



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

Professional 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:



- Muñoz-Pérez C, Martínez-López B, **Gómez-Vázquez JP**, Aguilar-Vega C, Bosch J, Ito S, Martínez-Avilés M, Sánchez-Vizcaíno JM, Quantitative risk assessment of African swine fever introduction into Spain by legal import of swine products, Research in Veterinary Science, Volume 163, 2023, 104990, ISSN 0034-5288, <https://doi.org/10.1016/j.rvsc.2023.104990>.
- Ngoshe YB, Etter E, **Gómez-Vázquez 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, Brighsmith 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 prevencion de enfermedades transfronterizas mediante el uso de modelos de simulacion), 30^a Reunión anual CONASA, October 2022
- Application of simulation modeling for FMD emergency response (original title: Aplicacion 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: Evaluacion 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 titel: 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:
 - *Universidad Nacional Autonoma de Mexico (UNAM), Mexico city, Mexico*, September 2023
 - *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 NIFA 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
 - *Maptime 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 analisis de datos con R], *Instituto Nacional de Investigaciones Forestales Agricolas 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-Inovation and Transfer of Technology (I2T2) Graduate fellowship, 2016