

# DANIEL ROMERO-ALVAREZ, M.D., Ph.D.

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## EDUCATION

**Doctor of Philosophy (PhD).** Department of Ecology & Evolutionary Biology and Biodiversity Institute, University of Kansas, Lawrence, Kansas, US (2017–2023).

Supervisor: A. Townsend Peterson PhD.

**Medical Doctor (MD).** School of Medicine, Universidad Central del Ecuador, Quito, Ecuador. Official registry number: 1005-12-1148208. (2005–2012).

## PROFESSIONAL EXPERIENCE

**Graduate research assistant (GRA).** Department of Ecology and Evolutionary Biology, University of Kansas, Lawrence, Kansas, US (2020–2023).

Description: Digital epidemiology and ecology of infectious diseases. Fieldwork related with tick collection in Kansas, US.

Supervisor: Folashade Augusto PhD, A. Townsend Peterson PhD.

**Graduate teaching assistant (GTA).** Department of Ecology and Evolutionary Biology, University of Kansas, Lawrence, Kansas, US (2017–2020).

Description: Instructor of Human Anatomy Dissection Laboratory.

Supervisor: Víctor González PhD.

**Epidemiologist.** Hospital General Enrique Garcés, Quito–Ecuador (2016–2017).

Description: Hospital data management and infectious disease control.

Supervisor: Viviana Quezada MD. Path.

**Research assistant.** Unit of Molecular Parasitology & Tropical Medicine, Centro de Biomedicina, School of Medicine. Universidad Central del Ecuador (2012–2016).

Description: Medical direction for care and diagnostic of leishmaniasis patients. Collection of samples and vectors of infectious diseases: fecal samples, freshwater fish and crabs, and sand flies in the tropical forest. Writing of research papers for projects of leishmaniasis, enteroparasites, paragonimiasis, and amphimeriasis.

Supervisors: Manuel Calvopiña PhD, Hiromu Sugiyama PhD, Yoshihisa Hashiguchi PhD.

**Medical assistant.** Hospital Carlos Andrade Marín, Quito–Ecuador (2012).

Description: Epidemiological surveillance of hospitalized patients diagnosed with Methicillin Resistant *Staphylococcus aureus* (MRSA) infections.

Supervisor: Jeannette Zurita MSc.

## ADDITIONAL TRAINING

**Genomics of *Mycobacterium leprae*.** Department of Microbiology, Immunology and Pathology. Colorado State University, Fort Collins, Colorado, US (February, 2023).

Description: Comparative genomics of *M. leprae*, phylogenies, and primer design.

Supervisor: Charlotte Avanzi, PhD.

**Remote Sensing.** Information Systems and Modeling (A-1). Los Alamos National Laboratory, New Mexico, US (June-August 2020, June-July 2021, June-August 2022, July-September 2023).

Description: Geographical information system (GIS) in R with applications for satellite data using Google Earth Engine.

Supervisors: Carrie A. Manore PhD, Sara del Valle PhD.

**Digital epidemiology.** Information Systems and Modeling (A-1). Los Alamos National Laboratory, New Mexico, US (June 2018 and 2019).

Description: Digital surveillance for arbovirus diseases (Dengue, Chikungunya and Zika) with focus on Google Health Trends data.

Supervisors: Carrie A. Manore PhD, Sara del Valle PhD.

**Geospatial epidemiology.** Department of Veterinary Population Medicine, University of Minnesota (February, 2016).

Description: One-month internship in ecological niche modeling applied to invasive biology and disease forecast.

Supervisors: Luis E. Escobar PhD, Nicholas Phelps PhD.

**Molecular biology.** Unit of Molecular Parasitology & Tropical Medicine, Centro de Biomedicina, School of Medicine, Universidad Central del Ecuador (August, 2015).

Description: Update and workshop on PCR–RFLP applied to the identification of trematodes.

Supervisor: Hiromu Sugiyama PhD.

**Molecular biology.** Department of Parasitology at the National Institute of Infectious Diseases. Tokyo–Japan (November, 2013).

Description: Collection of freshwater crabs and identification of *Paragonimus* spp. through molecular techniques.

Supervisor: Hiromu Sugiyama PhD.

## AWARDS/GRANTS

- The University of Kansas, Department of Ecology and Evolutionary Biology, **Doctoral Student Research Funds** (April, 2022).

- The University of Kansas, Biodiversity Institute. **Leaman D. Harris Biodiversity Scholarship Fund Academic 2021-2022 Solicitation** (November, 2021).
- Universidad de las Américas, Quito, Ecuador. **IX Convocatoria a proyectos de investigación. Incriminación e identificación molecular de *Mycobacterium leprae* y *M. lepromatosis* causantes de lepra en humanos, en tejidos de armadillos en Ecuador.** (July, 2021).
- The University of Kansas, Biodiversity Institute. **Ornithology grants** (March, 2021).
- The University of Kansas, Biodiversity Institute. **Panorama Small Grant Program–Spring 2021 competition** (March, 2021).
- CAPES (Coordenação de aperfeiçoamento de pessoal de nível superior, Portugues), Brazil: **“Prevention and control of outbreaks, endemic, epidemic, and pandemic diseases”**, call n° 9/2020, process n° 23038.003012/2020-16. Mapping risk areas of zoonotic epidemics in Brazil in the environmental, socio-demographic, epidemiologic, and climate change context. (2020–2023).
- The University of Kansas, Biodiversity Institute. **Panorama Small Grant Program–Spring 2020 competition** (March, 2020)
- Los Alamos National Laboratory. **Center for Nonlinear Studies (CNLS) Student Summer Program 2020** (February, 2020).
- The University of Kansas, Department of Ecology and Evolutionary Biology. **Summer Research Support** (May, 2018, 2019).
- The University of Kansas, College of Liberal Arts and Sciences. **Research Excellence Initiative – Time Sensitive and Urgency Funds** (February, 2019).
- The University of Kansas. GIS Day Poster Competition. Potential distribution of a newly *Bacillus* species causing anthrax in African rainforests. **First place & Crowd Favorite** (November, 2018).
- The University of Kansas, College of Liberal Arts and Sciences. **Research Excellence Fund in the College – Conference Sponsorship Fund (CME)** (February, 2018).

