

Katrina Abigail Lythgoe

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Employment Summary

- Jan 2011-Dec 2015 Wellcome Trust Re-Entry Research Fellow, Imperial College London
“The effect of population structure on the evolutionary dynamics of HIV”
Sponsor: Prof Christophe Fraser
(80% of full time)
- Jun 2006-Dec 2010 Senior Editor, *Cell Press*, London
This senior position reflected my contribution to *Cell Press* beyond the core role of Editor of *Trends in Ecology & Evolution* (see below).
- Aug 2003-Dec 2010 Editor, *Trends in Ecology & Evolution (TREE)*
TREE is a reviews only journal. While I was Editor it was the top-ranking journal in the fields of ecology and evolution and became the top ranking *Trends* journal.
- Roles and responsibilities: Commissioning all content; selecting referees, evaluating comments and making final decisions on manuscripts; editing content for readability; journal management and promotion; maintaining and developing the *TREE* website; recruitment and training.
- Sep 1999–Aug 2002 Wellcome Trust International Fellowship, UCSD and Edinburgh University
“The co-evolution of pathogens and their hosts”
Principle Investigators: Prof Andrew Read and Prof Lin Chao

Career Breaks

- Jan 2010–Dec 2010 Maternity leave, son born February 2010
- Oct 2007-Sep 2008 Maternity leave, daughter born November 2007
- Apr 1999–Sep 1999 Training for and competing at the Commonwealth Games Regatta (Gold medal)

Education

- Sep 2002–Aug 2003 M.Sc. in Science Communication, Imperial College London
Including work experience at The Daily Telegraph and BBC Science Radio
- Oct 1995-Apr 1999 Ph.D. in Population Genetics, University of Edinburgh, UK
“Evolution in structured populations”
Supervisors: Prof Nicholas Barton and Prof Andrew Read
- Jan 1993-Jun 1995 B.A. Honours in Human Sciences, Balliol College, University of Oxford, UK (2:1)
- Oct 1991-Dec 1992 Moderations in Mathematics, Balliol College, University of Oxford, UK (2:1)

Teaching

M.Sc. in Epidemiology, Imperial College London

- Lecturer, Evolution Module (January 2014-)
- Lecturer and assessment question setter, Infectious Disease Module (October 2012-)
- Personal Tutor (October 2012-)

M.Sc. in Public Health, Imperial College London

- Personal Tutor (October 2012-)

Short Course: Mathematical Models in Epidemiology & Control of Infectious Disease, Imperial College London

- Lecturer (September 2013-)
- Demonstrator (September 2012-)

B.Sc. in Biology, University of Edinburgh

- Demonstrator (1996-1999)

Scientific Outreach

- **Interviewed on Radio 4's *Material World* (6th June 2013; <http://www.bbc.co.uk/programmes/b02147xp>)**
- **Invited public lecture: "*The War on Viruses*", Cheltenham Science Festival (June 2013)**
- Demonstrator: "*Zombie Outbreak*" exhibit, Big Bang Fair, Excel Arena (March 2013)

Awards

- **L'Oreal UNESCO For Women in Science Fellowship, 2012-2013 (£15,000; 2% success rate)**
- Wellcome Trust Re-Entry Fellowship, 2011-2015 (£265,000; for return to research after a career break)
- Wellcome Trust Bursary, administered by the Association of British Science Writers, 2002-2003
- Wellcome Trust International Fellowship, 1999-2002
- BBSRC Prize Studentship, 1995-1999
- Balliol College Coolidge Prize for services to the College, 1995

Working Groups

- NESCent Working Group Member: Trends in the evolution of human viruses

Refereeing

- Biology Letters
- BMC Biology
- Epidemics
- Evolution
- Evolutionary Applications
- PLoS Computational Biology
- Theoretical Biology and Medical Modelling

Publications (<http://scholar.google.co.uk/citations?hl=en&user=zbRmxG0AAAA&user=zbRmxG0AAAAJ>)

