

Gytis Dudas

Curriculum Vitae

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Postgraduate career

- 2016– Mahan Postdoctoral Fellowship, *Fred Hutchinson Cancer Research Center*, Seattle, WA, USA, Mentor: Trevor Bedford.

Education

- 2011–2016 Doctor of Philosophy, “Inference of Evolutionary and Ecological Processes from Reticulate Evolution in RNA Viruses”, *University of Edinburgh*, Edinburgh, UK.
Supervisor: Prof. Andrew Rambaut, secondary supervisor: Prof. Andrew Leigh-Brown;
Thesis examiners: Prof. Oliver G Pybus, Prof. Paul Sharp.
- 2007–2011 BSc in Biological Sciences with Honours in Evolutionary Biology, *University of Edinburgh*, Edinburgh, UK.
First Class, Ashworth Prize and Class Medal

Publications

- 2018 Müller NF, **Dudas G**, Stadler T., *Inferring time-dependent migration and coalescence patterns from genetic sequence and predictor data in structured populations*, bioRxiv: 342329.
- 2018 Dellicour S, Baele G, **Dudas G**, Faria NR, Pybus OG, Suchard MA, Rambaut A, Lemey P., *Phylodynamic assessment of intervention strategies for the West African Ebola virus outbreak*, Nature Communications 9: 2222.
- 2018 Chu DKW, Hui Kenrie PY, ..., **Dudas G**, ..., Drosten C, Chevalier V, Peiris M, *MERS coronaviruses from camels in Africa exhibit region-dependent genetic diversity*, PNAS 115(12): 3144–3149.
- 2018 Whitmer SLM, Ladner JT, ..., **Dudas G**, ..., Palacios G, Ströher U, *Active Ebola Virus Replication and Heterogeneous Evolutionary Rates in EVD Survivors*, Cell Reports 22(5): 1159–1168.
- 2018 **Dudas G**, Carvalho LM, Rambaut A, Bedford T, *MERS-CoV spillover at the camel-human interface*, eLife 7: e31257.
- 2017 Langat P, Raghwan J, **Dudas G**, ..., Russell C, Pybus O, Kellam P, McCauley J, Watson S, *Genome-wide evolutionary dynamics of influenza B viruses on a global scale*, PLOS Pathogens 13(12): e1006749.
- 2017 [¹Grubaugh ND, Ladner JT, Moritz KUG, **Dudas G**, Tan AL, Gangavarapu K, Wiley MR, White S, Thézé J], ..., Sabeti PC, Gillis LD, Michael SF, Bedford T, Pybus OG, Isern S, Palacios G, Andersen KG, *Multiple introductions of Zika virus into the United States revealed through genomic epidemiology*, Nature 546(7656): 401–405.

