

Curriculum Vitae

Alison P. Galvani

Director, Yale Center for Infectious Disease Modeling and Analysis (CIDMA)
Burnett and Stender Families Professor of Epidemiology
Yale University School of Public Health

Education

2002 D. Phil from the University of Oxford. Advisor: Lord Robert May
1998 First class BA (Honors, with Distinction) in Biological Sciences
from the University of Oxford

Positions

2015-present Burnett and Stender Families Professor of Epidemiology
2014-present Director, Yale Center for Infectious Disease Modeling and Analysis
(CIDMA)
2013-present Professor of Epidemiology, Yale School of Public Health
2013-present Professor, Dept. of Ecology and Evolutionary Biology, Yale
University
2009-2013 Associate Professor (with tenure), Yale School of Public Health
2009-2013 Associate Professor, Dept. of Ecology and Evolutionary Biology,
Yale University
2004-2009 Assistant Professor, Yale School of Public Health
2008-2009 Assistant Professor, Dept. of Ecology and Evolutionary Biology,
Yale University
2002-2004 Miller Research Fellow, University of California, Berkeley

Honorary Positions/Awards

2020 Fellow, The Justice Collaborative Institute
2015 Professor of Epidemiology, University of Liberia
2015 Professor of Infectious Diseases, KIIT School of Public Health, India
2017-2025 Governing Council of the Connecticut Academy of Science and
Engineering
2016 Certificate of Gratitude from Liberian Ministry of Health for
“Pivotal role in the eradication of the Ebola virus from Liberia”
2013 Bellman Prize
2012 The Blavatnik Faculty Award for Young Scientists from the New
York Academy of Sciences
2007 Fellowship from Institute for Advanced Studies, Berlin
2007 MacMillan Award
2006 John Simon Guggenheim Memorial Foundation Award

Publications

325. Ye, Y., Pandey, A., Fitzpatrick, M.C., Potter-Schwartz, L., Bawden, C., Bilori, B.,
Singer, B.H. & **Galvani, A.P.** (2026) Estimating US savings on outpatient prescription

- pharmaceuticals from international reference pricing. *Proceedings of the National Academy of Sciences, USA*. 123(2):e2520871122 DOI: 10.1073/pnas.2520871122
324. Fitzpatrick, M.C., Wells, C.R., Pandey, A., Ayaz, L., Hotez, P.J., Moghadas, S.M. & **Galvani, A.P.** (2026) School-level gaps in MMR coverage as fuel for measles outbreaks. *Annals of Internal Medicine* 179(1):149-152. doi: 10.7326/ANNALS-25-01611
 323. Wells, C.R., Pandey, A., Ye, Y., Bawden, C., Giglio, R., Wong, C., Chelsea Cipriano., Ayaz, L., Moghadas, S.M., Bai, Y., Wang, L., Matrajt, L. Singer, B.H. & **Galvani, A.P.** (2026) The health and economic repercussions of declining MMR coverage in the United States. *Proceedings of the National Academy of Sciences, USA* (in press)
 322. Shoukat, A., Wells, C.R., Röst, G., Galvani, A.P., Fitzpatrick, M.C. & Moghadas, S.M. (2026). Containment scenarios for post-spillover transmission chains of avian influenza H5N1 from poultry to humans. *Nature Health* 1, 831–839. 10.1038/s44360-026-00095-0
 321. Du, Z., Pandey, A., Moghadas, S.M., Bai, Y., Wang, L., Matrajt, L., Singer, B.H. & Galvani, A.P. (2025). Impact of RSVpreF vaccination on reducing the burden of respiratory syncytial virus in infants and older adults. *Nature Medicine* 31, 647–652. 10.1038/s41591-024-03431-7
 320. Wells, C.R., Shoukat, A., Shin, T., **Galvani, A.P.**, Moghadas, S.M. (2025) Racial and ethnic disparities in meningococcal vaccination coverage and disease burden among US adolescents. *J Adolesc Health* 78(2):308-314. doi: 10.1016/j.jadohealth.2025.09.030
 319. Pandey, A., Ye, Y., Bawden, B.H., Singer, B.H. & **Galvani, A.P.** (2025) Quantifying the mortality and morbidity impact of Medicaid work requirements: a modeling study. *Lancet Reg Health Am.* 51:101232. doi: 10.1016/j.lana.2025.101232.
 318. The post-2030 HIV Response Working Group. **Galvani, A.P.** (17th) (2025) The HIV response beyond 2030: preparing for decades of sustained HIV epidemic control in eastern and southern Africa. *The Lancet* 10.1038/s41591-024-03431-7
 317. Ye, Y., Pandey, A., Bawden, C., Sumsuzzman, D.M., Rajput, R. Shoukat, A., Singer, B.H., Moghadas, S.M. & **Galvani, A.P.** (2025) Integrating artificial intelligence with mechanistic epidemiological modeling: a scoping review of opportunities and challenges. *Nature Communications* 16, 581
<https://doi.org/10.1038/s41467-024-55461-x>
 316. Abdollahi, E. Moghadas, S.M. & **Galvani, A.P.** (2025) The synergy of therapeutic vaccination and timely diagnosis for TB contro in high-burden settings: Nunavut as a case study *J Clin Tuberc Mycobact Dis.* 2025 Oct 17;41:100569. doi: 10.1016/j.jctube.2025.100569. PMID: 41293750; PMCID: PMC12642158.
 315. Pandey, A., Ye, Y., Wells, C.R., Singer, B.H. & **Galvani, A.P.** (2024) Estimating the lives that could be saved by expanded access to weight-loss drugs. *PNAS* 121 (43) e2412872121

