Katelyn Gostic

University of California, Los Angeles
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EDUCATION:

2013-present **PhD,** University of California Los Angeles, Los Angeles, CA
Department of Ecology and Evolutionary Biology
Research focus: Ecology and evolution of infectious disease
Advisor: Dr. James O. Lloyd-Smith
Thesis: *How does existing population immunity regulate the emergence of novel influenza A viruses with pandemic potential?*
Degree expected: June, 2019

2013 **AB,** Princeton University, Princeton, NJ
Department of Ecology and Evolutionary Biology, *summa cum laude*
Certificate in Environmental Studies
Advisor: Dr. Andrew P. Dobson
Thesis: *Macroparasites of domestic dogs and wild cats on Costa Rica's Osa Peninsula: How do spatial heterogeneity and host movement influence infection dynamics?*

PUBLICATIONS:

**Indicates that authors contributed equally and should be considered joint first authors.*

5. **Morris, D.H.**,* **Gostic, K.M.**,* **Pompei, S.**,* Bedford, T., Łuksza, M., Neher, R.A., Grenfell, B.T., Lässig, M., McCauley, J.W. (2017) Predictive modeling of influenza shows the promise of applied evolutionary biology. *Trends in Microbiology.* Accepted, and in press.

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

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.

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.

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.

HONORS AND AWARDS:

June 2017 NIH Ruth L. Kirschstien National Research Service Award, Individual Predoctroal Fellowship (F31AI134017)

May 2017 UCLA Life Sciences Excellence Award for Outstanding Research Publication

May 2016 Charles E. and Sue K. Young Graduate Student Award

Oct. 2015	UCLA Systems and Integrative Biology Training Grant, NIH Ruth L. Kirschstien National Research Service Award (T32-GM008185)
March 2015	Carol Newton Legacy Symposium Poster Prize, UCLA Dept. Biomathematics
June 2015	UCLA Dean's Scholar Award
Oct. 2014	UCLA Systems and Integrative Biology Training Grant, NIH Ruth L. Kirschstien National Research Service Award (T32-GM008185)
July 2014	Scholarship and travel award, Summer Institute in Statistics and Modeling in Infectious Diseases, University of Washington, Seattle Washington
June 2014	UCLA Dean's Scholar Award
April 2014	UCLA Ecology and Evolutionary Biology Small Research Grant
Sept. 2013	Eugene V. Cota-Robles Foundation Fellowship
June 2013	*Summa cum laude*, Princeton University Dept. of Ecology and Evolutionary Biology
June 2013	Leslie Kilham Johnson Book Prize, Princeton University Dept. of Ecology and Evolutionary Biology, awarded for the best tropical biology thesis
June 2013	Thesis Poster Prize, Princeton University Dept. of Ecology and Evolutionary Biology, awarded for the best poster presentation in disease research
June 2013	Elected to membership in the society of Sigma Xi

TALKS AND SEMINARS:

Oct. 2017	Invited seminar, "Population-level impacts of broadly protective influenza immunity." NIH Vaccine Research Center, Bethesda MD
Sept. 2017	Talk, "Should we expect broadly protective immunity to impact seasonal influenza epidemiology?" European Scientific Working Group on Influenza 6th Conference, Riga, Latvia *(Invited as the young scientist co-chair of the Mathematical Modeling conference session.)*
March 2017	Invited seminar, "Childhood immune imprinting and its implications for influenza pandemic preparedness." Occidental College, Los Angeles, CA
Sept. 2016	Talk, "Birth year predicts immunity against emerging influenza viruses with pandemic potential." UCLA EEB Graduate Seminar Series, Los Angeles, CA
Aug. 2016	Talk, "Bottom-up control of emerging influenza A viruses." Ecological Society of America 2016 Annual Meeting, Ft. Lauderdale, FL
July 2016	Talk, "Conserved epitopes and antigenic seniority." WHO workshop on models for influenza vaccine design, Princeton University, Princeton, NJ
April 2016	Talk, "Childhood immune imprinting provides potent protection against emerging influenza viruses." GATP-SIB-Big Data-BWFCHIP Joint Research Symposium, UCLA, Los Angeles, CA
March 2016	Guest Lecture, "Statistics in ecological modeling." EEB C219B, Modeling in Ecological Research, UCLA, Los Angeles, CA
Feb. 2015	Talk, "What can influenza transmission in ferrets tell us about pandemic potential in humans?" UCLA EEB Graduate Seminar Series, Los Angeles, CA

May 2012 Talk, “How do environmental gradients on Ol Pejeta Conservany influence macroparasite infection in plains zebras?” Ol Pejeta Conservancy, Kenya

POSTERS:

June 2017 Poster, “Effects of childhood HA imprinting on human susceptibility to and transmissibility of H5N1 and H7N9”. Ecology and Evolution of Infectious Diseases Conference, University of California Santa Barbara, Santa Barbara, CA

