KATELYN M. GOSTIC

Dept. of Ecology & Evolution, University of Chicago

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EDUCATION

PhD, University of California Los Angeles 2019

Ecology and Evolutionary Biology

   Advised by Dr. James O. Lloyd-Smith

AB, Ecology & Evolutionary Biology, Princeton University 2013

Ecology and Evolutionary Biology – Quantitative Track

   Summa cum laude, Thesis Prize

   Advised by Dr. Andrew P. Dobson

FELLOWSHIPS AND AWARDS

1) **James S. McDonnell Foundation: Understanding Dynamic and Multi-scale Systems Postdoctoral Fellowship**, $200,000 (planned 2019-2021)

2) **NRSA Predoctoral Fellowship** (NIAID F31AI134017), $55,125+fees (2017-2019)

3) **Scherbaum Award**, outstanding research by a graduate student, UCLA EEB, $200 (2018)

4) **Invited session co-chair,** 6th European Scientific Working Group on Influenza Conference, Riga, Latvia, (travel and accommodations) (2017)

5) **Charles E. and Sue K. Young Award**, UCLA Graduate Division, $10,000 (2016)

6) **Carol Newton Legacy Poster Prize**, UCLA Dept. Biomathematics, $100 (2015)

7) **Systems and Integrative Biology Training Grant**, $48,000+fees (2014-2016)

8) **Eugene V. Cota-Robles Foundation Fellowship**, $56,000+fees (2013, 2016)

MANUSCRIPTS IN REVIEW

8) **Gostic KM**, Bridge R, Brady S, Viboud C, Worobey M, Lloyd-Smith JO. Childhood immune imprinting to influenza A shapes birth year-specific risk during seasonal H1N1 and H3N2 epidemics. medRxiv. 2019 Jul 13; https://doi.org/10.1101/19001834

7) Helman, S.K., Mummah, R.O., **Gostic, K.M**., Buhnerkempe, M.G., Prager, K.C., Lloyd-Smith, J.O. Estimating prevalence and test accuracy in disease ecology: how Bayesian latent class analysis can boost or bias imperfect test results. Submitted to Methods in Ecology and Evolution, May 2019.

PUBLICATIONS   * AUTHORS CONTRIBUTED EQUALLY

6) **Gostic, K.M***., Wunder, E.A*. Jr., Bisht, V., Hamond, C., Julian, T.R., Ko, A.I., Lloyd-Smith, J.O. Mechanistic dose-response modeling of animal challenge data shows that intact skin is a crucial barrier to leptospiral infection. *Phil. Trans. B*. In press. DOI: 10.1098/rstb.2019.0367.

5) Morris, D.H.,* **Gostic, K.M.**,* Pompei, S.,* Bedford, T., Łuksza, M., Neher, R.A., Grenfell, B.T., Lässig, M., McCauley, J.W. (2018) Predictive modeling of influenza shows the promise of applied evolutionary biology. *Trends in Microbiology.* **26,** 102-118. DOI: https://doi.org/10.1016/j.tim.2017.09.004

4) **Gostic, K.M.,** Ambrose, M., Worobey, M., Lloyd-Smith, J.O. (2017) Maternal antibodies' role in immunity -- Response. *Science.* **355**, 705. DOI: 10.1126/science.aam7389

3) **Gostic, K.M.,** Ambrose, M., Worobey, M., Lloyd-Smith, J.O. (2016) Potent protection against H5N1 and H7N9 influenza via childhood hemagglutinin imprinting. *Science.* **354,** 722-726. DOI: 10.1126/science.aag1322

2) Buhnerkempe M.G.*, **Gostic K.M.***, Park M., Ahsan P., Belser J.A., Lloyd-Smith J.O. (2015) Mapping influenza transmission in the ferret model to transmission in humans. *eLife.* 4:e07969. DOI: 10.7554/eLife.07969

1) **Gostic, K.M.*** Kucharski, A*. Lloyd-Smith, J. O. (2015) Natural history of infection influences effectiveness of screening measures for emerging pathogens. *eLife*. 4:e05564. DOI: 10.7554/eLife.05564

SELECT PRESENTATIONS

1)	Ecology and Evolution of Infectious Diseases, Princeton University (Talk)	2019
2)	Workshop on Immunity, Aging and the Arrow of Time, Santa Fe Institute (Talk)	2019
3)	Theoretical Biology Group, Los Alamos National Laboratory (Seminar)	2019
4)	NIH Workshop on Universal Influenza Vaccines (Talk)	2018
5)	NIH Vaccine Research Center, Bethesda MD (Seminar)	2017
6)	European Scientific Working Group on Influenza 6th Conference, Riga, Latvia (Talk)	2017
7)	Occidental College, Los Angeles, CA (Invited Seminar)	2017
8)	Joint Training Grant Research Symposium, UCLA, Los Angeles, CA (Talk)	2015
9)	Ecological Society of America 2016 Annual Meeting, Ft. Lauderdale, FL (Talk)	2016
10)	WHO workshop on models for influenza vaccine design, Princeton, NJ (Talk)	2016

TEACHING AND SERVICE

1) **Teaching assistantships**: Math for Life Scientists, UCLA Division of Life Sciences, (2018); Modeling in Ecological Research, UCLA Ecology and Evolutionary Biology (2016); Research Immersion Lab, UCLA Microbiology, Immunology and Molecular Genetics (2014)   2018; Volunteered as a summer teaching assistant in 5th Grade Math at KIPP DC AIM Academy, Anacostia DC (2010)

2) **Outreach activities**: Developed and led an activity at DNA Day, (on-campus event for LA middle school students), UCLA Dept. of Human Genetics, (2015, 2016, 2017, 2018); Developed and led an activity at EmpowHer STEM Day (on-campus event for LA middle school girls), UCLA Empowering Women in Science, (2014, 2015); Visiting scientist, Science Lunch Friday, University High School, Los Angeles, CA (2013)

3) **Department service:** Founded and coordinated Eco-Evo Careers, (career discussion series for UCLA EEB Graduate Students) (2016, 2017); Organized UCLA EEB Graduate Student Seminar Series (Eco-Evo Pub) (2014-2015); Assisted at R Boot Camp for incoming graduate students (2014-2019)

4) **Peer review**: I have reviewed scholarly articles for PLoS Computational Biology, the Journal of the Royal Society Interface, the American Journal of Epidemiology, and Epidemiology and Infection.

PRESS

My research has been featured by several major news outlets, including the Economist, the Atlantic, NBC, CNN, AAAS Science Podcast, the NIH Director's Blog & the BBC Word Service. Links found at kgostic.github.io.