

Curriculum Vitae

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Education

- 2009 **University of Washington**, Seattle, WA (U.S.A.)
BA (Cum Laude); Anthropology; Certificate in Medical Anthropology and Global Health; minor in African Studies.
- 2011 **The Pennsylvania State University**, State College, PA (U.S.A.)
MA; Anthropology and Demography.
- 2014 **The Pennsylvania State University**, State College, PA (U.S.A.)
PhD; Anthropology and Demography.

Academic Appointments

- 2014 – 2017 **Postdoctoral Researcher and GeoUnit Supervisor**, Shoklo Malaria Research Unit, Mahidol Oxford Tropical Medicine Research Unit, Mae Sot, Tak Province, Thailand
- 2020 – 2022 **Visiting Professor in Epidemiology**, Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand
- 2017 – 2023 **Assistant Professor**, Department of Population Health & Disease Prevention, Program in Public Health, University of California, Irvine, U.S.A.
- 2019 – present **Associate Professor (courtesy appointment)**, Department of Epidemiology & Biostatistics, Joe C. Wen School of Population & Public Health, University of California, Irvine, U.S.A.
- 2023 – present **Associate Professor (with tenure)**, Department of Population Health & Disease Prevention, Joe C. Wen School of Population & Public Health, University of California, Irvine, U.S.A.

Publications

Peer-reviewed Papers

2012

- [1] Wang Z. **Parker D.**, Meng H. Wu L. Li J. Zhao Z. Zhang R. Fan Q. Wang H. Cui L. Yang Z. “In Vitro Sensitivity of Plasmodium falciparum from China-Myanmar Border Area to Major ACT Drugs and Polymorphisms in Potential Target Genes”. PLOS ONE 7, 5 (May 2012). Publisher: Public Library of Science, e30927. ISSN: 1932-6203. DOI: 10.1371/journal.pone.0030927.
- [2] Cui L. Wang Z. Jiang H. **Parker D.**, Wang H. Su X.-Z. Cui L. “Lack of Association of the S769N Mutation in Plasmodium falciparum SERCA (PfATP6) with Resistance to Artemisinins”. Antimicrobial Agents and Chemotherapy 56, 5 (Apr. 2012). Publisher: American Society for Microbiology, pp. 2546–2552. DOI: 10.1128/aac.05943-11.

- [3] Parker D. M., Zavortink T. J. Billo T. J. Valdez U. Edwards J. S. "Mosquitoes and Other Arthropod Macro Fauna Associated With Tank Bromeliads In A Peruvian Cloud Forest". Journal of the American Mosquito Control Association 28, 1 (Mar. 2012), pp. 45–46. ISSN: 8756-971X. DOI: 10.2987/11-6189.1.
- [4] Parker D., Holman D. "Event history analysis of dengue fever epidemic and inter-epidemic spells in Barbados, Brazil, and Thailand". International Journal of Infectious Diseases 16, 11 (Nov. 2012), e793–e798. ISSN: 12019712. DOI: 10.1016/j.ijid.2012.07.002.
- [5] Parker D., Lerdprom R. Srisatjarak W. Yan G. Sattabongkot J. Wood J. Sirichaisinthop J. Cui L. "Longitudinal in vitro surveillance of Plasmodium falciparum sensitivity to common anti-malarials in Thailand between 1994 and 2010". Malaria Journal 11, 1 (2012), p. 290. ISSN: 1475-2875. DOI: 10.1186/1475-2875-11-290.
- [6] Cui L. Yan G. Sattabongkot J. Cao Y. Chen B. Chen X. Fan Q. Fang Q. Jongwutiwas S. Parker D., Sirichaisinthop J. Kyaw M. P. Su X.-z. Yang H. Yang Z. Wang B. Xu J. Zheng B. Zhong D. Zhou G. "Malaria in the Greater Mekong Subregion: Heterogeneity and complexity". Acta Tropica 121, 3 (Mar. 2012), pp. 227–239. ISSN: 0001706X. DOI: 10.1016/j.actatropica.2011.02.016.
- [7] Cui L. Yan G. Sattabongkot J. Chen B. Cao Y. Fan Q. Parker D., Sirichaisinthop J. Su X.-z. Yang H. Yang Z. Wang B. Zhou G. "Challenges and prospects for malaria elimination in the Greater Mekong Subregion". Acta Tropica 121, 3 (Mar. 2012), pp. 240–245. ISSN: 0001706X. DOI: 10.1016/j.actatropica.2011.04.006.

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- [8] Li N. Parker D. M., Yang Z. Fan Q. Zhou G. Ai G. Duan J. Lee M.-c. Yan G. Matthews S. A. Cui L. Wang Y. "Risk factors associated with slide positivity among febrile patients in a conflict zone of north-eastern Myanmar along the China-Myanmar border". Malaria Journal 12, 1 (Oct. 2013), p. 361. ISSN: 1475-2875. DOI: 10.1186/1475-2875-12-361.
- [9] Miao J. Wang Z. Liu M. Parker D., Li X. Chen X. Cui L. "*Plasmodium falciparum*: Generation of pure gametocyte culture by heparin treatment". Experimental Parasitology 135, 3 (Nov. 2013), pp. 541–545. ISSN: 0014-4894. DOI: 10.1016/j.exppara.2013.09.010.
- [10] Miao J. Lawrence M. Jeffers V. Zhao F. Parker D., Ge Y. Sullivan Jr W. J. Cui L. "Extensive lysine acetylation occurs in evolutionarily conserved metabolic pathways and parasite-specific functions during Plasmodium falciparum intraerythrocytic development". Molecular Microbiology 89, 4 (2013). _eprint: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/mmi.12303>, pp. 660–675. ISSN: 1365-2958. DOI: 10.1111/mmi.12303.
- [11] Miao M. Wang Z. Yang Z. Yuan L. Parker D. M., Putaporntip C. Jongwutiwas S. Xangsayarath P. Pongvongsa T. Moji H. Tuong T. D. Abe T. Nakazawa S. Kyaw M. P. Yan G. Sirichaisinthop J. Sattabongkot J. Mu J. Su X.-z. Kaneko O. Cui L. "Genetic Diversity and Lack of Artemisinin Selection Signature on the Plasmodium falciparum ATP6 in the Greater Mekong Subregion". PLOS ONE 8, 3 (Mar. 2013). Publisher: Public Library of Science, e59192. ISSN: 1932-6203. DOI: 10.1371/journal.pone.0059192.
- [12] Weiss K. M. Parker D. M. "Will you stop bugging me?: Malaria and the evolutionary challenge that won't go away". Evolutionary Anthropology: Issues, News, and Reviews 22, 2 (Mar. 2013), pp. 46–51. ISSN: 1060-1538, 1520-6505. DOI: 10.1002/evan.21340.
- [13] Matthews S. A. Parker D. M. "Progress in Spatial Demography". Demographic research 28 (2013), pp. 271–312. ISSN: 1435-9871. DOI: 10.4054/demres.2013.28.10.
- [14] Yuan L. Zhao H. Wu L. Li X. Parker D., Xu S. Zhao Y. Feng G. Wang Y. Yan G. Fan Q. Yang Z. Cui L. "Plasmodium falciparum populations from northeastern Myanmar display high levels of genetic diversity at multiple antigenic loci". Acta Tropica 125, 1 (Jan. 2013), pp. 53–59. ISSN: 0001706X. DOI: 10.1016/j.actatropica.2012.09.008.
- [15] Miao J. Fan Q. Parker D., Li X. Li J. Cui L. "Puf Mediates Translation Repression of Transmission-Blocking Vaccine Candidates in Malaria Parasites". PLoS Pathogens 9, 4 (Apr. 2013). Ed. by Christine Clayton, e1003268. ISSN: 1553-7374. DOI: 10.1371/journal.ppat.1003268.

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- [16] Bancone G. Chu C. S. Somsakchaicharoen R. Chowwiwat N. **Parker D. M.**, Charunwatthana P. White N. J. Nosten F. H. "Characterization of G6PD Genotypes and Phenotypes on the Northwestern Thailand-Myanmar Border". *PLOS ONE* 9, 12 (Dec. 2014). Publisher: Public Library of Science, e116063. ISSN: 1932-6203. DOI: 10.1371/journal.pone.0116063.
- [17] Li P. Zhao Z. Wang Y. Xing H. **Parker D. M.**, Yang Z. Baum E. Li W. Sattabongkot J. Sirichaisinthop J. Li S. Yan G. Cui L. Fan Q. "Nested PCR detection of malaria directly using blood filter paper samples from epidemiological surveys". *Malaria Journal* 13, 1 (May 2014), p. 175. ISSN: 1475-2875. DOI: 10.1186/1475-2875-13-175.
- [18] He X. Yan J. Zhu X. Wang Q. Pang W. Qi Z. Wang M. Luo E. **Parker D. M.**, Cantorna M. T. Cui L. Cao Y. "Vitamin D Inhibits the Occurrence of Experimental Cerebral Malaria in Mice by Suppressing the Host Inflammatory Response". *The Journal of Immunology* 193, 3 (Aug. 2014), pp. 1314–1323. ISSN: 0022-1767. DOI: 10.4049/jimmunol.1400089.
- [19] Wang Z. Liu M. Liang X. Siriwat S. Li X. Chen X. **Parker D. M.**, Miao J. Cui L. "A Flow Cytometry-Based Quantitative Drug Sensitivity Assay for All Plasmodium falciparum Gametocyte Stages". *PLOS ONE* 9, 4 (Apr. 2014). Publisher: Public Library of Science, e93825. ISSN: 1932-6203. DOI: 10.1371/journal.pone.0093825.
- [20] **Parker D. M.**, Wood J. W. Tomita S. DeWitte S. Jennings J. Cui L. "Household ecology and out-migration among ethnic Karen along the Thai-Myanmar border". *Demographic Research* 30 (Apr. 2014), pp. 1129–1156. ISSN: 1435-9871. DOI: 10.4054/DemRes.2014.30.39.

