

Sarah Cobey

scobey@hsph.harvard.edu
+1 708 707 2499
www.cobey.info

Center for Communicable Disease Dynamics
506 Kresge Building
Harvard School of Public Health
677 Huntington Avenue
Boston, Massachusetts 02115

Education

- 2/10- **Harvard School of Public Health**
Postdoctoral Research Fellow
Advised by Marc Lipsitch
- 10/09-1/10 **Howard Hughes Medical Institute**, Ann Arbor
HHMI Postdoctoral Fellow at the University of Michigan
Advised by Mercedes Pascual
- 9/04-8/09 **University of Michigan**, Ann Arbor
Ph.D. in Ecology and Evolutionary Biology
Advised by Mercedes Pascual
Thesis: "Ecological and evolutionary dynamics of influenza viruses"
- 9/98-5/02 **Princeton University**
A.B. *summa cum laude* in Ecology and Evolutionary Biology
Certificates in Environmental Studies and Russian Studies
Advised by Andrew Dobson

Grants and awards

- 2011 NIH Kirschstein National Research Service Award (F32) (2 years)
- 2008 Block Grant, Department of Ecology and Evolutionary Biology, U. Michigan
- 2007 Rackham Graduate Student Research Grant, U. Michigan
- 2005 NSF Graduate Research Fellowship (3 years)
- 2005 YSSP Fellowship Grant from U.S. National Committee for IIASA
- 2002 Senior Book Prize, Department of Ecology and Evolutionary Biology, Princeton
- 2002 Phi Beta Kappa, Princeton
- 2002 Sigma Xi Society, Princeton
- 2001 NSF Research Experience for Undergraduates Grant

Publications

Peer-reviewed

- Cobey, S.** and M. Lipsitch. Niche and neutral components of acquired immunity allow the coexistence of pneumococcal serotypes. *Science* (accepted)
- Flanagan, M., Parrish, C., **Cobey, S.**, Glass, G., Bush, R. and T. Leighton. Anticipating the species jump: Surveillance for emerging viral threats. *Zoonoses and Public Health* (in press)
- Bedford, T., **Cobey, S.** and M. Pascual. 2011. Strength and tempo of selection revealed in viral gene genealogies. *BMC Evolutionary Biology* 11:220.

- Goldstein, E., **Cobey, S.**, Takahashi, S., Miller, J.C., and M. Lipsitch. 2011. Predicting the epidemic sizes of A/H1N1, A/H3N2, and B: a statistical method. *PLoS Medicine* 8(7):e1001051.
- Cobey, S.** and M. Pascual. 2010. Consequences of host heterogeneity, epitope immunodominance, and immune breadth for strain competition. *Journal of Theoretical Biology* 270(1):80-87.
- Cobey, S.**, Pascual, M. and U. Dieckmann. 2010. Ecological factors driving the long-term evolution of influenza's host range. *Proceedings of the Royal Society B* 277(1695):2803-2810.
- Bedford, T., **Cobey, S.**, Beerli, P. and M. Pascual. 2010. Global migrational dynamics underlie evolution and persistence of human influenza A (H3N2). *PLoS Pathogens* 6(5):e1000918.
- Cobey, S.** and K. Koelle. 2008. Capturing escape in infectious disease dynamics. *Trends in Ecology and Evolution* 23(10):572-577.
- Koelle*, K., **Cobey***, S., Grenfell, B. and M. Pascual. 2006. Epochal evolution shapes the phylodynamics of interpandemic influenza A (H3N2) in humans. *Science* 314:1898-1903. (*equal authorship)

Not peer-reviewed

- WHO Writing Group, Ampofo, W., Baylor, N., **Cobey, S.**, Cox, N., Daves, S., Edwards, S., Ferguson, N., Grohmann, G., Hay, A., Katz, J., Kullabutr, K., Lambert, L., Levandowski, R., Mishra, A., Monto, A., Siqueira, M., Tashiro, M., Waddell, A., Wairagkar, N., Wood, J., Zambon, M., Zhang, W. 2011. Improving influenza vaccine virus selection: Report of a WHO informal consultation held at WHO headquarters, Geneva, Switzerland, 14-16 June 2010. *Influenza and Other Respiratory Diseases* (in press).
- Cobey, S.** 2005. "Sea lampreys in the Great Lakes." In *Ecological Networks*. J.A. Dunne and M.P. Pascual, eds. (Oxford University Press).