## PUBLICATIONS | <https://goo.gl/wv03cc>

1. Rodríguez-Hidalgo R, Calvopiña M, **Romero-Alvarez D**, Montenegro-Franco M, Pavon D, Pointier JO, Benítez-Ortiz W, Celi-Erao M (2023). Triclabendazole efficacy, prevalence, and re-infection of *Fasciola hepatica* in bovine and ovine naturally infected in the Andes of Ecuador. *Veterinary Parasitology: Regional Studies and Reports*, 47: 100947 (IF = 1.4).
2. **Romero-Alvarez D**, Torres I, Lopez-Cevallos D. Doctors for the people? The problematic distribution of rural service year doctors in Ecuador. *Health Policy & Planning*, 38: 851–861 (IF = 3.2).
3. **Romero-Alvarez D**, Escobar LE, Auguste AJ, Del Valle S, Manore CA (2023). Transmission risk of Oropouche fever across the Americas. *Infectious Diseases of Poverty*, 12: 47 (IF = 10.49).

4. Torres I, Stewart-Ibarra AM, Borbor-Cordova M, **Romero-Alvarez D** (2023). Health and climate challenges in Ecuador. *The Lancet Regional Health – Americas*, 22: 100501 (IF = NA).
5. **Romero-Alvarez D**, Garzón-Chávez D, Jackson M, Avanzi C, Peterson AT (2023). *Mycobacterium leprae* in armadillo tissues from museum collections, United States. *Emerging Infectious Diseases*, 29: 622–626 (IF = 16.162).
6. Calvopiña M, **Romero-Alvarez D**, Vásconez E, Valverde-Muñoz G, Trueba G, Garcia-Bereguain MA, Alberto-Orlando S. Leptospirosis in Ecuador: current status and future prospects. *Tropical Medicine and Infectious Disease*, 8: 202 (IF = 3.59).
7. Carrington SJ, **Romero-Alvarez D**, Coral-Almeida M, Vela A, Henríquez-Trujillo AR, Mascialino G (2023). Ethnodemographic characterization of stroke incidence and burden of disease in hospital discharge records in Ecuador. *Frontiers in Neurology*, 14: 1059169 (IF = 4.003).
8. Torres I, **Romero-Alvarez D**, Borbor-Cordova M, Anna M. Stewart-Ibarra. Lancet Countdown: Ecuador policy brief (2023). *The Lancet Countdown South America* (Peer reviewed but non-academic). Available at: <https://www.lancetcountdown.org/resources/>.
9. Calvopiña M, **Romero-Alvarez D**, Guamán-Charco E, Ramírez K, Dávalos F, Chiliquinga P, Villa-Soxó S, Oña-Vistin R (2023). Epidemiology and clinical features of venomous snake bites in the Northern Amazon of Ecuador (2017-2021). *Biomedica*, 43: 1 (IF = 1.173).
10. Bastidas-Caldes C, **Romero-Alvarez D**, Valdez-Vélez V, Morales RD, Montalvo-Hernández A, Gomes-Dias C, Calvopiña M (2022). Extended-Spectrum Beta-lactamases producing *Escherichia coli* in South America: a systematic review with a One Health perspective. *Infection and Drug Resistance*, 15: 5759-5779 (IF = 1.033).
11. Bandara S, Baral P, Joshi A, Muhia J, Rahman-Shepherd A, Adhikari P, Bayingana A, Bookholane H, Changyit-Levin Y, Dada S, Dutta R, Essar MY, Evaborhene NA, Krugman D, Kumar R, Manoj M, Mathewos K, Olson N, Osborne R, **Romero-Alvarez D**, Tun ZM, Wong BLH (2022). Open Letter to G7 and G20 leaders: resolve global crises to secure our future. *Nature Medicine*, 28: 1974-1975 (IF = 87.2).
12. Hall CM, **Romero-Alvarez D**, Martz M, Santana-Propper E, Versluis L, Guidry K, Jiménez L, Alkische A, Busch JD, Maness T, Stewart J, Sidwa T, Gee JE, Hoffmaster AR, Sahl JW, Salzer JS, Peterson AT, Kieffer A, Wagner DM (2022). *Burkholderia pseudomallei* appears rare in the environment in Texas suggesting the risk of contracting melioidosis from the environment in the continental U.S. is low. *PLoS One*, 17: e0270997 (IF = 3.75).
13. **Romero-Alvarez D**, Fulk A, Abu-Saymeh Q, Saint Onge JM, Peterson AT, Agosto F (2022). Using Google Health Trends to investigate COVID-19 incidence in Africa. *PLoS One*, 17: e0269573 (IF = 3.75).
14. **Romero-Alvarez D**, Garcés MS, Calvopiña M, Mena-Mena P, Garzón-Chávez D (2022). The upcoming mental health unrest in Ecuador. *Práctica Familiar Rural*, 7: 237 (IF = NA).