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- [23] Wang Y. Yang Z. Yuan L. Zhou G. **Parker D.**, Lee M.-C. Yan G. Fan Q. Xiao Y. Cao Y. Cui L. "Clinical Efficacy of Dihydroartemisinin-Piperaquine for the Treatment of Uncomplicated Plasmodium falciparum Malaria at the China-Myanmar Border". *The American Journal of Tropical Medicine and Hygiene* 93, 3 (Sept. 2015), pp. 577–583. ISSN: 0002-9637. DOI: 10.4269/ajtmh.15-0029.
- [24] Yuan L. Wang Y. **Parker D. M.**, Gupta B. Yang Z. Liu H. Fan Q. Cao Y. Xiao Y. Lee M.-c. Zhou G. Yan G. Baird J. K. Cui L. "Therapeutic Responses of Plasmodium vivax Malaria to Chloroquine and Primaquine Treatment in Northeastern Myanmar". *Antimicrobial Agents and Chemotherapy* 59, 2 (Jan. 2015). Publisher: American Society for Microbiology, pp. 1230–1235. DOI: 10.1128/aac.04270-14.
- [25] Tomita S. **Parker D. M.**, Jennings J. A. Wood J. "Household Demography and Early Childhood Mortality in a Rice-Farming Village in Northern Laos". *PLOS ONE* 10, 3 (Mar. 2015). Publisher: Public Library of Science, e0119191. ISSN: 1932-6203. DOI: 10.1371/journal.pone.0119191.
- [26] **Parker D. M.**, Matthews S. A. Yan G. Zhou G. Lee M.-C. Sirichaisinthop J. Kiattibutr K. Fan Q. Li P. Sattabongkot J. Cui L. "Microgeography and molecular epidemiology of malaria at the Thailand-Myanmar border in the malaria pre-elimination phase". *Malaria Journal* 14, 1 (Dec. 2015). ISSN: 1475-2875. DOI: 10.1186/s12936-015-0712-5.

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- [27] Parker D. M., Landier J. von Seidlein L. Dondorp A. White L. Hanboonkunupakarn B. Maude R. J. Nosten F. H. “Limitations of malaria reactive case detection in an area of low and unstable transmission on the Myanmar–Thailand border”. *Malaria Journal* 15, 1 (Nov. 2016), p. 571. ISSN: 1475-2875. DOI: 10.1186/s12936-016-1631-9.
- [28] Landier J. Parker D. M., Thu A. M. Carrara V. I. Lwin K. M. Bonnington C. A. Pukrittayakamee S. Delmas G. Nosten F. H. “The role of early detection and treatment in malaria elimination”. *Malaria Journal* 15, 1 (July 2016), p. 363. ISSN: 1475-2875. DOI: 10.1186/s12936-016-1399-y.
- [29] Gupta B. Parker D. M., Fan Q. Reddy B. P. N. Yan G. Sattabongkot J. Cui L. “Microgeographically diverse *Plasmodium vivax* populations at the Thai-Myanmar border”. *Infection, Genetics and Evolution* 45 (Nov. 2016), pp. 341–346. ISSN: 1567-1348. DOI: 10.1016/j.meegid.2016.09.021.
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- [32] Bonnington C. A. Phyoe A. P. Ashley E. A. Imwong M. Sriprawat K. Parker D. M., Proux S. White N. J. Nosten F. H. “Plasmodium falciparum Kelch 13 mutations and treatment response in patients in Hpa-Pun District, Northern Kayin State, Myanmar”. *Malaria Journal* 16, 1 (Nov. 2017), p. 480. ISSN: 1475-2875. DOI: 10.1186/s12936-017-2128-x.
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- [34] Landier J. Kajeechiwa L. Thwin M. M. Parker D. M., Chaumeau V. Wiladphaingern J. Imwong M. Miotto O. Patumrat K. Duanguppama J. Cerqueira D. Malleret B. Rénia L. Nosten S. Seidlein L. Ling C. Proux S. Corbel V. Simpson J. A. Dondorp A. M. White N. J. Nosten F. H. “Safety and effectiveness of mass drug administration to accelerate elimination of artemisinin-resistant falciparum malaria: A pilot trial in four villages of Eastern Myanmar”. *Wellcome Open Research* 2 (2017). Publisher: The Wellcome Trust. DOI: 10.12688/wellcomeopenres.12240.1.
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- [41] Ya-umphan P. Cerqueira D. Parker D. M., Cottrell G. Poinsignon A. Remoue F. Brengues C. Chareonviriyaphap T. Nosten F. Corbel V. “Use of an Anopheles Salivary Biomarker to Assess Malaria Transmission Risk Along the Thailand-Myanmar Border”. *The Journal of Infectious Diseases* 215, 3 (Feb. 2017), pp. 396–404. ISSN: 0022-1899. DOI: 10.1093/infdis/jiw543.

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- [104] **Tarnas M. C.**, Hamze M. Tajaldin B. Sullivan R. **Parker D. M.**, Abbara A. “Exploring relationships between conflict intensity, forced displacement, and healthcare attacks: a retrospective analysis from Syria, 2016–2022”. *Conflict and Health* 18, 1 (Nov. 2024), p. 70. ISSN: 1752-1505. DOI: 10.1186/s13031-024-00630-4.

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- elimination programme in eastern Myanmar, and systematic review and meta-analysis". *Malaria Journal* 24, 1 (May 2025), p. 148. ISSN: 1475-2875. DOI: 10.1186/s12936-025-05392-9.
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- [110] **Parker D. M.**, Haileselassie W. Hailemariam T. S. Workenh A. Workineh S. Wang X. Lee M.-C. Yan G. "High seroprevalence of antibodies to Dengue, Chikungunya, and Zika viruses in Dire Dawa, Ethiopia: A cross-sectional survey in 2024". *PLOS Neglected Tropical Diseases* 19, 7 (July 2025). Publisher: Public Library of Science, e0013357. ISSN: 1935-2735. DOI: 10.1371/journal.pntd.0013357.
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- [112] Aung P. L. Sripoorote P. Rachaphaew N. Sattabongkot J. **Parker D. M.**, Nguitragool W. Phuanukoonnon S. "Community acceptance of Ivermectin mass drug administration for malaria in Southern Thailand". *Scientific Reports* 15, 1 (Aug. 2025). Publisher: Nature Publishing Group, p. 29026. ISSN: 2045-2322. DOI: 10.1038/s41598-025-14575-y.
- [113] **Sehi G. T.**, Birhanie S. K. Hans J. Brown M. Q. **Parker D. M.** "Environmental correlates of Aedes aegypti abundance in the West Valley region of San Bernardino County, California, USA, from 2017 to 2023: an ecological modeling study". *Parasites & Vectors* 18, 1 (Aug. 2025), p. 349. ISSN: 1756-3305. DOI: 10.1186/s13071-025-06967-w.
- [114] Poosesod K. Suk-uam K. **Parker D. M.**, Phuanukoonnon S. Saita S. "Resilience of long-lasting insecticidal net distribution system on the Thai-Myanmar border: pre, during, and post COVID-19 pandemic insights". *Malaria Journal* 24, 1 (Aug. 2025), p. 258. ISSN: 1475-2875. DOI: 10.1186/s12936-025-05499-z.
- [115] Win K. M. Show K. L. Sattabongkot J. Cui L. Nguitragool W. **Parker D. M.**, Aung P. L. "Access versus utilization: determinants of insecticide-treated net non-use in Myanmar". *Malaria Journal* 24, 1 (Aug. 2025), p. 278. ISSN: 1475-2875. DOI: 10.1186/s12936-025-05535-y.
- [116] Aung P. L. Sripoorote P. Inthitanon N. Wattanagoon Y. Hamers R. L. Van Nuil J. I. Cui L. Nguitragool W. Jones L. Sudewo A. G. Sattabongkot J. **Parker D. M.** "Malaria care-seeking behaviours and infection prevalence among short-term Myanmar migrants in Thailand". *Malaria Journal* 24, 1 (Sept. 2025), p. 280. ISSN: 1475-2875. DOI: 10.1186/s12936-025-05539-8.
- [117] Chu C. S. Lwin K. M. Burgoine K. Phyoe A. P. Turner C. San T. Aung A. A. Win H. H. Htoo K. Soe N. L. Christina N. Than H. H. Dah N. Pilaseng K. Wiladpaingern J. Proux S. Mukaka M. **Parker D.**, Carrara V. I. Nosten F. White N. J. "Plasmodium vivax malaria relapse risk depends on transmission intensity: evidence from a longitudinal study in northwest Thailand". *Open Forum Infectious Diseases* (Oct. 2025), ofaf667. ISSN: 2328-8957. DOI: 10.1093/ofid/ofaf667.