314. Du, Z. . Wang, L., Bai, Y., Liu, Y, Lau, E.H.Y., **Galvani, A.P.**, Krug., R.M.,(2024) A retrospective cohort study of Paxloviud efficacy depending on treatment time in hospitalized COVID-19 patients. *Elife* 13:e89801. doi: 10.7554/eLife.89801.
313. Wells, C.R., Pandey, A., Fitzpatrick, M.C., Singer, B.H. & **Galvani, A.P.** Moghadas, S.M., (2024) Evaluation of strategies for transitioning to annual SARS-CoV-2 vaccination campaigns in the United States. *Annals of Internal Medicine* <https://doi.org/10.7326/M23-24>
312. Moghadas, S.M., Shoukat, A, Bawden, C.E., Langley, J.M., Singer, B.H., Fitzpatrick, M.C. & **Galvani, A.P.** (2024) Cost-effectiveness perfusion F protein-based vaccines against Respiratory Syncytial Virus disease for older adults in the United States. *Clinical Infectious Diseases*. <https://doi.org/10.1093/cid/ciad658>
311. Abdollahi, E., Moghadas, S.M. & **Galvani, A.P.** (2024) Cost-effectiveness perfusion F protein-based vaccines against Respiratory Syncytial Virus disease for older adults in the United States. *Clinical Infectious Diseases*. <https://doi.org/10.1093/cid/ciad658>
310. Pandey, A., Fitzpatrick, M.C., Singer, B.H. & **Galvani, A.P.** (2024) Mortality and morbidity ramifications of proposed retractions in healthcare coverage for the United States. *PNAS* 121(18)e2321494121.
309. Shin, T., Wells, C.R., Potter-Schwartz, L., Langevin, E., Langley, J.M. **Galvani, A.P.** & Moghadas, S. M. (2024) Quadrivalent conjugate vaccine and invasive meningococcal disease in US adolescents and young adults. *JAMA Network Open* 7(11):e2443551
308. Shoukat, A, Abdollahi, E., **Galvani, A.P.**, Halperin, S.A., Langley, J.M. & Moghadas, S.M. (2023) Cost-effectiveness analysis of nirsevimab and maternal RSVpreF vaccine strategies for prevention of Respiratory Syncytial Virus disease among infants in Canada: a simulation study. *The Lancet Regional Health Americas*. 28, 100229
307. Bai, Y., Du, Z., Wang, L., Lau, E.H.Y., Fung, I. C., Holme, P., Cowling, B.J., **Galvani, A.P.**, Krug, R.M. & Meyers, L.A. (2024) Public Health Impact of Paxlovid as Treatment for COVID-19, United States. *Emerging Infectious Diseases*. 30: 262-269
306. Mehrab, Z., Stundal, L., Venkatramanan, S., Swarup, S., Lewis, B., Mortveit, H.S., Barrett, C.L., Pandey, A., Wells, C.R., **Galvani, A.P.**, Singer, B.H., Leblang, D., Colwell, R.R. & Marathe, M.V. (2024) An agent-based framework to study forced migration: A case study of Ukriane. *PNAS Nexus*. 3(3): 080 <https://doi.org/10.1093/pnasnexus/pgae080>
305. Shoukat, A., Bawden, C.E., Rost, G., LeBlanc, J.L., **Galvani, A.P.**, Langley, J.M. & Moghadas, S.M. (2024) Impact and cost-effectiveness analyses of vaccination for prevention of respiratory syncytial virus disease among older adults in Ontario: A Canadian Immunization Research Network (CIRN) study. *Vaccine*. 42(7): 1768-1776
304. Ali, S., Li, Z., Moqueet, N., Moghadas, S.M., **Galvani, A.P.**, Cooper, L.A., Stranges, S., Haworth-Brockman Pinto, A.D., Asaria, M., Champredon, Hamilton, D., Moulin, M.,