May 2016 Poster, “Childhood hemagglutinin imprinting provides potent protection against novel influenza A viruses.” Ecology and Evolutions of Infectious Diseases Conference, Cornell University, Ithaca, NY

May 2015 Poster, “Natural history, epidemiology and human behavior shape effectiveness of traveler screening for emerging infectious diseases.” Ecology and Evolution of Infectious Diseases Conference, University of Georgia, Athens, GA

May 2015 Poster, “Natural history, epidemiology and human behavior shape effectiveness of traveler screening for emerging infectious diseases.” UCLA Ecology and Evolutionary Biology 18th Annual Research Symposium, Los Angeles, CA

April 2015 Poster, “Natural history, epidemiology and human behavior shape effectiveness of traveler screening for emerging infectious diseases.” UCLA Global Health Day, Los Angeles, CA

March 2015 Poster, “Natural history, epidemiology and human behavior shape effectiveness of traveler screening for emerging infectious diseases.” Carol Newton Legacy Symposium, Los Angeles, CA

May 2013 Poster, “How does domestic dog movement, habitat and care drive macroparasite infection in a host community that includes wild cats?” Princeton Environmental Institute Discovery Day, Princeton, NJ

MEDIA COVERAGE

7. The year of your birth affects your resistance to flu. *The Economist.* http://www.economist.com/news/science-and-technology/21710156-specifically-it-determines-which-versions-virus-you-are-likely-be
6. Birth year may affect your flu risk. Here's how. *NBC News.* Nov. 10, 2016. http://www.nbcnews.com/health/health-news/birth-year-may-affect-your-flu-risk-here-s-how-n682076
5. Your flu risk may be linked to the year you were born. *CNN.* Nov. 10, 2016. http://www.cnn.com/2016/11/10/health/flu-risk-birth-year/
4. Why some flus are deadliest in young adults. *The Atlantic.* Nov. 10, 2016. http://www.theatlantic.com/health/archive/2016/11/flu-memory/507287/
3. Podcast: How farms made dogs love carbs, the role of dumb luck in science, and what your first flu exposure did to you. *Science Podcast.* Nov. 10, 2016. Audio available at :http://www.sciencemag.org/podcast/podcast-how-farms-made-dogs-love-carbs-role-dumb-luck-science-and-what-your-first-flu
2. Year of airport screening doesn't catch Ebola. *USA Today.* Sept. 22, 2015. Text available at: http://www.usatoday.com/story/news/2015/09/22/ebola-airport-screening-cbp-cdc/32493389/

1. Screening for Ebola and other diseases "inherently leaky." *BBC World Service Radio, Newsday*. Feb. 19, 2015.
   Audio available at: https://soundcloud.com/bbc-world-service/airport-screening-for-ebola-and-other-diseases-inherently-leaky?ocid=socialflow_twitter

OUTREACH:

May 2016	Facilitator, DNA Day, UCLA Dept. of Human Genetics
May 2015	Facilitator, DNA Day, UCLA Dept. of Human Genetics
May 2015	Activity leader, EmpowHER STEM Day, UCLA Empowering Women in Science
May 2014	Activity leader, EmpowHER STEM Day, UCLA Empowering Women in Science
Dec. 2013	Visiting scientist, Science Lunch Friday, University High School, Los Angeles, CA

SERVICE:

Sept. 2017	Co-organized the Mathematical Modeling section of the 6th meeting of the European Scientific Working Group on Influenza.
Sept. 2016 – June '17	Eco-Evo Careers Founder and Coordinator
Sept. 2014 - June '15	Eco-Evo Pub Committee Member
Sept. 2015	R Boot Camp Student Facilitator
Sept. 2014	R Boot Camp Student Facilitator

TEACHING:

Jan. 2016 – March 2016	Teaching Assistant, Modeling in Ecological Research, UCLA Dept. of Ecology and Evolutionary Biology
October 2014-Dec. 2014	Teaching Assistant, Research Immersion Laboratory in Microbiology, UCLA Dept. of Microbiology, Immunology and Molecular Genetics
Jan. 2012-June 2013	Wilderness First Aid Coordinator for Training & Curriculum Development, Princeton University Outdoor Action
April 2011-June 2013	Wilderness First Aid Instructor, Princeton University Outdoor Action
July 2010	Teaching Assistant/Mentee, Grade 5 Math, KIPP DC, AIM Academy, Anacostia, DC
Feb. 2010-June 2013	Trip Leader, Leader Trainer, Princeton University Outdoor Action

PEER REVIEW:

I have reviewed several scholarly articles for PLoS Computational Biology and for the Journal of the Royal Society Interface.

PROGRAMMING LANGUAGES:

R, MATLAB, Python