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- [119] Mishra S. R. Satheesh G. Khanal V. Adhikari B. **Parker D.**, Picone D. S. Chapman N. Schutte A. E. Lindley R. I. “Bridging Hypertension Care Shortfalls Between Provider Capacity and Patient Needs: A Pooled Analysis of Data From 199 Countries and Territories”. Hypertension 82, 11 (Nov. 2025). Publisher: American Heart Association, pp. 1906–1915. DOI: 10.1161/HYPERTENSIONAHA.125.24783.
- [120] Rae J. D. **Parker D. M.**, Maude R. J. Thu A. M. Devine A. Nosten F. H. Simpson J. A. “Spatiotemporal trends in *P. falciparum* malaria and identification of high-risk villages in Eastern Myanmar: an 8-year observational study”. Scientific Reports (Dec. 2025). Publisher: Nature Publishing Group. ISSN: 2045-2322. DOI: 10.1038/s41598-025-32065-z.
- [121] Htwe K. Z. Z. Aung P. L. Sripoorote P. Soe M. T. Petchvijit P. Aung P. P. Khamsiriwatchara A. Lawpoolsri S. Cui L. **Parker D. M.**, Kyaw M. P. Sattabongkot J. Kaewkungwal J. “Drivers of delay in reported malaria care-seeking in Myanmar and Thailand”. Malaria Journal 24, 1 (Dec. 2025), p. 434. ISSN: 1475-2875. DOI: 10.1186/s12936-025-05676-0.

Chapters

- [122] **Parker D. M.** “Human Migration and Spatial Synchrony: Spatial Patterns in Temporal Trends”. In: Recapturing Space: New Middle-Range Theory in Spatial Demography. Ed. by Frank M. Howell, Jeremy R. Porter, and Stephen A. Matthews. Spatial Demography Book Series. Cham: Springer International Publishing, 2016, pp. 325–351. ISBN: 978-3-319-22810-5. DOI: 10.1007/978-3-319-22810-5_16.
- [123] **Glendening N.**, Haileselassie W. **Parker D. M.** “A conceptual framework for understanding extractive settlements and disease: demography, environment, and epidemiology”. In: Planetary health approaches to understand and control vector-borne diseases. Section: Planetary health approaches to understand and control vector-borne diseases. Wageningen Academic, Dec. 2023, pp. 121–160. ISBN: 978-90-04-68865-0. DOI: 10.3920/9789004688650_007.

Grants, Contracts, Research Awards, and Consultations

External Funding

- Active*
2025 – 2027 **The Coachella Valley Mosquito and Vector Control District**. Principal Investigator. Project title: “From data to deployment: Modeling *Aedes aegypti* risk to guide sterile insect release.” Award number: F31AI183632; PI: Maia Tarnas (\$38,924)
- 2025 – 2026 **National Institute of Allergy and Infectious Disease**. Sponsor. Project title: “Quantifying conflict and its association with cholera in Yemen.” Award number: F31AI183632; PI: Maia Tarnas (\$91,952)
- 2025 - 2026 **PacVec (Pacific Southwest Center of Excellence in Vector-Borne Diseases)**. Principal Investigator. Project title: “Evaluating the Effectiveness of Area-Wide and Targeted Sterile Insect Release (SIT) for *Aedes aegypti* Control: Integrating Field Data and Simulation Approaches.” Award number: A23-0750-S029 (\$25,000)

Completed

- 2014 – 2017 **Bill and Melinda Gates Foundation**. Co-Investigator. “Targeted malaria elimination in Karen State, Myanmar.” Award: OPP1117507. PI: François Nosten. (\$6,326,573)

- 2017 – 2018 **Thailand Regional Artemisinin Initiative, through the Global Fund to fight AIDS, Tuberculosis and Malaria.** Co-Investigator. "GPS tracking of at-risk population movement in the Thai-Myanmar border region." PI: François Nosten. (\$20,000)
- 2019 – 2021 **Bill and Melinda Gates Foundation.** Co-Principal Investigator. Project title: "Identification and characterization of vector-borne pathogens and vector exposures to define regional biomonitoring strategies and vector control efforts in Cambodia." Award: OPP1211806. PI: Jessica Manning. (\$100,000)
- 2019 – 2021 **National Institute of Allergy and Infectious Disease.** Subrecipient Principal Investigator. Project title: "Assessing the acceptability of malaria interventions: a mixed methods approach." U19 Clinical Trial Option; FAIN: U19AI089672; Subaward number: 6123-1247-00-D; Part of the Southeast Asian Center for Excellence in Malaria Research (\$198,000)
- 2020 – 2021 **Federal Emergency Management Agency.** Co-Investigator. "Population-wide surveillance of COVID-19 antibodies in Orange County." In collaboration with Orange County Health Care Agency; contract: MA-042-20011978. PI: Tim Bruckner (mPI Bernadette Boden-Albala). (\$1,700,000)
- 2020 – 2021 **Federal Emergency Management Agency.** Co-Investigator. "Seroprevalence surveillance and predictive modeling for COVID-19 in Santa Ana, California." contract: A-2020-158-36. PI: Bernadette Boden-Albala). (\$2,960,145)
- 2020 – 2021 **Federal Emergency Management Agency.** Principal Investigator. "Health equity contact tracing." In collaboration with Orange County Health Care Agency; contract: MA-042-21010038. (\$217,045)
- 2021 – 2023 **Bill and Melinda Gates Foundation.** Co-Principal Investigator. Project title: "Pathogen metagenomics in the Mekong: A multi-faceted approach to improve public health." Award: INV-028123. PI: Jessica Manning. (\$993,567)
- 2021 – 2024 **National Institute of Allergy and Infectious Disease.** Subrecipient Principal Investigator. Project title: "Assessing the acceptability of malaria interventions: a mixed methods approach." U19 Clinical Trial Option; FAIN: U19AI089672; Subaward number: 6123-1247-12-D; Part of the Southeast Asian Center for Excellence in Malaria Research; PI: Liwang Cui (\$294,324)
- 2023 - 2024 **PacVec (Pacific Southwest Center of Excellence in Vector-Borne Diseases).** Principal Investigator. Project title: "Geospatial surveillance and geo-targeted interventions for halting the spread of Ae. aegypti mosquitoes in San Bernardino County, California." Award number: A23-0750-S015 (\$25,000)
- 2024 - 2025 **PacVec (Pacific Southwest Center of Excellence in Vector-Borne Diseases).** Principal Investigator. Project title: "Predictive modeling of Aedes mosquito distributions and abundance in San Bernardino County, CA for targeted vector control interventions." Award number: A23-0750-S022 (\$25,000)
- 2024 – 2025 **Thailand Fundamental Fund: Fiscal Year 2025 by the Thailand National Science Research and Innovation Fund (NSRF).** Mentor. Project title: "Assessing service readiness and community awareness in response to increasing incidence of Plasmodium knowlesi malaria in Thailand." PI: Pyae Linn Aung (\$25,000)
- 2025 **Wellcome Trust-funded initiative through MORU-OUCRU Discovery Research Academy (MODRA).** Mentor. Project title: "Hidden malaria transmission among Myanmar migrants in Thailand." PI: Pyae Linn Aung (\$30,000)

Internal Funding (selected)

- 2019 Faculty Seed Grant; Center for Population, Inequality, and Policy (CPIP); University of California, Irvine (\$4,442)
- 2022 Faculty Seed funding through the “Investing to Develop Center-Scale Multidisciplinary Convergence Research Programs” initiative. Project title: "New Data Streams and Predictive Analytics for Pandemic Preparedness" (Aug 1, 2022 - July 30, 2024) PI: Vladimir Minin; role: Co-Investigator (\$148,005)
- 2024 Surgery Seed Grant, School of Medicine, University of California, Irvine. Project title: “Evaluating Access to Neurosurgical Care in Ethiopia” (January – December 2024) PI: Alliya Qazi; role: Co-Investigator (\$7,500)

Consultations

- 2014 Community Partners International, Myanmar. Consultant. Mapping and GIS for malaria elimination.
- 2015 Save the Children, Nepal (for the Global Fund to Fight Aids, Tuberculosis, and Malaria). Consultant. Mapping and GIS for malaria services and elimination.
- 2020 - present California State Correctional System Expert Witness. Litigation concerning COVID-19 transmission in San Quentin Prison, Marin County, California, U.S.A.
- 2023 - 2024 California State Correctional System Expert Witness. Litigation concerning COVID-19 transmission in Chuckawalla Valley State Prison, Riverside County, California, U.S.A.

Honors, Fellowships, and Professional Distinctions (selected)

- 2009 Juan Comas award for best student paper, American Association of Physical Anthropologists Annual Meeting, Albuquerque, NM, U.S.A.
- 2020 Dean's Honoree for Public Health Celebration of Teaching, University of California, Irvine.
- 2020 Inducted into UCI's Delta Rho chapter of the Delta Omega Honorary Society in Public Health.
- 2021 Chartered Geographer (CGeog) and Fellow of the Royal Geographical Society (FRGS), London, U.K.
- 2025 Fellow (National), The Explorers Club, New York, NY.
- 2025 Graduate Student Mentor Award, Joe C. Wen School of Population and Public Health; University of California, Irvine.