- John-Baptiste, A.A. & (2024) Incorporating social determinants of health in infectious disease models: A systematic review of guidelines. *Medical Decision Making*. 44(7)
303. Sumsuzzman, D., Ye, Y., Wang, Z., Pandey, A., Langley, J.M., **Galvani, A.P.** & Moghadas, S.M. (2024) Impact of disease severity, gender, sex, comorbidity, and vaccination on secondary attack rates of SARS-CoV-2: a global systematic review analysis. *BMC Infec Dis*. **25**, 215
302. Shoukat, A., Wells, C.R., Shin, T., Potter-Schwartz, L., **Galvani, A.P.** & Moghadas, S.M. (2024) Assessing the impact of revising MenACWY vaccination schedule for adolescents in the United States: a modelling study. *Lancet Regional Health*. **44**, 101033
300. John-Baptiste, A.A., Moulin, M., Li, Z., Hamilton, D., Crichlow, G., Klein, D.E., Alemu, F.W., Ghattas, L., McDonald, K., Asaria, M., Sharpe, C., Pandya, E., Moqueet, N., Champredon, D., Moghadas, S.M., Cooper, L.A., Pinto, A.D., Stranges, S., Haworth-Brockman Asaria, M., **Galvani, A.P.** & Ali, S. (2024) Do COVID-19 disease models incorporate the social determinants of health? A systematic Review. *Public Health Review*. 45
299. Zakaria, M., Stundal, L., Venkatramanan, S., Swarup, S., Lewis, B.L., Mortveit, H.S., Barrett, CL., Pandey, A., Wells, C.R., **Galvani, A.P.**, Singer, B.H., Moghadas, S.M., Leblang, D., Colwell, R.R., Marathe, M.V. (2024) A generalizable theory-driven agent-based framework to study conflict-induced forced migration. *Proceedings of the AAAI Conference on Artificial Intelligence*. 42(7): 1768-1776
298. Townsend, J.P., Healer, H.B., Lamb, A.D., Sah, P., Nishio, A.A., Nguyen, C., Tew, A.D., **Galvani, A.P.** & Dornburg, A. (2023) Seasonality of endemic COVID-19. *mBio* 14:e01426-23
297. Pandey, A. & **Galvani, A.P.** (2023) Exacerbation of measles mortality by vaccine hesitancy worldwide. *The Lancet Global Health* 11(8) E478-E479
296. Pandey, A. Wells, C.R., Stadnytskyi, V., Moghadas, S.M., Marathe, M.V., Sah, P., Crystal, W., Meyers, L.A., Singer, B.H., Nesterova, O. & **Galvani, A.P.** (2023) Disease burden among Ukrainians forcibly displaced by the 2022 Russian invasion. *PNAS*. 120(8)e2215424120
295. Pandey, A. Fitzpatrick, M.C., Moghadas, S.M., Vilches, T.N., Ko, C., Vasan, A. & **Galvani, A.P.** (2023) Modelling the impact of a high-uptake bivalent booster scenario on the COVID-19 burden and healthcare costs in New York City. *The Lancet Regional Health Americas*. 24, 100555
294. Fitzpatrick, M.C., Moghadas, S.M., Vilches, T.N., Shah, A., Pandey, A. & **Galvani, A.P.** (2023) Estimated impact of accelerating COVID-19 bivalent booster vaccination on US pediatric health outcomes and school absenteeism. *Journal of the American Medical Association Network Open*. 6:e2313586
293. Laufer, R., Baral, R., Buchwald, A.G., Campbell, J.D., Coulibaly, F., Doumbia, M., Driscoll, A.J., **Galvani, A.P.**, Keita, A.M., Neuzil, K., M., Sow, S., Pecenka, C., Oritz,

- J.R. & Fitzpatrick, M.C. (2023) Optimizing next-generation RSV prevention in Mali: a cost-effectiveness analysis of pediatric vaccination, maternal vaccination and extended half-life monoclonal antibody immunoprophylaxis. *PLOS Global Public Health*. In press
292. Carpiano, R.M., Callaghan, T., DiResta, R., Brewer, N.T., Clinton, C., **Galvani, A.P.**, Lakshmanan, R., Parmet, W.E., Omer, S.B., Buttenheim, A.M., Benjamin, R.M., Caplan, A., Elharake, J.A., Flowers, L.C., Maldonado, Y.A., Mello, M.M., Opel, D.J., Salmon, D.A., Schwartz, J.L., Sharfstein, J.M. & Hotez, P.J. (2023) Confronting the evolution and expansion of anti-vaccine activism in the USA in the COVID-19 era. *The Lancet* S0140-6736 (23) 00136-8
291. Opel, D.J., Brewer, N.T., Buttenheim, A.M., Benjamin, R.M., Callaghan, T., Carpiano, R.M., Clinton, C., Elharake, J.A., Flowers, L.C., **Galvani, A.P.**, Hotez, P.J., Schwartz, J.L., Benjamin, R.M., Caplan, A., DiResta, R., Lakshmanan, R., Maldonado, Y.A., Mello, M.M., Parmet, W.E., Salmon, D.A., Sharfstein, J.M. & Omer, S.B. (2023) The legacy of the COVID-19 pandemic for childhood vaccination in the United States. *The Lancet* S0140-6736 (22) 01693-2
290. **Galvani, A.P.**, Parpia, A.S., Pandey, A., Sah, P., Colon, K., Friedman, G., Campbell, T., Kahn, J.G., Singer, B.H. & Fitzpatrick, M.C. (2022) Universal healthcare as pandemic preparedness: the lives and costs that could have been saved during the COVID-19 pandemic by healthcare reform in the United States. *Proceedings of the National Academy of Sciences, USA*. 119(25)e2200536119
289. Pandey, A. & **Galvani, A.P.** (2023) Role of immunity landscape in global risk assessment of re-emerging diseases. *The Lancet Infectious Diseases*. 23(4) P385-386
288. Sah, P., Vilches, T.N., Moghadas, S.M., Pandey, A., Gondi, S., Schneider, E.C., Singer, J., Chokshi, D.A. & **Galvani, A.P.** (2022) Return on investment of the COVID-19 vaccination campaign in New York City. *JAMA Network Open*. 5(11):e2243217
287. Wells, C.R. & **Galvani, A.P.** (2022) Tackling the politicisation of COVID-19 data reporting through open-access data sharing. *The Lancet Infectious Diseases*. 22(12) 1660-1661
286. Townsend, J.P., Hassler, H.B., Sah, P., **Galvani, A.P.** & Dornburg, A. (2022) The durability of natural infection and vaccine-induced immunity against future infection by SARS-CoV-2. *Proceedings of the National Academy of Sciences, USA*. 119(31)e2204336119
285. Wells, C.R. & **Galvani, A.P.**, (2022) The global impact of disproportionate vaccination coverage on COVID-19 mortality. *The Lancet Infectious Diseases*. 22(9) 1254-1255
284. Boyce-Jacino, C., Peters, E., **Galvani, A.P.** & Chapman, G.B. (2022) Large numbers cause magnitude neglect: The case of government expenditures. *Proceedings of the National Academy of Sciences, USA*. 119, e2203037119