15. Calvopiña M, Vásconez E, Barreto A, Coral-Almeida M, **Romero-Alvarez D**, Miguel Angel Garcia-Bereguain, Alberto Orlando (2022). Leptospirosis: morbidity, mortality and spatial distribution of hospitalized cases in Ecuador. A nationwide study 2000-2020. *PLoS Neglected Tropical Diseases*, 16: e0010430 (IF = 4.33).
16. Augusto FB, Erovenko IV, Fulk A, Abu-Saymeh Q, **Romero-Alvarez D**, Ponce J, Sindi S, Ortega O, Onge JMS, Peterson AT (2022). To isolate or not to isolate: the impact of changing behavior on COVID-19 transmission. *BMC Public Health*, 22: 138 (IF = 3.18).
17. Gorris ME, Bartlow AW, Temple SD, **Romero-Alvarez D**, Shutt DP, Fair JM, Kaufeld KA, Del Valle SY, Manore CA (2021). Updated distribution maps of predominant *Culex* mosquitoes across the Americas. *Parasites & Vectors*, 14: 547 (IF = 3.88).
18. **Romero-Alvarez D**, López-Cevallos DF, Torres I (2021). Uninformative and unuseful: why it is necessary to actively challenge COVID-19 antibody testing postvaccination. *Public Health*, 199: 32-33 (IF = 2.43).
19. Garzon-Chavez D, **Romero-Alvarez D**, Bonifaz M, Gaviria J, Mero D, Gunsha N, Perez A, Garcia M, Espejo H, Espinosa F, Ligña E, Espinel M, Quentin E, Teran E, Mora F, Reyes J (2021). Adapting for the COVID-19 pandemic in Ecuador, a characterization of hospital strategies and patients. *PLoS One*, 16: e0251295 (IF = 3.24).
20. **Romero-Alvarez D**, Garzon-Chavez D, Espinosa F, Ligña E, Terán E, Mora F, Espín E, Albán C, Galarza JM, Reyes J (2021). Cycle threshold values in the context of multiple RT-PCR testing for SARS-CoV-2. *Journal of Risk Management and Healthcare Policy*, 14: 1311 (IF = 3.2).
21. Banks WE, Moncel M-H, Raynal J-P, Cobos ME, **Romero-Alvarez D**, Woillez M-N, Faivre J-P, Gravina B, d'Errico F, Locht J-L (2021). An ecological niche shift for Neanderthal populations in Western Europe 70,000 years ago. *Scientific Reports*, 11: 5346 (IF = 3.998).
22. Vignoles A, Banks WE, Klaric L, Kageyama M, Cobos ME, **Romero-Alvarez D** (2021). Investigating relationships between technological variability and ecology in the Middle Gravettian (ca. 32-28 ky cal. BP) in France. *Quaternary Science Reviews*, 253: 106766 (IF = 4.571).
23. Mattingly S, Hardesty E, Chovanec K, Cobos ME, Garcia J, Grizzle M, Huerta A, Ohtake J, **Romero-Alvarez D**, Gonzalez VH (2020). Differences between attached and detached cadaveric prosections on students' identification ability during practical examinations. *Anatomical Sciences Education* (IF = 3.759).
24. **Romero-Alvarez D**, Valverde-Muñoz G, Calvopiña M, Rojas M, Cevallos W, Kumasawa H, Takagi H, Sugiyama H (2020). Liver fluke infections by *Amphimerus* sp. (Digenea: Opisthorchiidae) in definitive and fish intermediate hosts in Manabí province, Ecuador. *PLoS*

*Neglected Tropical Diseases*, 14: e0008286 (IF = 4.487)