Invited Talks, Panels, and Symposia

- 2016 **Human spatial ecology and residual transmission of malaria.** Invited speaker: Entomology and Vector Control for Malaria Elimination Regional Meeting & Workshop; Asia Pacific Malaria Elimination Network; Bangkok, Thailand. Event details
- 2017 **The importance of human population movement: Scale and frequency in infectious diseases dynamics.** Invited speaker: Infectious Routes: Epidemics and migration in Asia. Hong Kong University, Hong Kong.

Scale up and preliminary results from a *P. falciparum* malaria elimination program in Eastern Kayin State, Myanmar. Invited speaker: Center for Malaria Research at Penn State, Pennsylvania State University, University Park, PA.

2018 Who benefits from new technology? Perspectives from the Thai-Myanmar border. Invited speaker: Phones, drones and diseases. Hong Kong University, Hong Kong.

2019 Geospatial co-variation in entomological indices in malaria and dengue systems within the Mekong. Invited speaker: Defining vector research priorities in the Greater Mekong Sub-Region. Phnom Penh, Cambodia.

2020 Town hall discussion with Senator Ling Ling Chang on contact tracing for COVID-19 (Senator for the 29th District of California), July 8, 2020: Media coverage

Panelist on OC Forum: The Future of: The COVID Curve (July 9, 2020): Video link

Presentation to the Anaheim Unified High School District and the Anaheim Elementary School District Boards (both in Orange County, California) on whether or not school should be in-person (both voted unanimously to open the school year remotely, July 16, 2020): Read more

Multilevel effects of targeted mass drug administration for elimination of *P. falciparum* malaria on the Thailand-Myanmar border. Invited speaker for a session on: “Malaria parasite epidemiology and population dynamics during elimination” at the Joint International Tropical Medicine Meeting. Bangkok, Thailand (S3, virtual).

Reported acceptability and feasibility of mass administration of primaquine in field sites in Thailand and Myanmar. Invited speaker for a session on “Community and health system research for malaria elimination” at the Joint International Tropical Medicine Meeting. Bangkok, Thailand (S11, virtual).

2021 Updates on a *P. falciparum* elimination campaign in Kayin State, Myanmar; a TB program on the Thai-Myanmar border; and spatial epidemiology of COVID-19 in Orange County, California (USA). Invited speaker: Texas Biomedical Research Institute (virtual). Video link

Experience Sharing: **Using qualitative methods to enhance epidemiological research.** Invited speaker, along with Bipin Adhikari: Mahidol University. Bangkok, Thailand (virtual).

Mapping mosquito spit: a novel way to assess the space-time risk of mosquito borne diseases. Invited speaker for the Epidemiology Seminar Series at the Department of Epidemiology in the School of Public Health at the University of Michigan. (virtual).

Geospatial analyses of *Aedes aegypti* antibody intensity and its relationship to disease status. Invited speaker for IVCC (Innovative Vector Control Consortium) Tech Bites. (virtual).

2022 A spatial analysis of exposure to *Aedes* mosquitoes in an peri-urban area endemic to dengue, chikungunya, and Zika viruses. Invited speaker for the Infectious Diseases Grand Rounds in the School of Medicine at the University of California, Irvine. (virtual).

Mapping antibody responses to mosquito saliva for spatial epidemiologic analyses. Invited speaker for The GeoHealth Hour at the University of Twente, Netherlands. (virtual).

Spatial analysis of exposure to *Aedes* mosquitoes in a dengue-hyperendemic setting in Cambodia. Invited speaker at the Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand.

2023

Application of anthropology and demography for building a malaria elimination program.
Guest lecture for an Anthropology course at the University of South Dakota.

Social Epidemiology of Vector Borne Diseases, Prevention and Control. S19 at the Joint International Tropical Medicine Meeting in Bangkok, Thailand. Co-chaired with Suparat Phuanukoonnon. (December 14, 2023).

Contrasting environmental factors in scrub and murine typhus infections in Lao PDR (2003 – 2017). Invited lecture at the NIAID (National Institute of Allergy and Infectious Disease) International Center of Excellence in Research (ICER), Phnom Penh, Cambodia. (December 19, 2023).

2024 **A spatio-temporal analysis of scrub typhus cases in Lao PDR w/ murine typhus as a comparison.** Invited talk for the American Society for Rickettsiology ‘Spotlight on Rickettsia’. (virtual).

Panelist for Dean’s Distinguished Lecture Series: **Approaches to Population Health, Locally and Globally.** Joe C. Wen School of Population & Public Health, University of California, Irvine, U.S.A. (February 28, 2024).

Leveraging earth observation and serological data to understand the spread of *Aedes aegypti* and the diseases it transmits. Tribhuvan University Institute of Science and Technology; Central Department of Microbiology; Kirtipur, Kathmandu, Nepal. (Sept. 30, 2024).

Overlapping burdens: Climate change, displaced populations, and emerging health threats. Session on: Vulnerability of communities in a changing climate and neglected tropical diseases in a warming world; 17th Asian Conference on Diarrhoeal Disease and Nutrition (ASCODD); Kathmandu, Nepal. (Dec. 8, 2024).

2025 **Tracking conflict and cholera from space: Using night lights to measure infrastructure collapse and recovery, population displacement, and disease risk** Population Research Discovery Seminars; Center for Studies in Demography and Ecology; University of Washington, Seattle, U.S.A. (April 18, 2025).

Emergence of *Aedes aegypti* and *Aedes*-borne diseases in new ecological frontiers: Evidence from Southern California and Ethiopia Infection Grand Rounds: Nuffield Department of Medicine; University of Oxford, Oxford, U.K. (April 29, 2025).

Shedding light on conflict and cholera: Using night lights to track infrastructure collapse and disease risk Infectious Disease Data Observatory; Oxford Population Health; University of Oxford, Oxford, U.K. (April 30, 2025).

Vector expansion and immune imprints: Studying *Aedes aegypti* and the diseases it spreads in California, U.S.A. and Dire Dawa, Ethiopia Liverpool School of Tropical Medicine, Liverpool, U.K. (May 1, 2025).

Public health in complex borderlands: Lessons, challenges, and solutions for mobile populations on the Thailand-Myanmar border MiReKoc-UNIC International Summer School 2025: Beyond Borders: Health, Migration, and Diversity in an Interconnected World, 14-25 July 2025; Rumelifeneri Campus, Koç University, Istanbul (July 17, 2025). Event details

Grant writing for research Center on Forced Displacement: Interdisciplinary Research Methods Course for Displaced Scholars. Boston University (October 30, 2025).

Conference Presentations

* indicates presenter

- 2008** ***Parker D.**, Medina C. **Comparison of chiroptera and arthropod diversity in the Amazon Basin and the Andean Cloud Forest.** Centro de Educacion, Ciencia, y Conservacion Tambopata (CECCOT), Puerto Maldonado, Peru. 2008. [talk]
- 2009** ***Parker D.** **A survey of the arthropod populations within the phytotelmata of tank bromeliads in the cloud forests of the Andes.** UW Undergraduate Research Symposium. 2009. [poster]
- 2010** ***Parker D.**, Curran S. **The meanings of destination enclaves in origin communities and their consequences for migrant networks between origin and destination communities.** Population Association of America, Dallas, TX. P3-58. 2010. [poster]
- ***Parker D.**, Holman D. **An event history analysis of dengue fever outbreaks in eight different endemic regions.** American Association of Physical Anthropologists, Albuquerque, NM. 141(S50):pp. 184-185. 2010. [poster]
- 2011** ***Parker D.**, Jennings J. Wood J. **Sex and age-specific trends in the loss of life from tuberculosis in Sanday and Westray, Northern Orkney (Scotland), 1861-1961.** American Association of Physical Anthropologists, Minneapolis, MN. 144(S52):p. 234. 2011. [poster]
- ***Parker D.**, Lerdprom R., Srisatjarak W., Yan G., Prachumsri J., Cui L., Sirichaisinthop J. **Antimalarial drug resistance surveillance in Thailand: 1994 – 2010.** American Society of Tropical Medicine and Hygiene, Philadelphia, PA. 85(6 Suppl): LB-2286. 2011. [poster]
- 2012** ***Parker D.**, Jennings J. Wood J. **Transitions in mortality and documented causes of death: North Orkney (1855 – 1955).** American Association of Physical Anthropologists, Portland, OR. 147(S54):pp. 232-233. 2012. [poster]
- *Jennings J., **Parker, D.**, Wood J. **The influence of environmental and household factors on mortality in North Orkney, 1851 – 1961.** Population Association of America, San Francisco, CA. P2-32. 2012. [poster]
- ***Parker D.**, Matthews S., Srisatjarak W., Boonpan P., Lerdprom R., Lee M., Yan G., Sattabongkot J., Cui L., Sirichaisinthop J. **A spatio-temporal analysis of *Plasmodium falciparum* and *P. vivax* infections and treatment seeking behavior in Tha Song Yang District, Tak Province, Thailand: 2008 - 2011.** American Society of Tropical Medicine and Hygiene, Atlanta, GA. 877. 2012. [poster]
- 2013** ***Parker D.M.**, Wood J.W., Tomita S., DeWitte S., Sirichaisinthop J., Cui L. **Household level predictors and migration: a micro-demographic study of Karen villages along the Thai-Myanmar border.** Population Association of America, New Orleans, LA. P3-76. 2013. [poster]
- ***Parker D.M.**, Wood J.W., Tomita S., DeWitte S., Sirichaisinthop J., Cui L. **A sensitivity analysis of the impact of household consumer-producer ratios on the hazard of out-migration among the Karen.** American Association of Physical Anthropologists, Knoxville, TN. 150(S56): pp. 216-217. 2013. [talk]
- 2014** **Parker D.M.**, Matthews S.A., *Sattabongkot J., Sirichaisinthop J., Kiattibutr K., Yan G., Zhou G., Lee M., Fan Q., Li P., Cui L. **Malaria in borderlands: A case study from the Thailand-Myanmar border.** American Society of Tropical Medicine and Hygiene, New Orleans, LA. 941. 2014. [poster]
- 2015**