Invited talks (*upcoming)

- Next-generation molecular evolutionary epidemiology of infectious disease. Kavli Royal Society International Centre, Buckinghamshire, United Kingdom. May 2012.*
- Informal Consultation for Improving Influenza Vaccine Virus Selection. WHO, Geneva, Switzerland. June 2010.
- Anticipating the Species Jump: Surveillance for Emerging Viral Threats. DTRA and SAIC, McLean, Virginia. December 2009. (Session chair in follow-up meeting in March 2011.)
- Infectious Disease Epidemiology Seminar, Harvard School of Public Health. Boston, Massachusetts. May 2007.
- Influenza Seasonality Workshop. Center for Infectious Disease Dynamics, Penn State University. State College, Pennsylvania. October 2006.

Contributed talks and posters (*upcoming)

- Pneumococci & Pneumococcal Disease Symposium (ISPPD-8), Brazil. March 2012.*
- Epidemics³. Boston, Massachusetts. December 2011. (Talk)
- Epidemics. Asilomar, California. December 2008. (Poster)

Ecological Society of America Annual Meeting, Milwaukee, Wisconsin. August 2008. (Talk)
Viral Paradigms. Emory University, Atlanta, Georgia. January 2008. (Poster)
Preparedness to the Influenza Pandemic—an International Outlook. St. Petersburg, Russia. March 2007. (Talk)
EcoHealthONE. Madison, Wisconsin. October 2006. (Talk)
Bridging the Scales of Disease Dynamics. Vancouver, B.C. September 2006. (Poster)

Teaching and professional service

Reviews *American Naturalist*, *BioEssays*, *Journal of Infectious Diseases*, *Journal of Molecular and Genetic Medicine*, *Journal of Theoretical Biology*, *Molecular Biology & Evolution*, *PLoS Biology*, *PLoS Computational Biology*, *PLoS One*, *PNAS*, *Proceedings of the Royal Society B*, and *Trends in Parasitology*

Guest lectures BIO 516: Inferential Methods for Infectious Diseases (2011, HSPH)
EEB 481: Population and Community Ecology (2007, U. Michigan)
EEB 410: EEB Capstone Seminar (2006 and 2009, U. Michigan)

Teaching assistance BIO 516: Inferential Methods for Infectious Diseases (2011, HSPH)
EEB 315: Ecology and Evolution of Infectious Disease (2009, U. Michigan)
EEB 485: Population Dynamics and Community Ecology (2008, U. Michigan)

Committees Center for Communicable Disease Dynamics representative to the MIDAS Software Sharing and Information Outreach Network (since 2011)
EEB representative, Rackham Graduate School Forum (2007-2008, U. Michigan)
Co-chair, Complex Systems Advanced Academic Workshop, Center for the Study of Complex Systems (2006-2007, U. Michigan)
Graduate student representative to the seminar committee, EEB Department (2006-2007, U. Michigan)

Other professional experience

2002-3 **IUCN-The World Conservation Union**, Vientiane, Lao PDR
Assistant Program Officer and Princeton-in-Asia Intern
Managed and developed projects requiring collaboration between the Lao government, international NGOs, and UN agencies relating to development, information-sharing, and conservation; was the primary author of a country framework agreement, securing core program funding for three years.

2002 **Consortium for Conservation Medicine**, Palisades, New York
Intern
Wrote paper to guide research on a major collaborative project investigating the proximate and ultimate factors of henipavirus emergence.

1997 **Rep. Thomas M. Davis III, U.S. House of Representatives**, Washington, D.C.
Intern
Wrote constituents about Social Security and health care, gave tours of the Capitol, wrote remarks for the *Congressional Record*, researched legislation for staff, and assisted at political fundraisers and events.