25. Simões M, **Romero-Alvarez D**, Nuñez-Penichet C, Jiménez L, Cobos ME (2020). General theory and good practices in ecological niche modeling: a basic guide. *Biodiversity Informatics*, 15: 67–68 (IF = NA).
26. **Romero-Alvarez D**, Parikh N, Osthus D, Martinez K, Generous N, Del Valle S, Manore CA (2020). Google Health Trends performance reflecting dengue incidence for the Brazilian states. *BMC Infectious Diseases*, 20: 1–15 (IF = 2.951).
27. **Romero-Alvarez D**, Peterson AT, Salzer JS, Pittiglio C, Shadomy S, Traxler R, Vieira AR, Bower WA, Walke H, Campbell LP (2020). Potential distributions of *Bacillus anthracis* and *Bacillus cereus* biovar *anthracis* causing anthrax in Africa. *PLoS Neglected Tropical Diseases*, 14: e0008131 (IF = 4.487).
28. Ahadji-Dabla KM, **Romero-Alvarez D**, Djègbè I, Amoudji AD, Apétogbo YG, Djouaka R, Oboussoumi KF, Aawi A, Atcha-Oubou T, Peterson AT, Ketoh GK (2020). Potential roles of environmental and socio-economic factors in the distribution of insecticide resistance in *Anopheles gambiae sensu lato* (Culicidae: Diptera) across Togo, West Africa. *Journal of Medical Entomology*, 57: 1168-1175 (IF = 1.907).
29. Calvopina M, Atherton R, **Romero-Alvarez D**, Castaneda B, Valverde-Muñoz G, Cevallos W, Izurieta R (2019). Identification of intestinal parasite infections and associated risk factors in indigenous Tsáchilas communities of Ecuador. *International Journal of Academic Medicine*, 5: 171–179 (IF = NA).
30. Peterson AT, Anderson RP, Cobos ME, Cuahutle M, Cuervo-Robayo A, Escobar LE, Fernandez M, Jiménez-García D, Lira-Noriega A, Lobo JM, Machado-Stredel F, Martínez-Meyer E, Nuñez-Penichet C, Nori J, Osorio-Olvera L, Rodríguez T, Rojas-Soto O, **Romero-Alvarez D**, Soberón J, Varela S, Yañez-Arenas C (2019). Curso modelado de nicho ecológico, versión 1.0 [Spanish]. *Biodiversity Informatics*, 14: 1–7 (IF = NA).
31. Villacís JE, Bovera M, **Romero-Alvarez D**, Cornejo F, Albán V, Trueba G, Dorn HF, Reyes JA (2019). NDM-1 carbapenemase in *Acinetobacter baumannii* Sequence Type 32 in Ecuador. *New Microbes and New Infections*, 29: 100526 (CiteScore = 2.06).
32. Peterson AT, Anderson R, Beger M, Bolliger J, Brotons L, Burrige C, Cobos ME, Cuervo-Robayo A, Minin ED, Diez J, Elith J, Embling C, Escobar LE, Essl F, Feeley K, Green D, Hawkes L, Jiménez L, Jiménez-García D, Knop E, Kühn I, Lahoz-Monfort J, Lira-Noriega A, Lobo JM, Loyola R, Nally RM, Machado-Stredel F, Martínez-Meyer E, McCarthy M, Merow C, Nori J, Nuñez-Penichet C, Osorio-Olvera L, Pysek P, Rejmánek M, Ricciardi A, Robertson M, **Romero-Alvarez D**, Roura-Pascual N, Santini L, Schoeman D, Schröder B, Soberón J, Strubbe D, Thuiller W, Traveset A, Trembl E, Vaclavik T, Varela S, Watson J, Wiersma Y, Wintle B, Yañez-Arenas C, Zurell D (2019). Open access solutions for biodiversity journals: Don't replace one problem with another. *Diversity and Distributions*, 25: 5–8 (IF = 4.614).

33. Escobar LE, **Romero-Alvarez D**, Larkin DJ, Phelps NBD. (2018). Understanding lake connectivity to inform *Nitellopsis obtusa* spread in Minnesota. *Chinese Journal of Oceanology and Limnology* (IF = 0.717).
34. Cobos ME, Jiménez L, Nuñez-Penichet C, **Romero-Alvarez D**, Simões M (2018). Sample data and training modules for cleaning biodiversity information. *Biodiversity Informatics*, 14: 49–50 (IF = NA).
35. Calvopina M, **Romero-Alvarez D**, Díaz F, Cevallos W, Sugiyama H (2018). A comparison of Kato-Katz technique to three other methods for diagnosis of *Amphimerus* spp. liver fluke and the prevalence of infection in Chachi Amerindians of Ecuador. *PLoS One*, 13: e0203811 (IF = 2.806).
36. Astorga F, Escobar LE, Poo-Muñoz DA, Escobar-Dodero J, Rojas-Hucks S, Alvarado-Rybak M, Duclos M, **Romero-Alvarez D**, Molina-Burgos BE, Peñafiel-Ricaurte A, Toro F, Peña-Gómez FT, Peterson AT (2018). Distributional ecology of Andes Hantavirus: a macroecological approach. *International Journal of Health Geographics*, 17:22 (IF = 3.199).
37. Calvopina M, **Romero-Alvarez D**, Rendon M, Takagi H, Sugiyama H (2018). *Hypolobocera guayaquilensis* (Decapoda: Pseudothelphusidae): a new crab intermediate host of *Paragonimus mexicanus* in Manabí Province, Ecuador. *Korean Journal of Parasitology*, 56: 189–194 (IF = 1.82).
38. **Romero-Alvarez D**, Escobar LE (2017). Oropouche fever, an emergent disease from the Americas. *Microbes and Infection*, 20: 135–146 (IF = 2.15).
39. **Romero-Alvarez D**, Reyes J, Quezada V, Satán C, Cevallos N, Escobar LE, Villacís JE (2017). First case of New Delhi metallo- $\beta$ -lactamase in *Klebsiella pneumoniae* from Ecuador: an update for South America. *International Journal of Infectious Diseases*, 65: 119–121 (IF = 2.53).
40. Román JP, García F, Medina D, Vásquez M, García J, Graham MR, **Romero-Alvarez D**, Pardal PDO, Ishikawa EY, Borges A (2017). Scorpion envenoming in Morona Santiago, Amazonian Ecuador: molecular phylogenetics confirms involvement of species in the *Tityus obscurus* group. *Acta Tropica*, 178: 1–9 (IF = 2.22).
41. Escobar LE, **Romero-Alvarez D**, Carver S, VandeWoude S, Crooks K, Lappin MR, Craft M (2017). Inferring the ecological niche of environmentally transmitted pathogens: *Toxoplasma gondii* and *Bartonella* spp. in wild felids. *Frontiers in Veterinary Science*, 4: 172. (IF = NA).
42. de Oliveira SV, **Romero-Alvarez D**, Martins TF, dos Santos JP, Labruna MB, Gaceta GS, Escobar LE, Gurgel-Gonçalves R (2017). *Amblyomma* ticks and future climate: Range contraction due to climate warming. *Acta Tropica*, 176: 340–348 (IF = 2.22).
43. **Romero-Alvarez D**, Escobar LE, Varela S, Larkin DJ, Phelps NBD (2017). Forecasting distributions of an aquatic invasive species (*Nitellopsis obtusa*) under future climate scenarios.