283. Sah, P., Vilches, T.N., Pandey, A., Schneider, E.C., Moghadas, S.M. & **Galvani, A.P.**, (2022) Estimating the impact of vaccination on reducing COVID-19 burden in the United States: December 2020 to March 2022. *The Journal of Global Health*. 12:03062
282. Brewer, N.T., Buttenheim, A.M., Mello, M.M., Clinton, C.V., Mello, M.M., Benjamin, R.M., Callaghan, T., Caplan, A., Carpiano, R.M., DiResta, R., Elharake, J.A., Flowers, L.C., **Galvani, A.P.**, Hotez, P.J., Lakshmanan, R., Maldonado, Y.A., Omer, S.B., Salmon, D.A., Schwartz, J.L. Sharfstein, J.M. & Opel, D.J. (2022) Incentives for COVID-19 vaccination. *The Lancet Regional Health Americas*. 8, 100205
281. Mello, M.M., Opel, D.J., Benjamin, R.M., Callaghan, T., DiResta, R., Elharake, J.A., Flowers, L.C., **Galvani, A.P.**, Salmon, D.A., Schwartz, J.L., Brewer, N.T., Buttenheim, A.M., Carpiano, R.M., Clinton, C., Hotez, P.J., Lakshmanan, R., Maldonado, Y.A., Omer, S.B., Sharfstein, J.M. & Caplan, A. (2022) Effectiveness of vaccination mandates in improving the uptake of COVID-19 vaccines in the United States. *The Lancet*. 400 (10351) 535-538
280. Wells, C.R. & **Galvani, A.P.** (2022) The indirect ramifications of the COVID-19 pandemic on cancer incidence and mortality. *The Lancet Public Health*. 7(6) E490-E491
279. Campbell, T., **Galvani, A.P.**, Friedman, G. & Fitzpatrick, M.C. (2022) Exacerbation of COVID-19 mortality by fragmented United States healthcare system: a retrospective observational study. *The Lancet Regional Health - Americas*. 12, 100264
278. Fitzpatrick, M.C. & **Galvani, A.P.** (2021) Optimizing age-specific vaccination. *Science*. 371, 890-891
277. Sharfstein, J.M., Callaghan, T., Carpiano, R.M., Sgaier, S.K., Brewer, N.T., **Galvani, A.P.**, Lakshmanan, R., McFadden, Reiss, D.R., Salmon, D.A. & Hotez, P.J. (2021) Uncoupling vaccination from politics: a call to action. *The Lancet*. 398, 1211-1212
276. Moghadas, S.M., Sah, P., Shoukat, A., Meyers, L.A. & **Galvani, A.P.** (2021) Population immunity against COVID-19 in the United States. *Annals of Internal Medicine*. 398, 1211-1212
275. Townsend, J.P., Hassler, H.B., Wang, Z., Miura, S., Singh, J., Kumar, S., Ruddle, N.H., **Galvani, A.P.** & Dornburg, A. (2021) The durability of immunity against reinfection by SARS-CoV-2. *The Lancet Microbe*. 2 (12) e666-e675
274. Wells, C.R., Pandey, A., Moghadas, S.M., Singer, B.H., Krieger, G., Heron, R.J.L., Turner, D.E., Abshire, J.P., Phillips, K.M., Donoghue, A.M., **Galvani, A.P.** & Townsend, J.P. (2022) Comparative analyses of eighteen rapid antigen tests and RT-PCR for COVID-19 quarantine and surveillance-based isolation. *Communications Medicine*. In press
273. Omer, S.B., Benjamin, R.M., Brewer, N.T., Buttenheim, A.M., Callaghan, T., Caplan, A., Carpiano, R.M., Clinton, C., DiResta, R., Elharak, J.A., Flowers, L.C., **Galvani, A.P.**, Lakshmanan, R., Maldonado, Y.A., McFadden, S.M., Mello, M.M., Opel, D.J., Reiss, D.R., Salmon, D.A. Schwartz, J.L., Sharfstein, J.M. & Hotez, P.J. (2021)