*Ya-umphan P., **Parker D.M.**, Cerqueira D., Cottrell G., Poinsignon A., Remoue F., Charoenviriyaphap T, Nosten F., Corbel V. **Human antibody response to *Anopheles* salivary peptide as a biomarker to assess the risk of malaria transmission in the Thai-Myanmar border.** Joint International Tropical Medicine Meeting, Bangkok, Thailand. 2015. [poster]

***Parker D.M.**, Landier J., Wiladphaingern J., Kereecharoen L., Maelankiri L., Thwin M.M., Nosten F.H. **Complex spatial patterns in Southeast Asian falciparum malaria transmission mean that reactive case detection is unlikely to halt transmission.** Joint International Tropical Medicine Meeting, Bangkok, Thailand. 2015. [talk]

Thi S.S., ***Parker D.M.**, Swe L.L., Ling C., Nosten F.H. **Migrants with multi-drug resistant tuberculosis.** XXV SMRU Border Meeting: Border Health, Malaria and Infectious Disease Forum, Mae Sot, Thailand. 2015. [talk]

*Bonnington C., **Parker D.M.**, Landier J., Nosten, F. **Practicalities of malaria elimination in Eastern Burma.** Oxford Tropical Network Conference, Siem Reap, Cambodia. 2015. [poster]

***Parker D.M.** **Spatial analysis of the re-emergence of clinical and asymptomatic *Plasmodium falciparum* in a low-uptake targeted chemo-elimination study site.** Oxford Tropical Network Conference, Siem Reap, Cambodia. 2015. [talk]

*Swe L.L., **Parker D.M.**, Nosten S., Charunwatthana P., Vincenti-Delmas M. **Putting life on hold: A clinic becomes a community for tuberculosis patients.** Joint International Tropical Medicine Meeting, Bangkok, Thailand. 2015. [poster]

2016 *Taylor A., Cerqueira G.C., Nkhoma S.C., Nair S., Cheeseman I.H., McDew-White M., Phyoe A.P., **Parker D.M.**, Nosten F., Anderson T.J.C., Wesolowski A., Engø-Monsen K., Neafsey D.E., Buckee C. **Malaria parasite population structure and implied human mobility in Northwest Thailand.** American Society of Tropical Medicine and Hygiene, Atlanta, GA. 1580. 2016. [poster]

***Parker D.M.**, Landier J., Thu A.M., Kajeechiwa L., Twin M.M., Soe T.N., Proux S., Tun S.W., Min M.C., Moo K.L., Lwin K.M., Khin S.D., Marta E., Delmas G., Nosten F. **Geographic distribution and spatial clustering of submicroscopic malaria in Kayin State, Myanmar.** American Society of Tropical Medicine and Hygiene, Atlanta, GA. 922. 2016. [poster]

Landier J., ***Parker D.M.**, Thu A.M., Kajeechiwa L., Twin M.M., Soe T.N., Proux S., Tun S.W., Min M.C., Moo K.L., Lwin K.M., Khin S.D., Marta E., Delmas G., Nosten F. **Relative contribution of generalized early diagnosis and treatment and of targeted mass treatment to elimination of *Plasmodium falciparum* malaria in Eastern Myanmar.** American Society of Tropical Medicine and Hygiene, Atlanta, GA. 1217. 2016. [talk]

2017 *Landier J., Santirad A., Wanachaloemlap C., B'let S., Kittitawee K., Konghahong K., Christensen P., Haohankhunnatham W., Archasuksan L., Wongaeka M., Raksuansak J., Das S., Jang I.K., Wiladphaingern J., **Parker D.M.**, Thu A.M., Ling C., Proux S., Domingo G.J., Delmas G., Nosten F. **A new high sensitivity rapid diagnostic test for *Plasmodium falciparum* detection in an elimination setting: individual diagnosis of infection and measurement of prevalence.** American Society of Tropical Medicine and Hygiene, Baltimore, MD. 967. 2017. [poster]

*Tomita S., **Parker D.M.** **Household demography and land-use in a rice-farming village in Laos from 1971 to 2013.** American Association of Physical Anthropologists, New Orleans, LA. S56. 2017. [poster]

*Pan-ngum W., Boondam J., White L.J., **Parker D.M.** **Cross-border malaria and new challenges to Thai national malaria control programme.** British Society for Parasitology, City of Dundee, UK. A12865. 2017. [talk]

- 2018**
- *Roberts T., Rattanavong S., Elliot I., Phommasone K., Mayxay M., Chansamouth V., Homsana A., Robinson M., Blacksell S., **Parker D.M.**, Newton P.N. **Come rain or come shine. Differential spatiotemporal dynamics of scrub typhus and murine typhus in the Lao PDR.** American Society of Tropical Medicine and Hygiene, New Orleans, LA. 754. 2018. [talk]
 - Rattanavong S., Dubot-Pérès A., Mayxay M., Vongsouvath M., Lee S.J. Cappelle J., Newton P.N., ***Parker D.M. A spatial analysis of central nervous system infections in Lao PDR.** American Society of Tropical Medicine and Hygiene, New Orleans, LA. LB-5125. 2018. [poster]
 - *Bipin Adhikari B., Phommasone K., Pongvosa T., Koummarasy P., Soundala X., Henriques G., Sirithiranont P., **Parker D.M.**, von Seidlein L., White N.J., Day N.P.J., Dondorp A.M., Newton P.N., Cheah P.Y., Pell C., Mayxay M. **A mixed method study of health seeking behavior for febrile illnesses and its implications for malaria control and elimination in Savannakhet Province, Lao PDR.** American Society of Tropical Medicine and Hygiene, New Orleans, LA. 400. 2018. [poster]
- 2019**
- Leang R., **Parker D.M.**, Kong D., Man S., Sreng S., Lay S., Nang K., Kamhawi S., Fay M., Amaro-Carambot E., Whitehead S., Suon S., Huch C., Huy R., Wellemes T.E., Valenzuela J.G., *Manning J.E. **Update from PAGODAS: Pediatric Assessment Group Of Dengue and Aedes Saliva to investigate vector-borne determinants of Aedes-transmitted arboviral infections in Cambodia.** American Society of Tropical Medicine and Hygiene, National Harbor, MD. 9. 2019. [talk]
 - *Li X., Arya G.A., Reyes A., Thu A.M., Delmas G., **Parker D.M.**, Lwin K.M., Sriprawat K., Nosten F., Anderson T. **Spatial analysis of parasite population genomics during malaria elimination efforts in Eastern Myanmar.** American Society of Tropical Medicine and Hygiene, National Harbor, MD. 1938. 2019. [talk]
 - *Roberts T., **Parker D.M.**, Butlerys P., Phommasone K., Chansamouth V., Vongsouvath M., Rattanavong S., Elliot I., Robinson M., Blacksell S., Mayxay M., Newton P.N.. **Differential spatiotemporal dynamics of scrub typhus and murine typhus in the Lao PDR.** Asia-Pacific Rickettsia Conference, Chiang Rai, Thailand. 37. 2019. [talk]
- 2020**
- *Kong D., Lay S., Man S., **Parker D.M.**, Sreng S. Chea S., Suon S., Huch C., Huy R., Oliveira F., Leang R., Ayhong V., Tato C., DeRisi J., Bohl J., Manning J.E. **Transmission dynamics of 2019 dengue outbreak in Cambodia via next generation sequencing.** U.S.-Japan Cooperative Medical Sciences Program's 22nd International Conference On Emerging Infectious Diseases In The Pacific Rim, Bangkok, Thailand. 2020. [poster]
 - *Swe M.M.M., Win M.M., Cohen J., Phyto A.P., **Parker D.**, Dance D., Ashley E., Smithuis F. **Mapping and geographic distribution of Burkholderia pseudomallei in Myanmar.** American Society of Tropical Medicine and Hygiene. 946. 2020. [poster]
 - *Oliveira F.L., Oristian J., Kong D., **Parker D.M.**, Leon P.V., Jeang B., Man S., Sreng S., Suon S., Huy R., Leang R., Bohl J.A., Calvo E., Valenzuela J.G., Manning J.E. **Leveraging biomarkers of exposure identified in PAGODAS (Pediatric Assessment Group Of Dengue and Aedes Saliva) in Cambodia.** American Society of Tropical Medicine and Hygiene. 496. 2020. [talk]
 - Yongchaitrakul S., ***Parker D.M.**, Singhasivanon P., Cui L., Sattabongkot J., Phuanukoonnon S. **Understanding malaria preventive behaviors among the cross border population along the Thai-Myanmar border in Tak province, Thailand.** American Society of Tropical Medicine and Hygiene. 757. 2020. [poster]
 - ***Parker D.M.**, Jeang B., Kong D., Man S., Sreng S., Huy R., Leang R., Bohl J.A., Valenzuela J.G., Oliveira F., Manning J.E. **Individual, household, and environmental predictors of symptomatic dengue infection in a peri-urban area of Cambodia: a geostatistical analysis.** American Society of Tropical Medicine and Hygiene. 609. 2020. [poster]