- van de Vijver, D.A.M.C., Nichols, B.E., Abbas, U., Cambiano, V., Eaton, J., Glaubius, R., **Lythgoe, K.A.**, Mellors, J., Phillips, A., Sigaloff, K.C. & T.Hallett 2013. Pre-exposure prophylaxis (PrEP) will have a limited impact on the prevalence of HIV-1 drug resistance in sub-Saharan Africa: Comparison of mathematical models. *AIDS* DOI:10.1097/01.aids.0000433237.63560.20
- **Lythgoe, K.A.** 2013. Invisible Foes. Review of “Contagion: how commerce has spread disease” by Mark Harrison. *Current Biology* 23:R548-R549
- **Lythgoe, K.A.***, L.Pellis* & C. Fraser 2013. Is HIV short-sighted? Insights from a multi-strain nested model. *Evolution* DOI:10.1111/evo.12166 (*indicates joint first authorship).
- **Lythgoe, K.A.** & C. Fraser 2012. New insights into the evolutionary rate of HIV-1 at the within- and between-host levels. *Proceedings of the Royal Society B*, 279, 3367-3375
- **Lythgoe, K.A.**, L.J. Morrison, A.F. Read & J.D. Barry, 2007. Parasite-intrinsic factors can explain ordered progression of trypanosome antigenic variation. *Proceedings of the National Academy of Science USA* 104, 8095-8100
- Barry, J.D., L. Marcello, L.J. Morrison, A.F. Read, **K. Lythgoe**, N. Jones, M. Carrington, G. Blandin, U. Böhme, E. Caler, C. Hertz-Fowler, H. Renaud, N. El-Sayed & M. Berriman 2005. What the genome sequence is revealing about trypanosome antigenic variation. *Biochemical Society Transactions* 33, 986-989
- **Lythgoe, K.A.** & L. Chao 2003. Mechanisms of coexistence between a bacteria and a bacteriophage in a spatially homogeneous environment. *Ecology Letters* 6, 326-334
- **Lythgoe, K.A.** 2002. Effects of acquired immunity and mating strategy on the genetic structure of parasite populations. *American Naturalist* 159, 519-529
- **Lythgoe, K.A.** 2000. The coevolution of parasites with host-acquired immunity and the evolution of sex. *Evolution* 54, 1142-1156
- **Lythgoe, K.A.** & A.F. Read, 1998. Catching the Red Queen? The advice of the Rose. *Trends in Ecology & Evolution* 13, 473-474
- **Lythgoe, K.A.** 1997. Consequences of gene flow in spatially structured populations. *Genetical Research* 69, 49-60
- Heyn, M., **K.A. Lythgoe** & C. Myers, 1997. Education and economic development: Sustainability, threshold, and equity. Plenary Lecture. Proceedings of the Third UNESCO-ACEID International Conference: Educational Innovation for Sustainable Development.

Oral presentations (2011 onwards)

Invited speaker

- **Keynote**: British Society for Parasitology Spring Meeting, Bristol, UK, April 2013
- **Royal Society Discussion Meeting**: Next-Generation Molecular and Evolutionary Epidemiology of Infectious Disease: Challenges and Opportunities, Kavli Royal Society International Centre, UK, May 2012
- Permafrost, Bormeo, Italy, March 2012

Invited seminar speaker

- Bristol University, Complexity Group, October 2013
- Johns Hopkins University, School of Medicine, USA, August 2013
- Pennsylvania State University, USA, August 2013
- Rakai Health Science Research Seminar Series, Kalisizo, Uganda, February 2013
- Uganda Virus Research Institute Seminar Series, Entebbe, Uganda, February 2013
- Imperial College MRC Centre for Outbreak Analysis Seminar Series, May 2011

Oral presentations at international conferences

- Epidemics 4, Amsterdam, December 2013
- HIV Dynamics & Evolution, Utrecht, Netherlands, May 2013
- Epidemics 3, Boston, USA, December 2011
- HIV Dynamics & Evolution, Galway, Ireland, April 2011