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272. Sah, P., Fitzpatrick, M.C., Zimmer, C.F., Abdollahi, E., Juden-Kelly, L., Moghadas, S.M., Singer, B.H. & **Galvani, A.P.** (2021) Asymptomatic SARS-CoV-2 infection: a systematic review and meta-analysis. *Proceedings of the National Academy of Sciences, USA*. 118 (34) e2109229118
 271. Vilches, T.N., Sah, P., Moghadas, S.M., Shoukat, A., Fitzpatrick, M.C., Hotez, P.J., Schneider, E.C. & **Galvani, A.P.** (2022) COVID-19 hospitalizations and deaths averted under an accelerated vaccination program in northeastern and southern regions of the USA. *The Lancet Regional Health - Americas*. 6, 100147
 270. Vilches, T.N., Moghadas, S.M., Sah, P., Fitzpatrick, M.C., Shoukat, A., Pandey, A. & **Galvani, A.P.** (2022) Estimating COVID-19 infections, hospitalizations and deaths following the US vaccination campaigns during the pandemic. *JAMA Network Open*. 5(1):e2142725
 269. Zang, X., Goedel, W.C., Bessey, S.E., Lurie, M.N., Galea, S., **Galvani, A.P.**, Friedman, S.R., Nosyk, B. & Marshall, B.D. (2021) The impact of rural syringe services program closure on the risk of rebound HIV outbreaks among people who inject drugs: A modeling study. *AIDS*. In press
 268. Sah, P., Moghadas, S.M., Vilches, T.N., Shoukat, A., Singer, B.H., Hotez, P.J., Schneider, E.C. & **Galvani, A.P.** (2021) Implications of suboptimal COVID-19 vaccination coverage in Florida and Texas. *Lancet ID*. 21, 1493-4
 267. Shoukat, A., Vilches, T.N., Moghadas, S.M., Sah, P., Schneider, E.C., Shaff, J., Ternier, A., Chokshi, D.A. & **Galvani, A.P.** (2022) Lives saved and hospitalizations averted by COVID-19 vaccination in New York City: a modeling study. *The Lancet Regional Health - Americas*. 5, 100085
 266. Vilches, T.N., Sah, P., Abdollahi, E., Moghadas, S.M. & **Galvani, A.P.** (2021) Importance of non-pharmaceutical interventions in the COVID-19 vaccination era: A case study of the Seychelles. *Journal of Global Health*. 11: 03104
 265. Moghadas, S.M. & **Galvani, A.P.** (2021) The unrecognized death toll of COVID-19 in the United States. *The Lancet Regional Health - Americas*. 1, 100033
 264. Moghadas, S.M., Vilches, T.N., Zhang, K., Wells, C.R., Shoukat, A., Singer, B.H., Meyers, L.A., Neuzil, K.M., Langley, J.M., Fitzpatrick, M.C. & **Galvani, A.P.** (2021) The impact of vaccination on COVID-19 outbreaks in the United States. *Clinical Infectious Diseases*. 73: 2257-2264
 263. Wells, C.R. & **Galvani, A.P.** (2021) The interplay between COVID-19 restrictions and vaccination. *Lancet ID*. 21, 1053-4

