https://doi.org/10.1371/journal.pntd.0010566>
- **Gómez-Vázquez, J.P.**, García, Y.E., Schmidt, A.J. et al. Testing and vaccination to reduce the impact of COVID-19 in nursing homes: an agent-based approach. *BMC Infect Dis* 22, 477 (2022). <https://doi.org/10.1186/s12879-022-07385-4>
- Maier GU, Breitenbuecher J, **Gómez JP**, Samah F, Fausak E, Van Noord M. Vaccination for the Prevention of Neonatal Calf Diarrhea in Cow-Calf Operations: A Scoping Review. *Vet Anim Sci*. 2022 Feb 19;15:100238. doi: 10.1016/j.vas.2022.100238. PMID: 35243126; PMCID: PMC8866090.
- Emery CB, Outerbridge CA, Knych HK, Lam ATH, **Gómez-Vázquez JP**, White SD. Preliminary study of the stability of dexamethasone when added to commercial veterinary ear cleaners over a 90 day period. *Vet Dermatol*. 2021 Feb 2. doi: 10.1111/vde.12924. Epub ahead of print. PMID: 33528860.
- **Gómez-Vázquez, J. P.**, Quevedo-Valle, M., Flores, U., Portilla Jarufe, K., & Martínez-López, B. (2019). Evaluation of the impact of live pig trade network, vaccination coverage and socio-economic factors in the classical swine fever eradication program in Peru. *Preventive Veterinary Medicine*, 162(May 2018), 29–37. <https://doi.org/10.1016/j.prevetmed.2018.10.019>
- Garcia-Mazcorro JF, Castillo-Carranza SA, Guard B, **Gómez-Vázquez JP**, Dowd SE, Brighthsmith DJ. 2016. Comprehensive molecular characterization of bacterial communities in feces of pet birds using 16S marker sequencing. *Microbial Ecology* Epub ahead of print Aug 27 2016 DOI 10.1007/s00248-016-0840-7.

Projects

- USDA-NIFA:EEID, Unraveling the effect of contact networks and socio-economic factors on the evolution, emergence and spread of infectious diseases at the wildlife-domestic interface, 1/1/2019-12/31/2022 (Co-Investigator)
- NSF, BIGDATA:IA, A multi-level approach for global optimization of the surveillance and control of infectious disease in the swine industry, 1/1/2019- 12/31/2022 (Co-Investigator)
- NSF, Convergence Accelerator – Track D: Data-driven disease control and prevention in Veterinary Health, 9/1/2020 – 5/31/2023 (Co-Investigator).
- CBTS – Texas A&M, User-friendly online dashboard for the assessment of the risk of African swine fever virus introduction, exposure and potential spread into the United States, 1/4/2022-31/3/2024 (Co-Investigator)
- USDA-NIFA: Development of a precision epidemiology web-based tool for livestock disease management, 1/6/2021-31/5/2024

Participation at conferences

Invited speaker:

- Simulation modeling for the evaluation of the introduction and spread of ASF, 2nd Working meeting: The role of wildlife in potential spread of ASFv in the American Continent, GF-TADS, WOAH, March 2023
- Evaluation of intervention strategies for prevention and diseases control (original title: Evaluación de estrategias de control y prevención de enfermedades transfronterizas mediante el uso de modelos de simulación), 30^a Reunión anual CONASA, October 2022
- Application of simulation modeling for FMD emergency response (original title: Aplicación de modelaje para simular una emergencia de fiebre aftosa), SEMINARIO INTERNACIONAL PRE COSALFA 49 - “En el contexto de un estatus de libre sin vacunación, PAHO, WHO”, August 2022

Oral Presentations:

- An open access framework for quantitative rapid risk assessment, *International Symposium in Veterinary Epidemiology and Economics (ISVEE) 16, Halifax, Canada, 2022.*
- A framework for a quantitative rapid risk assessment open access tool, *Congreso Panamericano de Ciencias Veterinarias, November 2021, Virtual conference.*
- Spatio-Temporal analysis of the trade network of the cattle industry in California, October 2019, *GeoVet 2019, Davis, California, United States.*
- Spatio-Temporal analysis for the CSF occurrence in Peru (original title: Evaluación espacio-temporal de factores de riesgo para la ocurrencia de peste porcina clásica en Perú), October 2017, “*III SIEVMP (Iberoamerican society of veterinary epidemiology and preventive medicine) symposium*”, Valdivia, Chile.