*PLoS One*, 12: e0180930 (IF = 3.54).

44. **Romero-Alvarez D**, Peterson AT, Escobar LE (2017). Surveillance fatigue (*fatigatio vigilantiae*) during epidemics. *Revista Chilena de Infectología*, 34: 289–290 (IF = 0.34).
45. **Romero-Alvarez D**, Escobar LE (2017). Vegetation loss and the 2016 Oropouche fever outbreak in Peru. *Memorias do Instituto Oswaldo Cruz*, 112: 292–298 (IF = 1.7).
46. Escobar LE, **Romero-Alvarez D**, León R, Lepe-López MA, Craft ME, Borbor-Córdova, MJ, Svenning JS (2016). Declining prevalence of disease vectors under climate change. *Scientific Reports*, 6: 39150. (IF = 5.5).
47. Calvopiña M, **Romero-Alvarez D**, Macias R, Sugiyama H (2016). Case report: severe pleuropulmonary paragonimiasis caused by *Paragonimus mexicanus* treated as tuberculosis in Ecuador. *American Journal of Tropical Medicine and Hygiene*, 96: 97–99 (IF = 2.45).
48. Kato H, Gomez EA, Martini-Robles L, Muzzio J, Velez L, Calvopiña M, **Romero-Alvarez D**, Mimori T, Uezato H, Hashiguchi Y (2016). Geographic distribution of *Leishmania* species in Ecuador based on the cytochrome b gene sequence analysis. *PLoS Neglected Tropical Diseases*, 10: e0004844 (IF = 4.45).
49. Takeda M, Sugiyama H, Kumasawa H, **Romero-Alvarez D**, Calvopiña M (2016). Recent collections of freshwater crabs from the Pacific and Amazonian regions of Ecuador, South America. *Journal of Teikyo Heisei University*, 27 (IF = NA).
50. Olalla HR, Velez LN, Kato H, Hashiguchi K, Caceres AG, Gomez E, Zambrano FC, **Romero-Álvarez D**, Guevara A, Hashiguchi Y (2015). An analysis of reported cases of leishmaniasis in the southern Ecuadorian Amazon region, 1986–2012. *Acta Tropica*, 146: 119–126 (IF = 2.27).
51. Hashiguchi K, Velez NL, Kato H, Criollo FH, **Romero-Alvarez D**, Gomez LE, Martini RL, Zambrano CF, Calvopiña HM, Caceres GA, Hashiguchi Y (2014). Sand fly fauna (Diptera, Psychodidae, Phlebotominae) in different leishmaniasis-endemic areas of Ecuador, surveyed using a newly named mini-Shannon trap. *Tropical Medicine and Health*, 42: 163–170 (IF = NA).
52. Calvopiña M, **Romero D**, Castañeda B, Hashiguchi Y, Sugiyama H (2014). Current status of *Paragonimus* and paragonimiasis in Ecuador. *Memórias Do Instituto Oswaldo Cruz*, 109: 849–855 (IF = 1.592).
53. Takeda M, Sugiyama H, Calvopiña M, **Romero-Alvarez D** (2014) Some freshwater crabs from Ecuador, South America. *Journal of Teikyo Heisei University*, 25 (IF = NA).
54. Calvopiña Hinojosa M, **Romero-Alvarez D**, Kato H, Hashiguchi Y (2014). Cutaneous



sporotrichoid lesion in a patient from a subtropical region of Ecuador. *Enfermedades Infecciosas y Microbiología Clínica*, 32: 465–466 (IF = 2.172).

## SUBMITTED MANUSCRIPTS

1. **Romero-Alvarez D**, Calvopiña M, Vásquez-Cisneros E, Garzon-Chavez D, Warren A, Bennet L, Janapati R, Bastidas-Caldes C, Cabezas-Moreno M, de Waard J, Silva-Martinod D, Schaub R, Jackson M, Peterson AT, Avanzi, C. (2023). *Mycobacterium leprae* detected in Ecuadorian long-nosed armadillos. *Emerging Infectious Diseases* (In review).
2. Ng'eno E, **Romero-Alvarez D**, Sundstrom K, Cobos ME, Belgum H, Chitwood A, Grant A, Keck A, Kloxin J, Letterman B, Lineberry M, McClung K, Nippoldt S, Sharum S, Struble S, Thomas B, Ghosh A, Brennan R, Little S, Peteron AT. (2023). Complex phenology of five tick species in the central Great Plains. *PLoS one* (In review).
3. Calvopiña M, Silva-Martinod D, Montalván N, **Romero-Alvarez D**. (2023). Epidemiology, clinical presentations and risk factors of snakebite at the 'Delfina Torres de Concha' Hospital, Esmeraldas, Ecuador, 2017-2020. *Biomedica* (In review).
4. Ramírez P, Valdiviezo S, Villavicencio X, **Romero-Alvarez D**, Garzon-Chavez D, Reyes J. Outbreak of multidrug-resistant *Klebsiella pneumoniae* K2 serotype strains ST25 and ST307 in Ecuadorian hospitals. *Biomedica* (In review).
5. Navarrete C, Nuñez D, **Romero-Alvarez D**, Zabala A, Pazmiño G, Reyes J, Escalante S. Characterization of *vacA* and EPIYA motifs of *Helicobacter pylori* in dyspeptic patients from Ecuador. *PLoS One* (In review).