262. Moghadas, S.M., Sah, P., Vilches, T.N. & **Galvani, A.P.** (2021) Can the USA return to pre-COVID-19 normal by July 4? *Lancet ID.* 21, 1073-4
261. Wells, C.R., Townsend, J.P., Pandey, A., Moghadas, S.M., Krieger, G., Singer, B.H., McDonald, R.H., Fitzpatrick, M.C. & **Galvani, A.P.** (2021) Optimal COVID-19 quarantine and testing strategies. *Nature Communications.* 12: 356
260. Pandey, A., Sah, P., Moghadas, S.M., Mandal, S., Banerjee, S., Hotez, P.J. & **Galvani, A.P.** (2021) Challenges facing COVID-19 vaccination in India. *Journal of Global Health* 11: 03083
259. Hotez, P.J., Cooney, R., Benjamin, R., Brewer, N.T., Bottenheim, A.M., Callaghan, T., Caplan, A., Carpiano, R.M., Clinton, C., DiRista, R., Depres, S., Elharake, J.A., Flowers, L.C., **Galvani, A.P.**, Lakshmanan, R., Maldonado, McFadden, S.M., Mello, M., Opel, D.J., Reiss, D.R., Salmon, D.A., Schwartz, J.L., Sharfstein, J. & Omer, S.B. (2021) The Lancet commission on vaccine refusal, acceptance and demand in the USA. *The Lancet.* 397, 1165-1167
258. Pandey, A. & **Galvani, A.P.** (2021) Role of the G20 in safe reopening of international travel. *The Lancet ID.* 21, 919
257. Zhanwei, D.U., Pandey, A., Fitzpatrick, M.C., Chinazzi, M., Piontti, A.P., Lachmann, M., Vespignani, A., Cowling, B., Galvani, A.P. & Meyers, L.A. (2021) Comparative cost-effectiveness of SARS-CoV-2 testing strategies. *The Lancet Public Health.* 6, e184-e191
256. Moghadas, S.M., Vilches, T.N., Zhang, K., Nourbakhsh, S., Sah, P., Fitzpatrick, M.C. & **Galvani, A.P.** (2021) Evaluation of COVID-19 vaccination strategies with a delayed second dose. *PLoS Biology.* doi.org/10.1371.pbio.3001211
255. Moghadas, S.M., Fitzpatrick, M.C., Shoukat, A., Zhang, K. & **Galvani, A.P.** (2021) Simulated identification of silent COVID-19 infections among children and estimated future rates with vaccination. *JAMA Network Open.* 4:e217097
254. Parpia, A.S., Martinez, I., El-Sayed, A.M., Wells, C.R., Myers, L., Duncan, J., Collins, J., Fitzpatrick, M.C., **Galvani, A.P.** & Pandey, A. (2021) Racial disparities in COVID-19 mortality across Michigan, United States. *EClinicalMedicine.* 33, 100761
253. Wells C.R., Cao Y., Durham D.P., Byraredy S.N., Ansari A.A., Ruddle, N.H., Townsend, J.P., **Galvani, A.P.** & Perelson, A.S. (2021) Mechanistic basis of post-treatment control of SIV after anti- $\alpha 4\beta 7$ antibody therapy. *PLOS Computational Biology* 17(6): e1009031
252. Townsend, J.P., Hassler, H., Wang, Z., Miura, S., Singh, J., Kumar, S., Ruddle, N.H., **Galvani, A.P.** & Dornburg, A. (2021) The durability of immunity against reinfection by SARS-CoV-2: a comparative evolutionary study. *The Lancet Microbe.* 2, e666-e675

251. Sah, P., Vilches, T.N., Moghadas, S.M., Fitzpatrick, M.C., Singer, B.H., Hotez, P. & **Galvani, A.P.** (2021) Accelerated vaccine rollout is imperative to mitigate highly transmissible COVID-19 variants. *EClinicalMedicine*. 35, 100865
250. Vilches, T.N., Nourbakhsh, S., Juden-Kelly, L., Cipriano, L.E., Langley, J.M., Sah, P., **Galvani, A.P.** & Moghadas, S.M. (2021) Multifaceted strategies for the control of COVID-19 outbreaks in long-term care facilities in Ontario, Canada. *Preventative Medicine*. 148, 106564
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32. Poolman, E.M. & **Galvani, A.P.** (2006) Modeling targeted ivermectin treatment for controlling river blindness. *American Journal of Tropical Medicine and Hygiene* 75: 921-927.
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30. Reluga, T.C., Bauch, C. & **Galvani, A.P.** (2006) Evolving public perceptions and stability in vaccine uptake. *Mathematical Biosciences* 204: 185-198.
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Commentary on this article by Gaggiotti (2006) *Heredity*
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20. **Galvani, A.P.** (2004) Emerging infections: What have we learned from SARS? *Emerging Infectious Diseases* 10: 1351-1352.
19. **Galvani, A.P.** & Slatkin, M. (2004) Intense selection in an age-structured population. *Proceedings of the Royal Society, Series B* 271: 171-176.
18. **Galvani, A.P.** & Slatkin, M. (2003) Evaluating plague and smallpox as historical selective pressures for the *CCR5-Δ32* HIV-resistance allele. *Proceedings of the National Academy of Sciences, USA* 100: 15276-15279.
Commentary on this article by Stumpf & Wilkinson-Herbots (2004) *Trends Ecology & Evolution*
17. Ferguson, N.M., **Galvani, A.P.** & Bush, R.M. (2003) Ecological and immunological determinants of influenza evolution. *Nature* 422: 428-433.
16. **Galvani, A.P.** (2003) Epidemiology meets evolutionary ecology. *Trends in Ecology & Evolution* 18: 132-139. (Cover article)
15. **Galvani, A.P.**, Lei, X. & Jewell, N.P. (2003) Severe acute respiratory syndrome: temporal stability and geographic variation in death rates and doubling times. *Emerging Infectious Diseases* 9: 991-994.
14. Lloyd-Smith, J.O., **Galvani, A.P.** & Getz, W. (2003) Curtailing SARS transmission within a community and its hospital. *Proceedings of the Royal Society London, Series B* 270: 1979-1989. (Cover article)
13. Bauch, C.T., **Galvani, A.P.** & Earn, D.J.D. (2003) Smallpox vaccination: insights from game theory. *Proceedings of the National Academy of Sciences, USA* 100: 10564-10567.
12. **Galvani, A.P.** (2003) Immunity, antigenic diversity and the aggregation of helminth parasites. *Journal of Parasitology* 89: 232-241.
11. Ferguson, N.M. & **Galvani, A.P.** (2003) The impact of antigenic variation on pathogen population structure, fitness and dynamics. p. 403-433. In *Antigenic Variation* (eds. A. Carig & A. Scherf) Harcourt Publishers.
10. **Galvani, A.P.**, Coleman, R.M. & Ferguson, N.M. (2003) The evolution of sex in parasite populations. *Proceedings of the Royal Society London, Series B* 270: 19-28.
9. **Galvani, A.P.** (2003) Immunology and epidemiology of infectious disease. *The Quarterly Review of Biology* 78: 130-131. (Book review)
8. Bauch, C.T. & **Galvani, A.P.** (2003) Using network models to approximate spatial point-process models. *Mathematical Biosciences* 184: 101-114.