2021

*Li X., Arya G.A., Thu A.M., Delmas G., **Parker D.M.**, Lwin K.M., Sriprawat K., Nosten F., Anderson T. **Spatial analysis of parasite population genomics during malaria elimination efforts in Eastern Myanmar.** Genomic Epidemiology of Malaria. 2021. [talk]

*Manning J., Chea S., **Parker D.M.**, Mateja A., Man S., Nhek S., Sreng S., Lay S., Fay M.P., Ly S., Sath R., Chea H., Huy R., Valenzuela J.G., Kry H., Lon C., Leang R., Oliveira F. **Humoral immunity against *Aedes aegypti* saliva associated with development of inapparent dengue: a longitudinal observational cohort in Cambodia.** American Society of Tropical Medicine and Hygiene. 126. 2021. [talk]

*Steinbrook E.; Min M.C.; Kajeechiwa L.; Wiladphaingern J.; Paw M.K.; Pimanpanarak M.; Hirannetthanyakit W.; Min A.M.; Tun N.W.; Gilder M.E.; Nosten F.; McGready R., **Parker D.M.** (2021). **Distance matters: barriers to antenatal care and safe childbirth in a migrant population on the Thailand-Myanmar border from 2007-2015, a pregnancy cohort study.** American Society of Tropical Medicine and Hygiene. 0464. 2021. [talk]

*Bohl J.A., Lay S., Chea S., Ahyong V., **Parker D.M.**, Gallagher S., Fintzi J., Man S., Ponce A., Sreng S., Kong D., Oliveira F., Kalantar K., Tan M., Fahsbender L., Sheu J., Neff N., Detweiler A., Ly S., Sath R., Chea H., Kry H., Leang R., Huy R., Lon C., Tato C.M., DeRisi J.L., Manning J. (2021). **Metagenomic next-generation sequencing of febrile patients reveals diverse vector-borne pathogen landscape in Cambodia.** American Society of Tropical Medicine and Hygiene. 0907. 2021. [talk]

*Brook C., Bohl J.A., Northrup G., Lay S., Chea S., Ahyong V., **Parker D.M.**, Man S., Sreng S., Kong D., Oliveira F., Fahsbender L., Leang R., Huy R., Lon C., Tato C.M., DeRisi J.L., Boots M., Manning J. (2021). **Peri-urban transmission of dengue in the Cambodian 2019 epidemic: a phylogeographic approach to understand arboviral outbreaks.** American Society of Tropical Medicine and Hygiene. 1362. 2021. [talk]

2022

*Bruckner T., **Parker D.**, Messaoudi I., Minin V. (2022). **Hospital-based surveillance approximates population seroprevalence of SARS-CoV-2 in the pre-vaccine era.** Society for Epidemiological Research. 0181. [talk]

*Goldstein I., **Parker D.**, Jiang S., Minin V. Using infectious disease RNA counts from wastewater surveillance to estimate the effective reproduction number. MIDAS Network Annual Meeting. 2022. [talk]

*Pacheco A.R., Lon C., Lay S., Chea S., Oum M.H., Ly S., Sath R., Tim R., Khamsiriwatchara A., Wansatid P., **Parker D.M.**, Manning J.E. The CoorFamily App: **Feasibility of a 10-day location history contact tracing smartphone applicatoin for febrile patients in Cambodia.** American Society of Tropical Medicine and Hygiene. 0692. 2022. [poster]

***Baker C.**, Barilar I., de Araujo L., Rimoin A., **Parker D.**, Boyd R., Tobias J., Moonan P., Click E., Finlay A., Oeltmann J., Minin V., Modongo C., Zetols N., Niemann S., Shin S. **High-resolution characterization of recent tuberculosis transmission in Botswana using geospatial and genomic data - the Kopanyo study.** American Society of Tropical Medicine and Hygiene. LB-5072. 2022. [poster]

***Sehi G.T.**, Macharia P.M., Houngbedji C.A., **Parker D.M.** **A spatial analysis of geographic access to public healthcare facilities in Côte d'Ivoire.** American Society of Tropical Medicine and Hygiene. LB-5402. 2022. [poster]

2023

*Aung P.L., Soe M.T., Aung P.P., Kyaw M.P., Nguitragool W., **Parker D.M.**, Cui L., Sattabongkot J. **Revolutionizing Control of *Plasmodium vivax* Malaria: Assessing the Efficacy of Targeted Primaquine Mass Treatment in a Township of Northern Myanmar.** American Society of Tropical Medicine and Hygiene. Seattle, WA, U.S.A. LB-8408. 2023. [poster]

***Tarnas M.C.**, Ching C., Lamb L.B., **Parker D.M.**, Zaman M.H. **Analyzing health of forcibly displaced communities through an integrated ecological lens.** American Association of Geographers. Paper session: Displacement Ecologies 1: Rethinking the displacement-environment nexus. Denver, CO, U.S.A. 2023. [talk]

Ching C., **Tarnas M.C.**, **Parker D.M.**, *Zaman M.H. **Infectious disease research in displaced communities: Evaluating ethics, inclusion, and engagement.** Humanitarian and Conflict Response Institute Conference on Medical Humanitarianism and Global Health. Manchester, U.K. 2023. [talk]

***Tarnas M.C.**, Al Dheeb N., Zaman M.H., **Parker D.M.** **Impact of Air Raids on the Reported Incidence of Cholera in Yemen, 2016-2019.** Consortium of Universities for Global Health Conference. Washington, D.C., U.S.A. 2023. [poster]

***Sehi G.T.**, Birhanie S.K., **Parker D.M.** **Geospatial Surveillance Strategies to Combat *Aedes* Mosquitoes in West Valley San Bernardino County, California.** PacVec Fall Seminar Series 2023. Online. 2023. [talk]

2024 ***Glendening N.**, Haileselassie W., **Parker D.M.** **A cross-sectional study examining malaria risk factors among migrants to a gold-mining settlement in Ethiopia.** UC Global Health Day, Los Angeles, USA. 2024. [Poster]

***Tarnas M.C.**, Abbara A., Desai A.N., **Parker D.M.** **Associations between reported leishmaniasis incidence, conflict intensity, and environmental factors, 2005 – 2020.** Consortium of Universities for Global Health Conference. Los Angeles, USA. 2024. [poster]

***Sehi G.T.**, Birhanie S.K., Brown M., **Parker D.M.** **Mapping the future: Geospatial surveillance strategies to combat *Aedes* mosquitoes in West Valley San Bernardino County, California.** PacVec Annual Meeting 2024, Arizona State University. Phoenix, AZ, USA. 2024. [talk]

***Tarnas M.C.**, Abbara, A., Desai A.N., **Parker D.M.** **Conflict and the environment: Associations with the global increase in cutaneous and mucocutaneous leishmaniasis.** Global Health Security Conference, Sydney, Australia. 2024. [poster]

*Lay S., Lay S., Oum M., Sebastian J., Long L., Chea S., Ly P., Ly S., Sath R., Chin S., Chau D., Seng H., Ly S., **Parker D.M.**, Minin V.M., Manning J.E., Lon C., Yek C. **Mapping respiratory virus evolution and outbreaks in Cambodia using pathogen genomics.** American Society of Tropical Medicine and Hygiene. New Orleans, LA, U.S.A. 6274. [poster]

***Glendening N.**, Haileselassie W., Lee M.C., Yan G., **Parker D.M.** **Analysis of malaria prevalence and health services in a gold mining site in western Ethiopia: A mixed methods research study.** American Society of Tropical Medicine and Hygiene. New Orleans, LA, U.S.A. 6402. [poster]

***Sehi, G.T.**, Birhanie S.K., Brown M., **Parker D.M.** **Ecological correlates of invasive *Ae. aegypti* mosquitoes in San Bernardino County, California U.S.A.** American Society of Tropical Medicine and Hygiene. New Orleans, LA, U.S.A. 7773 [poster]

***Tarnas M.C.**, Vasylyeva T.I., Minin V.M., **Parker D.M.** **Nighttime lights for measuring conflict: Case studies in Yemen and Ukraine.** Part of a symposium on: Tracking the Footprint of War: Earth and Environmental Science Perspectives on Monitoring Conflict Impacts: American Geophysical Union 2024. Washington, D.C., U.S.A. [Poster]

2025 *Chu C.S., Lwin K.M., Burgoine K., Phyto A.P., Mukaka M., **Parker D.M.**, Carrara V.I., Nosten F., White N.J. **Characterising the *Plasmodium vivax* relapse rate with background transmission intensity: a longitudinal study in northwest Thailand.** The 9th International Conference on Plasmodium vivax Research (ICPV 2025). Puducherry, India. [Talk]

*Mercaldo R., **Parker D.M.**, Chea S., Ly P., Oum M., Lay S., Long L., Phoch S., Chea S., Chhuon T., Hou C., Ly S., Sath R., Srouen M., Bin C., Chak C., Seang S., Te V., Srey V., Chhor B., Lean K., Nhem S., Chiek S., Dork R., Prevots R., Seng H., Krang S., Ly S., Lon C., Yek C. **Modeling melioidosis incidence and hotspots in Cambodia using national surveillance data from 2018-2023.** American Society of Tropical Medicine and Hygiene. Toronto, Ontario, Canada. LB-9046. [Poster]