## PRESENTATIONS

### LECTURES

**Romero-Alvarez D**. Changing perspectives on leprosy research. Biology Departmental Seminar Speaker. University of Pittsburgh, Kansas, US (October, 2023).

**Romero-Alvarez D**. Zoonoses everywhere! III Meeting of Systematics, Biogeography, and Evolution: New Roles and Challenges of Biodiveristy Research, University of North Carolina, Charlotte, North Carolina, US (April, 2022).

**Romero-Alvarez D**. Detection of *Mycobacterium leprae* in armadillos from museum collections. Museums and Emerging Pathogens (MEPA) session, Lawrence, Kansas, US (March, 2022).

**Romero-Alvarez D**. Detección de *Mycobacterium leprae* en tejidos de armadillo utilizando técnicas tradicionales de biología molecular. Segundo Congreso Internacional de Biotecnología de la Universidad de las Américas, Quito, Ecuador (November, 2021).

**Romero-Alvarez D** – Guest Lecturer, Universidad Tecnológica de la Selva / Universidad Autónoma de Chiapas, México. Zoonosis y enfermedad de Hansen en México (September, 2021).

**Romero-Alvarez D**, Escobar LE, Del Valle S, Manore CA. Transmission risk of Oropouche fever in the Americas. Information Systems and Modeling (A-1), Los Alamos National Laboratory. New Mexico, US (June, 2021)

**Romero-Alvarez D** – Unidad Metropolitana de Salud Sur, Distrito Metropolitano de Quito. Primera Jornada Científica Covid-19: Una vision desde la mitad del mundo. Conference: ‘Valores de ciclado para el diagnóstico de Covid-19’ (May, 2021:

[https://www.facebook.com/watch/live/?v=1883072525193149&ref=watch\\_permalink](https://www.facebook.com/watch/live/?v=1883072525193149&ref=watch_permalink)).

**Romero-Alvarez D** – Guest Lecturer, Universidad Nacional de Colombia sede Bogotá, Facultad de Ciencias Agrarias, Departamento de Agronomía, Course ‘Epidemiology Analysis’, Graduate level. Conference: ‘Epidemiology 2.0: a modern vision of a classical science’. Instructor: Dr. Guillermo Ramírez-Gil (October, 2020: <https://www.youtube.com/watch?v=Utf0BaD1nkl>).

**Romero-Alvarez D** – Guest Lecturer, Virginia Tech, Course: FiW 5984 Advanced Biogeography and Macroecology in the Anthropocene, Graduate level. Conference: ‘R for spatial analysis: introduction’. Instructor: Dr. Luis E Escobar (October, 2020).

Deka MA, Gee, JE, Mindy Glass Elrod MG, Liu L, Bower WA, Salzer JS, **Romero-Alvarez D**, Alkische AA, Peterson AT. Predicting the distribution of *Burkholderia pseudomallei* in the Americas using ecological niche modeling. 2019 Place & Health Conference. Centers for Disease Control and Prevention (CDC), Atlanta, Georgia, US (November, 2019).

**Romero-Alvarez D**, Jimenez L, Jimenez D. Niches, wildlife and diseases: how nature copes with change? Latin American Graduate Organization–Symposium Night. Lawrence, Kansas, US (October, 2019).

**Romero-Alvarez D**, Del Valle S, Manore CA. Can Google Health Trends anticipate Dengue incidence in Brazil? (Spanish). Carrera de Biomedicina, Universidad Internacional SEK Ecuador. Quito, Ecuador (July, 2019).

**Romero-Alvarez D**, Del Valle S, Manore CA. Google Health Trends accuracy to reflect dengue incidence at the Brazilian states. Information Systems and Modeling (A-1), Los Alamos National Laboratory. New Mexico, US (June, 2019).

**Romero-Alvarez D**. Disease mapping. Ecological Niche Modeling Course, 2018 (Spanish). Online course. Available at: <https://www.youtube.com/watch?v=PuTtQHJ3dVQ&feature=youtu.be> (July, 2018)

**Romero-Alvarez D**, Lepe-Lopez MA, León R, Borbor-Cordova M, Escobar LE Climate change may decline prevalence of disease vectors in Ecuador. 66th Annual Meeting of the America Society of Tropical Medicine and Hygiene (ASTMH 2017). Baltimore, Maryland, US (November, 2017).

Quezada V, Reyes J, Villacís E, **Romero-Alvarez D**. First report of NDM-1 in *Klebsiella pneumoniae* in Ecuador (Spanish). API Panamá 2017. XVIII Congreso Panamericano de Infectología. VI Congreso Nacional de Enfermedades Infecciosas. Ciudad de Panamá, Panamá (May, 2017).

**Romero-Alvarez D**. Intrahospitalary outbreak control (Spanish). Plan para la implementación de la notificación y seguimiento de brotes nosocomiales en las unidades privadas. Coordinación Zonal 9 – Ministerio de Salud Pública del Ecuador. Quito, Ecuador (May, 2017).

**Romero-Alvarez D**. Geographical epidemiology (Spanish). II Seminario de “Actualización en Enfermedades Infecciosas”. Sociedad Ecuatoriana de Infectología. Quito, Ecuador (March, 2017).

**Romero-Alvarez D**, Lepe-López M, Escobar LE. Potential distribution of *Aedes aegypti* and *Aedes albopictus* in the present and future of Ecuador (Spanish). II Encuentro Científico CIZ – UCE 2016. Quito, Ecuador (October, 2016).