7. **Galvani, A.P.**, Coleman, R.M. & Ferguson, N.M. (2001) Antigenic diversity and the selective value of sex in parasites. *Special issue in tribute to W.D. Hamilton in Annales Zoologici Fennici* 38: 305-314.
6. Gupta, S. & **Galvani, A.P.** (1999) The effects of host heterogeneity on pathogen population structure. *Philosophical Transactions of the Royal Society* 354: 711-719.
5. **Galvani, A.P.** & Gupta, S. (1998) The effects of mating probability on the population genetics of nematodes. *Journal of Helminthology* 72: 295-300.
4. **Galvani, A.P.** & Johnstone, R. (1998) Sperm allocation in an uncertain world. *Behavioural Ecology and Sociobiology* 44: 161-168.
3. **Galvani, A.P.** & Coleman, R.M. (1998) Do parental convict cichlids of different sizes value the same brood number equally? *Animal Behaviour* 56: 541-546.
2. Coleman R.M. & **Galvani, A.P.** (1998) Egg size determines offspring size in Neotropical cichlid fishes. *Copeia* 1998: 209-213.
1. **Galvani, A.P.** & Coleman, R.M. (1996) Parental size and perceived brood value: Are all eggs created equal? *Proceedings of the International Congress on the Biology of Fishes* 1996: 67-72.

Research Support

Active

2020-2025	NIAID R01 (PI: Galvani)
2020-2025	NSF Collaborative Award (Co-PI: Galvani)
2020-2024	The Commonwealth Fund (PI: Galvani)
2020-2025	CDC U01 (Co-PI: Galvani)
2020-2024	James B. Crystal & Lillain Yaros Philanthropic Fund (PI: Galvani)
2021-2026	Notsew Orm Sands Foundation (PI: Galvani)

Select Completed

2019-2020	CDC (Co-PI: Galvani)
2020-2021	NSF RAPID COVID (PI: Galvani)
2020-2022	CDC U01 COVID supplement (Co-PI: Galvani)
2020-2022	NIAID R01 COVID supplement (PI: Galvani)
2014-2019	Bill and Melinda Gates Foundation (PI: Galvani)
2014-2019	NIH R01 NIAID (Co-I: Galvani)
2015-2020	NIH U01 NIAID (Co-I: Galvani)
2015-2018	NSF SES (PI: Galvani)
2016-2017	Fogarty International Center D71 (PI: Galvani)
2015-2018	Gilead Foundation (Yale PI: Galvani)
2013-2018	NIH Multi-Scale Modeling U01 (PI: Galvani)
2015-2016	NSF RAPID (PI: Galvani)

2014-2016	Task Force for Global Health (PI: Galvani)
2014-2017	Novartis Foundation (Yale PI: Galvani)
2014-2017	Children's Investment Fund (Yale PI: Galvani)
2009-2014	NIGMS MIDAS U01 (PI: Galvani & Meyers)
2013-2015	CDC U01 (Co-I: Galvani, PI: Friedland)
2012-2015	NSF SES (PI: Galvani)
2007-2012	NIH R01 NIAAA (Yale PI: Galvani, PI: Braithwaite)
2006-2013	Notsew Orm Sands Foundation (PI: Galvani)
2007-2012	NIH R01 NIAID (Co-I: Galvani, PI: Aksoy)
2007-2011	NIH R01 NIGMS (PI: Galvani)
2006-2011	NSF SBE (PI: Galvani)
2009-2011	UNICEF/UNDP/World Bank/WHO Programme for Research and Training in Tropical Diseases (Yale PI: Galvani)
2009-2010	NSF RAPID (PI: Galvani)
2009-2010	NIGMS MIDAS U01 Supplement (PI: Galvani & Meyers)
2008-2010	Howard Hughes Medical Institute (PI: Galvani)