*Urrutia A., **Parker D.M.** **Shifting water cycle, water management, and zoonotic diseases risk: Socioenvironmental drivers of dengue and leptospirosis in Peru (2003-2023).** American Society of Tropical Medicine and Hygiene. Toronto, Ontario, Canada. 6065. [Talk]

Professional Service

University Service

Aug. 2017 – present	Director of GHREAT (Global Health Research, Education and Translation); Department of Population Health and Disease Prevention; Program in Public Health
Aug. 2017 – June 2023	Steering committee member GloCal Health Fellowship Program
Oct. 2018 – June 2019	Designed and established an undergraduate minor in Global Health
Apr. 2019	GHREAT-DITA Endowed Graduate Fellowship Committee
May 2019	UCI Public Health Diverse Educational Community and Doctoral Experience Program (DECADE) Student Council, Invited Panelist, Careers Panel
May 2019 – present	Faculty advisory board member for the UCI Infectious Diseases Initiative
Dec. 2019 – March 2021	PhD admissions committee member (Department of Population Health and Disease Prevention)
Dec. 2019 – June 2022	Faculty affairs committee member (Department of Population Health and Disease Prevention)
Apr. 2020 – June 2022	Faculty workload committee member (Department of Population Health and Disease Prevention)
Aug. 2020 – June 2021	Search committee for Associate Dean of Research (Program in Public Health)
May 2021 – August 2023	School wide curriculum committee (Program in Public Health)
Oct. 2021 – June 2024	School wide Masters in Public Health advisory committee (Program in Public Health)
Oct. 2022 – January 2023	Search committee for faculty member in Global Health (Department of Population Health and Disease Prevention)
May 2023 – June 2024	Co-Director of Accreditation (through the Council on Education in Public Health (CEPH))
Sept. 2023 – June 2024	Chair of school wide curriculum committee (Program in Public Health)

Service to the Field

May 2018 – May 2020 2019	Global Assessor (reviewer for small grants); Royal Society of Tropical Medicine and Hygiene Invited expert reviewer for: European Research Council Consolidator Grants
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2019	Invited expert reviewer for: United Kingdom Academy of Medical Sciences Springboard scheme
July 2020	Epidemiological investigations of Orange County Jails with regard to the COVID-19 outbreak, at request of ACLU of Southern California
Aug. 2020	Invited ad hoc peer reviewer for: National Institutes of Health/National Institute of Allergy and Infectious Disease
2020, 2021, 2022	Invited expert reviewer for: The U.K. Research and Innovation/Medical Research Council UKRI Future Leaders Fellowships.
2023	Invited expert reviewer for: the Programmes Transversaux de Recherche - Institut Pasteur
2023, 2024	Invited reviewer for: The U.K. Research and Innovation /Medical Research Council Applied Global Health Research Board.
2024	Invited reviewer for: The U.K. Medical Research Foundation "Impact of Climate Change on Health" 24/25 funding call.
2024, 2025	Invited expert reviewer for: The Swiss National Science Foundation
2024 - June 2025	Chair, DSMB for: "Neonatal exposure to primaquine through breast milk during treatment in postpartum women"; ClinicalTrials.gov ID: NCT06191458

Journal Editorial Boards

Aug. 2018 – present	Editorial board: Spatial Demography
Nov. 2020 – present	Associate Editor of PLOS Neglected Tropical Diseases
June 2021 – April 2025	Associate Editor of Discover Social Science and Health
April 2025 - Dec. 2025	Senior Editorial Board Member of Discover Social Science and Health
April 2025 - present	Advisory Board for Global Health Equity
Jan. 2026 - present	Section Editor of Discover Social Science and Health

Manuscript review for peer-reviewed journals

American Journal of Physical Anthropology, Asia Pacific Education Review, Asia-pacific Journal of Public Health, Asian Pacific Journal of Tropical Biomedicine, BMC Infectious Diseases, BMC Medicine, BMC Public Health, BMJ Case Reports, Communications Medicine, Demographic Research, Demography, Emerging Infectious Diseases, Environmental Health Perspectives, Environmental Monitoring and Assessment, Epidemics, Epidemiology and Infection, Eurosurveillance, Expert Review of Molecular Diagnostics, F1000 Research, Gates Open Research, Globalization and Health, Health and Place, Heliyon, Infectious Diseases of Poverty, International Health, International Journal of Infectious Diseases, International Journal of Molecular Sciences, Journal of the American Mosquito Control Association, Journal of the Association for Information Science and Technology, Journal of Mountain Science, Journal of Youth Studies, The Lancet Global Health, The Lancet Infectious Diseases, The Lancet Planetary Health, The Lancet Regional Health-Western Pacific, Malaria Journal, Nature Communications, Pathogens and Global Health, PLoS Climate, PLoS Medicine, PLoS Neglected Tropical Diseases, PLoS One, Population and Environment, Science Advances, Science, Scientific Reports, Social Science & Medicine, Southern Economic Journal, Spatial Demography

Teaching and Advising

University of California, Irvine (UGs = undergraduate students; Gs = graduate students)

Term	Course number: course name (% contribution)	Student count
2018 (Spring)	PH101: Introduction to Epidemiology (100%)	246 UGs
2018 (Fall)	PH213: International Epidemiology (100%)	13 Gs
2019 (Spring)	PH101: Introduction to Epidemiology (100%)	242 UGs
2019 (Fall)	PH213: International Epidemiology (100%)	8 Gs
2020 (Spring)	PH101: Introduction to Epidemiology (100%)	250 UGs

2020 (Spring)	PH289: Climate Change and Global Health (100%)	14 Gs
2020 (Fall)	PH213: Epidemiology in Global Health (100%)	25 Gs
2021 (Spring)	PH101: Introduction to Epidemiology (100%)	247 UGs
2021 (Fall)	PH213: Epidemiology in Global Health (100%)	26 Gs
2022 (Spring)	PH101: Introduction to Epidemiology (100%)	252 UGs
2022 (Fall)	PH213: Epidemiology in Global Health (100%)	30 Gs
2023 (Spring)	PH282: Climate Change and Global Health (100%)	10 Gs
2023 (Fall)	PH213: Epidemiology in Global Health (100%)	33 Gs
2024 (Spring)	PH101: Introduction to Epidemiology (100%)	175 UGs
2025 (Fall)	PH213: Epidemiology in Global Health (100%)	15 Gs
2025 (Fall)	PH282: Climate Change and Global Health (100%)	14 Gs

Mahidol University, Bangkok, Thailand

2021 (Fall) TMHG548: Research Methods in Health Informatics (20%)

Graduate Student Committee Member (all from UC-Irvine Public Health unless otherwise indicated)

Current PhD (pre-candidacy)

Advanced to PhD Candidacy

09/2021 – present	Gaëlle Sehi, Advisor
09/2021 – present	Maia Tarnas, Advisor
09/2021 – present	Heven Sime, Co-Advisor; Addis Ababa University
09/2022 – present	Marcela Lopez, Co-advisor
09/2023 – present	Jose Villalvazo, Co-advisor
09/2023 – present	Adriana Urrutia, Advisor
04/2025 – present	Naing Bo Bo Min, External committee member; Mahidol University, Thailand
09/2025 – present	Christian Zelaya, Committee member; Statistics

Completed PhD

12/2017 – 06/2018	Tamara Jimah, Committee member
08/2017 – 06/2019	Sayambhu Saita, Chair and external committee member; Mahidol University, Thailand
05/2019 – 06/2021	Kasama Pooseesod, Chair and external committee member; Mahidol University, Thailand
12/2019 – 01/2020	Alfonso Shin, Committee member; Biomedical Engineering
04/2019 – 12/2023	Lauren Bradley, Committee member; Biological Sciences
09/2020 – 06/2025	Natasha Glendening, Advisor
09/2021 – 08/2023	Wen-Jian Chung, Committee member; Computational Science (UCI/UCSD joint program)
07/2021 – 08/2024	Chelsea Baker, Committee member; Nursing
11/2021 – 06/2025	Prudencio Merino, Committee member; Lundquist Institute for Biomedical Innovation at Harbor-UCLA Medical Center
2022	Desmond Gul, External PhD thesis examiner, Monash University, Australia
01/2022 – 05/2022	Samuel Lopez, Committee member; Mathematics
05/2022 – 06/2023	Damon Bayer, Committee member; Statistics
09/2023 – 06/2025	Catalina Medina, Committee member; Statistics
2024	Ganga Chhetri, External PhD thesis examiner, Tribhuvan University, Nepal
2025	Meiwen Zhang, External examiner, University of Oxford; U.K.
2025	Patiwat Sa-angchai, Chair and external examiner; Mahidol University, Thailand.