**Romero-Alvarez D**, Lepe-López MA, Borbor-Córdova MJ, Craft ME, León R, Escobar LE Zika virus and *Aedes aegypti* in Ecuador: Perfect areas for new cases? (Spanish). IV Encuentro Internacional en Investigación de Enfermedades Infecciosas y Medicina Tropical. Quito, Ecuador (June, 2016).

**Romero-Álvarez D**, Calvopiña M, Castañeda B, Hashiguchi Y, & Sugiyama H. Current situation of *Paragonimus* and paragonimiasis in Ecuador (Spanish). II Latin American Network of Molecular Epidemiology and Evolutionary Genetics of Infectious Diseases. III Encuentro Nacional de Investigación de Enfermedades Infecciosas y Medicina Tropical. Quito, Ecuador (July, 2014).

Kato H, Gómez E, Martini L, Muzzio J, Velez L, **Romero-Álvarez D**, Calvopiña M, & Hashiguchi Y. Cutaneous and mucocutaneous leishmaniasis and their causative agents, vector sandflies and reservoir hosts in Ecuador. XXI Parasitology Latinoamerican Conference. Sociedad Ecuatoriana de Medicina Tropical y Parasitología. FLAP. Quito, Ecuador (October, 2013).

## POSTERS

Arede M, Allepuz A, Beltran-Acrudo D, Casal J, **Romero-Alvarez D**. Suitability of anthrax in the Black Sea Basin through the scope of distribution modeling. Society for Veterinary Epidemiology and Preventive Medicine Annual Conference (SVEPM 2023) (March 2023).

Gorris ME, Bartlow AW, **Romero-Alvarez D**, Temple S, Fair JM, Kaufeld KA, Valle SA, Manore C. Species distribution maps of *Culex* mosquitos, important vectors of West Nile virus. American Geophysical Union (December, 2020).

**Romero-Alvarez D**, Campbell LP, Peterson AT. Potential distribution of a newly *Bacillus* species causing anthrax in African rainforests. GIS Day Poster Competition. The University of Kansas (Awarded first place and crowd favorite) (November, 2018).

Cobos ME, Jiménez L, Nuñez-Penichet C, **Romero-Alvarez D**, Simões M. Sample data and training modules for cleaning biodiversity information. GIS Day Poster Competition (First place). The University of Kansas (November, 2018).

**Romero-Alvarez D**, Escobar LE. Emergent viruses in America: The case of Oropouche virus. 18<sup>th</sup> International Congress on Infectious Diseases, selected for moderated poster presentation (ICID 2018) (March, 2018).

Valverde-Muñoz GS, **Romero-Alvarez D**. Measuring the epidemiological uncertainty in snakebite case reports in 2016 Ecuador. 18<sup>th</sup> International Congress on Infectious Diseases (ICID 2018). Available at: [10.1016/j.ijid.2018.04.3894](https://doi.org/10.1016/j.ijid.2018.04.3894) (March, 2018).

**Romero-Alvarez D**, Lepe-Lopez MA, León R, Borbor-Cordova M, Escobar LE. Climate change may decline prevalence of disease vectors in Ecuador. 66th Annual Meeting of the American Society of Tropical Medicine and Hygiene (ASTMH 2017) (November, 2017).

de Oliveira SV, **Romero-Alvarez D**, Martins TF, de Araújo-Vilges KM, Santos JP, Labruna MB, Gaceta GS, Escobar LE, Salles G, Gurgel-Gonçalves R. Climate change and the *Amblyomma cajennense* complex (Acari: Ixodidae) in Brazil. XIX International Congress for Tropical Medicine and Malaria 2016 (ICTMM 2016) (September, 2016).

**Romero-Alvarez D**, Valverde-Muñoz G, Sugiyama H, Kumasawa H, Calvopiña M. Formas de transmisión de *Amphimerus* sp.: Peces de río y metacercarias. IV Encuentro Internacional en Investigación de Enfermedades Infecciosas y Medicina Tropical (June, 2016).

Aterthon R, **Romero-Álvarez D**, Valverde-Muñoz G, Calvopiña M. Prevalence of intestinal parasites and associated risk of infection in Tsachilas communities of Santo Domingo Ecuador. II Latin American Network of Molecular Epidemiology and Evolutionary Genetics of Infectious Diseases. III Encuentro Nacional de Investigación de Enfermedades Infecciosas y Medicina Tropical (July, 2014).

**Romero, D**, Calvopiña M. *Paragonimus* and Paragonimiasis in Ecuador. Third World Summit on Evolution, Galapagos Island-Ecuador. (July, 2013).

## WORKSHOP INSTRUCTOR

A. Townsend Peterson, **Romero-Alvarez D**, Cobos ME, Alkische A. Mapping infectious disease transmission risk in India. American Society for Microbiology & Centers of Disease Control and Prevention United States (July-August 2021).

Campbell L, **Romero-Alvarez D**. Basic Mapping and Cluster Analysis in QGIS. Florida Mosquito Control Association Dodd Short Courses 2021 (February, 2021).

Escobar LE, Yumiseva C, **Romero-Álvarez D**. Biodiversity Informatics: Applications in Public Health. IV International Meeting on Infectious Diseases Research and Tropical Medicine. Quito, Ecuador (June, 2016).

Escobar LE, Escobar-Dodero J, Kinsley A, Phelps N, **Romero-Alvarez D**, VanderWaal K. Disease Modeling in Aquatic Ecosystems. Saint Paul, Minnesota, US (February, 2016).