Poster presentations:

- Spatial-explicit agent-based modeling to inform targeted surveillance and emergency response against foot-and-mouth disease in the last phase of eradication programs, *International Symposium in Veterinary Epidemiology and Economics (ISVEE) 16, Halifax, Canada, 2022.*
- Evaluation of vaccination and control strategies of porcine reproductive and respiratory syndrome (PRRS) in US sow farms using an agent-based approach, *International Symposium in Veterinary Epidemiology and Economics (ISVEE) 16, Halifax, Canada, 2022.*
- Spatial Explicit Agent based model to evaluate intervention strategies for FMD in Ecuador, *Congreso Panamericano de Ciencias Veterinarias, November 2021, Virtual conference*
- Identification of areas at risk for low immunity herds against Foot-and-Mouth disease virus in Ecuador using maximum entropy models, November 2018, “*International Symposium of Veterinary Epidemiology and Economics 15*”, Chiang Mai, Thailand
- Live pig trade network modeling and prediction using Network analysis and exponential random graph models in Peru, June 2018, *25th International Pig Veterinary Society Congress*, Chongqing Yuelai, China

- Bioinformatics tools for gastrointestinal microbiota analysis (original title: Herramientas bioinformáticas para el estudio de la microbiota intestinal), October 2015, “XXVIII Congreso Nacional de Investigación en Medicina UANL” (National symposium of Medical research UANL), Monterrey N.L., Mexico
- Metabolic profiles of microbiome communities in pet bird feces (original title: Perfil metabólico de comunidades microbianas en heces de aves en cautiverio), October 2015, “4th KALAANKAB Symposium”, Villahermosa, Tabasco, Mexico

Organization

- Management and local organizing team, *GeoVet 2019, Davis, California, United States*
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Teaching Experience:

Graduate level courses:

Health and Ecological Risk Analysis (EPI 224), Co-Instructor - University of California Davis. Davis, California, United States, *March 2022 - June 2022*

Spatial epidemiology (EPI 223), Teaching assistant - University of California Davis. Davis, California, United States, *March 2019 - June 2019*

Mathematical Statistics (EPI 203), Teaching assistant - University of California Davis. Davis, California, United States, *January 2019 - March 2019*

Medical statistics (MPM 204), Teaching assistant - University of California Davis. Davis, California, United States, *January 2018 - March 2019*

Workshops, trainings and other courses developed:

- Using R for reproducible research in animal health, offered at:
 - *Chattogram Veterinary and Animal Sciences University, Chattogram, Bangladesh*, May 2023
 - *The Ministry of Agriculture, Land and Fisheries MALF, Port of Spain, Trinidad and Tobago*, May 2023
- Interactive data visualization of complex systems with R shiny, offered at:
 - *Bayarea Geo, University of San Francisco*, October 2022, 6 participants.
 - *Universidad Nacional Autonoma de Mexico, Virtual workshop*, March 2022, 8 participants.
- Spatiotemporal analysis of social networks, offered at:
 - *International Conference in Animal Health Research (ICAHS), Copenhagen, Denmark*, May 2022 17 participants
 - *ASF NIFAF virtual workshop*, 40 participants.
 - *Universidad Nacional Autonoma de Mexico, Mexico City, Mexico*, November, 2019, 20 participants.
 - *Geovet 2019, University of California Davis*, October 2019, 9 participants
 - *Maptimed Davis, University of California Davis*, February 2019, 25 participants

Other workshops: Other workshops provided in the past have covered concepts in statistical programming, data visualization and spatial analysis with open access tools. Some of these workshops include:

- Introduction to data processing and analysis with R [original title: Fundamentos para el manejo y análisis de datos con R], *Instituto Nacional de Investigaciones Forestales Agrícolas y Pecuarias, virtual workshop*, May 2022, ~20 participants.
 - Getting started with R for inference in epidemiology, *Agencia de Regulación y Control Fito y Zoosanitario - AGROCALIDAD, Quito, Pichincha, Ecuador*, August 2018, 12 participants.
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Honors

- Latin America & Caribbean Summer Field Research Award, Hemispheric Institute on the Americas, University of California, Davis, 2019.
- UC MEXUS-Conacyt Doctoral Fellowship, 2017.
- CONACYT-Innovation and Transfer of Technology (I2T2) Graduate fellowship, 2016