Completed MPH/MS

09/2019 – 06/2021	Alexanhder Luu Vo, MPH Advisor
09/2019 – 06/2021	Sasha Jahan Belaluddin, MPH Advisor
05/2021 – 01/2022	Tullaya Sitasuwan, MS, External Thesis Chair, Mahidol University, Thailand
09/2021 – 06/2022	Jay Mantuhac, MPH Advisor

09/2022 – 06/2023	Rohan Subramanian, MPH Advisor
01/2023 – 06/2023	Shemms Najjar, MPH practicum site supervisor
12/2021 – 09/2023	Kamaori Xiong, MPH Advisor
01/2023 – 09/2024	Victoria Sahrai, MPH Advisor

Undergraduate Research Advising

2018/2019	Stephanie Nguyen and Nhu Do: Psychosociocultural investigation of smoking cessation of previous Vietnamese male smokers in Orange County (awarded \$400 for research; presented at UROP symposium Spring 2019)
2018/2019	Elizabeth Savin, Jessica Oshiro, Noor Elbershawi, Rita L. Karaian and Mahima Avanti: Flu vaccine perceptions among University of California, Irvine (UCI) students (awarded \$648 for research; presented at UROP symposium Spring 2019)
2017/2018	Samar Arshad and Catherine Chiou: Assessing the knowledge of and access to contraceptives among female undergraduate students at the University of California, Irvine (awarded \$500 for research; presented at UROP symposium Spring 2018)
2019/2020	Hector M. Garcia: Vaccines: Role of a UCI student's living situation in vaccine barriers (awarded \$350 for research on access to the influenza vaccine among UCI students)
2019/2020	Chas P. Hurst, Nydia I. Gomez, Aqsa Khalil: Exploring food insecurity and its effect on academics and wellbeing among college students (awarded \$400 for research on food security among UCI students)
2020/2021	Chas P. Hurst: Examining Potential Associations between Landscape Attributes, Environmental Factors, <i>Aedes</i> Mosquito Abundance, and Human Exposure to <i>Aedes</i> Mosquitoes in Cambodia (awarded \$600)
2020/2021	Catthi Ly, Aisha Raheem, Nydia Gomez, Jasmine Quan, Thang Nguyen, Jihwan T. Kim, Govena Garewal, Chas P. Hurst, Katy X. Dang, Sarah Wang, Nayeli Inzunza, Manuel Sardaryan, Jayden Ware, Samuel D. Tincher, Ashley Park, Chisomam J. Agaranna: Community Based Participatory Research Project for Orange County amid the COVID-19 Pandemic (awarded \$2,500)
2021/2022	Nydia I. Gomez, Shayla Tran, Annaliese Kaxon-Rupp, Ashley Tang, Jasmine Quan, Ziena Smadi, Ashley Park, Chisomam Agaranna, Benjamin Ho, Dana Suleiman, Melyssa Karcher: Assessing the knowledge of sexual health and sexual health resource use on UCI undergraduate students and its relation to cultural upbringing (awarded \$200)

Workshops

2014	<u>Mapping health structures for malaria elimination.</u> Community Partners International, Karen Department of Health and Welfare, Karen Baptist Convention, Dawei, Myanmar; October 27 – 29.
2015	<u>Introduction to global positioning systems and geographic information systems for malaria elimination.</u> Save the Children Nepal and Epidemiology and Disease Control Division, Department of Health Services, Hetauda and Chitwan, Nepal; December 8 – 9; Kathmandu, Nepal; December 11.
2016	<u>Introduction to ArcMap and GIS for malaria elimination.</u> Save the Children Nepal and Epidemiology and Disease Control Division, Department of Health Services, Kathmandu, Nepal; June 16.
2016	<u>Introduction to Quantum GIS (QGIS).</u> Lao-Oxford-Mahosot Hospital Wellcome Trust Research Unit, Vientiane, Laos; May 23 – 25.

2016	<u>Mapping health services in Eastern Burma Workshop.</u> Burmese Medical Association and Karen Department of Health and Welfare, Mae Sot, Thailand; March 30 – April 1 (with Saw Poe Wah and Saw Myo Chit Min).
2016	<u>Mass drug administration in low-income countries.</u> University of Copenhagen, School of Global Health; July 25 – August 26. Contributed five short videos on mass drug administration for malaria.
2017	<u>Introduction to Quantum GIS (QGIS).</u> Shoklo Malaria Research Unit, Mahidol Oxford Tropical Medicine Research Unit, Mae Sot, Thailand; June 17 – 18.
2020	<u>Health Equity Contact Tracing.</u> University of California, Irvine; July 20 – September 18.
2022	<u>UC Irvine Summer Institute in Biostatistics and Undergraduate Data Science;</u> Participated as a data science/infectious disease epidemiology mentor; July 2022.
2024	<u>UC Irvine Summer Institute in Biostatistics and Undergraduate Data Science;</u> Participated as a data science/infectious disease epidemiology mentor; July 2024.

Professional Memberships

American Association for the Advancement of Science*
 American Association of Physical Anthropologists
 American Public Health Association
 American Society for Rickettsiology
 American Society of Tropical Medicine and Hygiene
 The Explorers Club*
 International Society for Infectious Diseases
 John Snow Society*
 Population Association of America
 Royal Geographical Society*
 Royal Society of Tropical Medicine and Hygiene
 Sigma Xi

* currently active

Certifications & Licenses

Amateur Radio License (FCC, USA) – Technician & General (2024), Amateur Extra (2025); Call Sign: KO6GAH
 Remote Pilot Certificate – Part 107, sUAS (FAA, USA) – Earned 2023
 Open Water Diver Certification (SSI) – Certified 2014; Specialty Certifications: Night/Limited Visibility, Education Dives; 18 dives logged in Thailand (2014–2016)

Media and Other Interviews

Media about my research

April 2015: Interviewed by Alexa C. Kurzius for article titled “Mapping Malaria in Myanmar” on the Johns Hopkins Bloomberg School of Public Health “Global Health Now” blog: available at: <https://www.globalhealthnow.org/2015-04/mapping-malaria-myanmar>

March 2016: Interviewed by Sarika Bansal for article titled “The Unrelenting Specter of Drug-Resistant Malaria” on “The Development Set”: <https://medium.com/the-development-set/the-unrelenting-specter-of-drug-resistant-malaria-da11f736c973#.oypacg437>

April 2019: Article about my research on herd effects from mass administration of antimalarials: <https://www.drugdiscoverytrends.com/mass-drug-administrations-can-grant-population-protection-against-malaria/>

December 2019: Interview with Lilibeth Garcia about my malaria work for UCI's webpage: <https://news.uci.edu/2020/01/13/on-a-mission-to-mitigate-malaria/>

August 2020: Article about our online dashboard for local COVID-19 epidemiology: <https://www.audacy.com/knxnews/articles/uci-launches-covid-19-trends-site-comparing-socal-counties>

August 24, 2021: Interviewed by Ben Brazil from LA Times OC about my research on the spatial epidemiology of COVID-19 in Orange County: <https://www.latimes.com/socal/daily-pilot/entertainment/story/2021-08-26/uci-disparities-orange-county-covid-19>

August 23, 2021: Quoted in the OC Business Journal with regard to our paper on the spatial epidemiology of COVID-19 in OC: <https://www.ocbj.com/news/2021/sep/06/uci-finds-disparities-covid-infections-deaths/>

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March 3, 2020: Interviewed by Patrice Apodaca of Daily Pilot about hand hygiene: <https://www.latimes.com/socal/daily-pilot/opinion/story/2020-03-10/coronavirus-one-reason-to-stop-shaking-hands>

March 20, 2020: Interviewed by Liz Scherer about hand hygiene: <https://www.everydayhealth.com/coronavirus/should-you-diy-hand-sanitizer-health-experts-weigh-in/>

May 1, 2020: My expert opinion was referenced by ACLU of Southern California regarding COVID-19 in jails: <https://www.latimes.com/california/story/2020-05-01/warning-coronavirus-could-quadruple-in-orange-county-jails-aclu-sues-oc-sheriff-to-free-inmates>

May 4, 2020: Interviewed by Katie Murar for OC Business Journal regarding COVID-19 in Orange County: <https://www.ocbj.com/news/2020/may/04/covid-19-first-coast-now-inland/>

May 15, 2020: Interview with Paul Anderson of the City News Service regarding COVID-19 in Orange County: <https://www.nbclosangeles.com/news/coronavirus/orange-county-reports-155-more-cases-of-covid-19/2364155/>

May 18, 2020: Interviewed by Ashley Ludwig regarding COVID-19 in Orange County <https://patch.com/california/orange-county/nearly-4-500-cases-coronavirus-orange-county>

July 22, 2020: Interviewed by Jessica De Nova for ABC7 regarding geographic spread of COVID-19 in OC: <https://abc7.com/orange-county-coronavirus-oc-covid-19-santa-ana/6329876/>

July 28, 2020: Interviewed by Tyler Kingkade regarding contact tracing for COVID-19 in California: <https://>

<http://www.nbcnews.com/news/us-news/california-coronavirus-cases-spike-contact-tracing-stalled-fear-embarrassment-n1235345>

August 15, 2020: Interviewed by Tammy Webber for an article on fear of contact tracing among immigrants in the Associated Press: <https://apnews.com/67d8c0778472c9c06bb5b1a0622375c2>

November 6, 2020: Interviewed by Spencer Custodio for an article about COVID-19, risk behaviors, and a potential second peak in the Voice of OC: <https://voiceofoc.org/2020/11/is-a-second-coronavirus-wave-hitting-orange-county/> and: <https://voiceofoc.org/2020/11/second-coronavirus-wave-hits-orange-county/>

December 9, 2020: Interviewed by Vera Castaneda for the LA Times Daily Pilot about our seroprevalence survey in Santa Ana, California: https://www.latimes.com/socal/daily-pilot/entertainment/story/2020-12-10/drive-through-and-walk-in-coronavirus-antibody-testing-launches-in-santa-ana?_amp=true

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