Training

Advisor to: David Durham (now BARDA/HHS), Paula Luz (now Oswaldo Cruz Foundation, Brazil), Tim Reluga (now Penn State), Jan Medlock (now Oregon State), Eunha Shim (now U Tulsa), Yonas Tekle (now Spelman), Yoko Ibuka (now Tohoku University, Japan), Jingzhou Liu (now Goldman Sachs), and Eric Poolman (now University of Oregon), Katie Atkins (now London School of Tropical Medicine and Hygiene), Jennifer Gilbert (now Boston Healthcare Associates), Dan Yamin (now Tel Aviv University), Scott Greenhalgh (now Queens University), Sanjay Basu (now Stanford University), Alyssa Bilinski (now Partners in Health), Danielle Bloch (now New York City Health Department), Alex Rittel (now Defense Health Agency), Evan Orenstein (now Philadelphia Children's Hospital), Meagan Fitzpatrick (now U of Maryland), Martial Ndefo-Mbah (now Texas A & M), Jorge Alfaro-Murillo (current), Chad Wells (current), Abhishek Pandey (current), Alyssa Parpia (now University of Toronto), Erlyn Macarayan (now Harvard) and Laura Skrip (now Public Health Foundation of Liberia), Pratha Sah (now Reliant Medical Group), Affan Shoukat (University of Virginia), William Crystal (Yale), Charlotte Zimmer (Yale), Yang Ye (current), Carolyn Bawden (current), Michael Cairo (current)

Courses & Lectures

- Studies in Evolutionary Medicine (EMD 695a,b).
- Modeling the epidemiology and evolution of infectious diseases (EMD 565).
- Seminar in epidemiology of microbial diseases (EMD 525).
- Lab and Field Studies in Infectious Disease (EMD 525).
- Undergraduate independent research course (EEB 475)
- Instructor of graduate course 'Evolution of infectious diseases', UC Berkeley.

- Outreach: 1000 Girls, 1000 Futures, New York Academy of Sciences

Advisory roles

Advisory Board: Merck Advisory Boards (Pneumococcal; Ebola; V212; Vaccine innovations; Improving US vaccine coverage), Latin American Pneumococcal Disease Consortium

Lead: Population Modeling within NIH Interagency Modeling and Analysis Group

Ad hoc advisor: White House Office of Science and Technology Policy; The United States Congress; Global Alliance for Vaccines and Immunization; Liberian Ministry of Health; Israeli Ministry of Health; Costa Rican Ministry of Health; Philippine Ministry of Health; Ministries of Health and Agriculture in India; Public Health Foundation of India; Sanofi Pasteur; British Columbia Centre for Disease Control; Italian Ministry of Health; Japanese National Institute of Infectious Diseases; Global Pertussis Initiative; US Senate; Biomedical Advanced Research and Development Authority; World Health Organization

Selected Organizational Activities

- National Academy of Sciences Colloquia. Washington DC, March 13-15, 2016
- Infectious Disease Modeling Workshop at the University of KwaZulu Natal, Durban. July 6-8, 2009
- Scientific Advisory Board Member of Workshop ‘Mitigating the spread of influenza: lessons learned from past outbreaks, Arizona State University, Tempe. June 25-28, 2009
- Economic Epidemiology Advanced Study Institute, Makerere University, Uganda, 20 July-1 August, 2009
- NIH Microbiology & Infectious Disease Research Committee to review K applications
- NSF-funded DIMACS meeting ‘Addressing social conflict in public health and environmental policy modeling’ at Rutgers University, October 15-17, 2007.
- NSF-funded DIMACS meeting ‘Evolutionary Considerations in Vaccine Use’ at Rutgers University, June 27-30, 2005.

Selected Invited Presentations

- Consortium of Universities for Global Health, March, 2021
- Columbia University, November 2020
- COVID-19 experts panel with Senator Bernie Sanders, March 2020
- Sustainable Development Solutions Network, March 2020
- National Academy of Sciences, March, 2016
- New York Academy of Sciences, July 2015
- World Health Organization, December 2015
- Sanofi Pasteur April 20, 2012
- US Department of Health and Human Services. August 18, 2009
- Health Law Policy and Bioethics Seminar, Harvard Law School. April 29, 2009
- HPA, Epidemiology and Public Health, Yale University. November 17, 2008
- CBB, Yale University. April 3, 2008

- University of Austin, Texas. March 6, 2008
- YIBS, Yale University. April 11, 2008
- Behavioral Epidemiology Workshop, University of Washington, Seattle. June 20, 2006
- Award talk. Fairbanks, Alaska. Evolution meetings. June 13, 2005
- SAMSI, Research Triangle Park, Jan 31, 2005
- Yale University, Medical School, Division of Epidemiology of Microbial Diseases, Feb 18, 2004
- University of Maryland, College Park, Biology Department. Jan 29, 2004.
- University of Wisconsin, Madison, Department of Zoology. Dec 11, 2003
- University of British Columbia, Department of Zoology. Dec 2, 2003
- DIMACS meeting on Genetics and Evolution of Pathogens, Rutgers University. Nov 24, 2003
- University College London, Department of Biology. May 15, 2003
- University of McMaster, Department of Mathematics. March 30th, 2001.
- Workshop on Evolutionary Epidemiology of Strain Structure in Pathogen Populations, University of Warwick. Jan 15th-17th, 2001.
- University of Toronto, Department of Zoology. March 21st, 2001.
- W.D. Hamilton Symposium, University of California at Berkeley. Oct 19th-21st, 2000.
- Harvard School of Public Health. Oct 26th, 2000.