Calvopiña M, Cevallos W, **Romero-Álvarez D**, Loor R. Update on the situation, diagnosis and treatment of leishmaniasis in Ecuador (Spanish). Centro de Salud San Miguel de los Bancos, Centro de Salud de Puerto Quito, Noroccidente de Pichincha – Ecuador (November, 2014).

Calvopiña M, Cevallos W, **Romero-Álvarez D**. Pre-Congress Workshop on Leishmaniasis. “Eco-epidemiology of cutaneous leishmaniasis in a subtropical region of Ecuador (Northwestern Pichincha)” (Spanish). II Latin American Network of Molecular Epidemiology and Evolutionary Genetics of Infectious Diseases. III Encuentro Nacional de Investigación de Enfermedades Infecciosas y Medicina Tropical. Pichincha, Ecuador (July, 2014).

## ACADEMIC PEER REVIEW

### REVIEWER

- Journal of Vector Ecology
- Parasites & Vectors
- Peer J
- PLoS NTD
- BMC Infectious Diseases
- PLoS One
- Vector Borne and Zoonotic Diseases
- Proceedings of the National Academy of Sciences B
- Journal of Health Care Informatics
- Ecography
- Ecology and Evolution
- Scientific Data
- Transboundary and Infectious Diseases
- Environmental Entomology
- Journal of Medical Entomology
- Scientific Reports
- CDC Emerging Infectious Diseases
- EcoHealth
- The Lancet Infectious Diseases
- Grant proposals: Universidad de las Américas, Ecuador

### THESIS ADVISOR

Bustamante-Enríquez K. Análisis transdisciplinario de accidentes ofídicos para atenuar el conflicto humano-serpiente en los cantones El Carmen y Flavio Alfaro, Manabí, Ecuador. Universidad Tecnológica Indoamérica. (October, 2022)

## SCIENTIFIC COMMUNICATION AND OUTREACH

**Science communication.** Science blogging and visual communication in social media on infectious disease discovery and research (2016-present). <http://www.romerostories.com>

**Science Writing.** Editor, designer, and researcher of the science communication magazine “Antorcha Verde” (Spanish). Sociedad de Divulgación Científica Quinto Pilar. (2013-2016).

[http://issuu.com/quinto\\_pilar](http://issuu.com/quinto_pilar)

**Science blogging (Spanish).** Sociedad de Divulgación Científica Quinto Pilar. (2008-2016).  
<http://quintopilar.blogspot.com>

### Invited contributions

- Interview. Oropouche: método para previsão de ocorrência de casos estima 5 milhões de pessoas em risco na América Latina (Portugues). [Internet] Available at: <https://sbmt.org.br/oropouche-metodo-para-previsao-de-ocorrencia-de-casos-estima-5-milhoes-de-pessoas-em-risco-na-america-latina/>
- Interview. ¿Dónde están los medicos rurales en Ecuador? (Spanish). [Internet] Available at: <https://www.youtube.com/live/sb27Rg0e3Ko?si=Je-al1LLsT8o6yXs>
- **Romero-Alvarez D.** [Sarah Gregory, host]. *Mycobacterium leprae* in Armadillo Tissues from Museum Collections, United States (2023). [Podcast] Available at: <https://tools.cdc.gov/medialibrary/index.aspx#/media/id/734643>
- **Romero-Alvarez D.** [Villiger M, editor]. Leprosy-causing bacteria found in nine-banded armadillos from natural history museum specimens in the United States (2023). The conversation. [Internet] Available at: <https://theconversation.com/leprosy-causing-bacteria-found-in-armadillo-specimens-highlight-value-of-museum-collections-for-tracking-pathogens-203458>
- Interview. Global Health is broken, but young people plan to repair it (2022). [Internet] Available at: <https://www.forbes.com/sites/madhukarpai/2022/03/24/global-health-is-broken-but-young-people-plan-to-repair-it/?sh=12ce8a2b1fb5>
- Torres I, **Romero-Alvarez D**, López Cevallos D, Cañizares B. Time for a health check: the reality of vaccine rollout in Ecuador (2021). [Internet] Available at: <https://www.thinkglobalhealth.org/article/time-health-check-reality-vaccine-rollout-ecuador>
- **Romero-Alvarez D.** The dark side of open access. (2018). [Internet]. Available at: <https://oanarchy.wordpress.com/2018/11/30/the-dark-side-of-open-access/>. Spanish version available at: <http://latinamericanscience.org/spanish/2018/12/el-lado-oscuro-del-acceso-abierto/>
- **Romero-Alvarez D**, Quezada V. La eterna amenaza de la resistencia bacteriana (2017). [Internet]. Available at: <http://latinamericanscience.org/spanish/2017/05/la-eterna-amenaza-de-la-resistencia-bacteriana/>

**Lectures** to improve scientific outreach in Ecuadorian community. Topics: science, astronomy, biology and neuroscience.

**Meeting organizer:** World Space Week in Ecuador. Sociedad de Divulgación Científica Quinto Pilar. Promoted by United Nations (October, 2013).

## LANGUAGES

Spanish: First language

English: Professional Proficiency

- Story Circles Narrative Training. Certificate of narrative training (February, 2019).
- Contributor as Spanish translator in the non-profit project “Out of Eden Walk” hosted by Pulitzer winner Paul Salopek: (<http://www.outofedenwalk.com/dispatches/translations/es/>)
- TOEFL – SCORE 2016: 102/120

## PROFESSIONAL REFERENCES

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