¹[] denotes joint first authorship

- 2017 **Dudas G**, Carvalho LM, Bedford T, Tatem AJ, Baele G, Faria N, Park D, Ladner J, Arias A, ..., Suchard M, Lemey P, Rambaut A, *Virus genomes reveal the factors that spread and sustained the West African Ebola epidemic*, *Nature* 544(7650): 309-315.
- 2016 Holmes EC, **Dudas G**, Rambaut A, Andersen KG, *The Evolution of Ebola virus: Insights from the 2013-2016 Epidemic*, *Nature* 538(7624): 193-200.
- 2016 Whitmer SLM, Albariño C, Shepard SS, **Dudas G**, ..., Nichol ST, Ströher U, *Preliminary Evaluation of the Effect of Investigational Ebola Virus Disease Treatments on Viral Genome Sequences*, *Journal of Infectious Diseases*: jiw177.
- 2016 Rambaut A, **Dudas G**, Carvalho LM, Park DJ, Yozwiak NL, Holmes EC, Andersen KG, *Comment on "Mutation rate and genotype variation of Ebola virus from Mali case sequences"*, *Science* 353(6300): 658-658.
- 2016 Arias A, Watson SJ, Asogun D, ..., **Dudas G**, ..., Pybus OG, Rambaut A, Kellam P, Goodfellow I, Cotten M, *Rapid outbreak sequencing of Ebola virus in Sierra Leone identifies transmission chains linked to sporadic cases*, *Virus Evolution* 2 (1): vew016.
- 2016 Lewis NS, Russell CA, Langat P, ..., **Dudas G**, ..., Watson SJ, Brown IH, Vincent AL, *The global antigenic diversity of swine influenza A viruses*, *eLife* 5: e12217.
- 2016 Quick J, Loman NJ, Duraffour S, Simpson JT, Severi E, Cowley L ..., **Dudas G**, ..., Günther S, Carroll MW, *Real-time, portable genome sequencing for Ebola surveillance*, *Nature* 530(7589): 228-232.
- 2016 **Dudas G**, Rambaut A, *MERS-CoV recombination: implications about the reservoir and potential for adaptation*, *Virus Evolution* 2(1): vev023.
- 2015 Ladner JT, Wiley MR, Mate S, **Dudas G**, ... Palacios G, *Evolution and Spread of Ebola Virus in Liberia, 2014-2015*, *Cell Host & Microbe* 18(6): 659-669.
- 2015 [Park DJ, **Dudas G**, Wohl S, Goba A, Whitmer SLM], ..., Sabeti PC, *Ebola Virus Epidemiology, Transmission, and Evolution during Seven Months in Sierra Leone*, *Cell* 161(7): 1516-1526.
- 2015 Carroll MW, Matthews DA, Hiscox JA, ... **Dudas G**, ... Günther S, *Temporal and spatial analysis of the 2014-2015 Ebola virus outbreak in West Africa*, *Nature* 524(7563): 97-101.
- 2015 **Dudas G**, Obbard DJ, *Are arthropods at the heart of virus evolution?*, *eLife* 4: e06837.
- 2015 **Dudas G**, Bedford T, Lycett S, Rambaut A, *Reassortment between Influenza B Lineages and the Emergence of a Coadapted PB1-PB2-HA Gene Complex*, *Molecular Biology and Evolution* 32(1): 162-172.
- 2014 Obbard DJ, **Dudas G**, *The genetics of host-virus coevolution in invertebrates*, *Current Opinion in Virology* 8: 73-78.
- 2014 Gire SK, Goba A, Andersen KG, ... **Dudas G**, ... Sabeti PC, *Genomic surveillance elucidates Ebola virus origin and transmission during the 2014 outbreak*, *Science* 345(6202): 1369-1372.
- 2014 **Dudas G**, Rambaut A, *Phylogenetic analysis of Guinea 2014 EBOV Ebolavirus outbreak*, *PLOS Currents Outbreaks* 6.
- 2013 Bedford T, Suchard MA, Lemey P, **Dudas G**, Gregory V, ..., Rambaut A, *Integrating influenza antigenic dynamics with molecular evolution*, *eLife* 3: e01914.

Professional service

- Ad hoc* referee BMC Bioinformatics, PLoS Currents Outbreaks, eLife, Molecular Biology and Evolution, Infection, Genetics and Evolution, PLoS Pathogens, PeerJ, Proceedings of the Royal Society B, Scientific Reports, Virology Journal, Virus Evolution.
- Social media editor Virus Evolution.

Presentations

- San Diego, 2018 Invited talk at UC San Diego HIV Institute, "Reconstructing the history and drivers of viral epidemics from genomes of Zika, MERS-CoV, and Ebola viruses"
- San Francisco, 2018 Invited talk at BioHub, "Reconstructing the history and drivers of viral epidemics from virus genomes"
- Bellevue, 2018 Oral presentation at the 6th Annual Disease Modeling Symposium, "Genomic epidemiology and population genetics of emerging RNA viruses"
- Tucson, 2018 Invited talk at BIO5 Institute, "MERS-CoV spillover at the camel-human interface"
- Tucson, 2018 Invited talk at University of Arizona, "Reconstructing the history and drivers of viral epidemics from virus genomes"
- Seattle, 2017 Invited talk at University of Washington Institute for Health Metrics and Evaluation, "MERS-CoV spillover at the camel-human interface"
- Baltimore, 2017 Invited talk at 19th Annual International Meeting of the Institute of Human Virology, "Virus genomes reveal factors that spread and sustained the Ebola epidemic"
- Edinburgh, 2017 Oral presentation at ARTIC network meeting, "Reproducible visualisation using Jupyter notebooks"
- Hong Kong, 2017 Oral presentation at Next Generation Informatics for Global Health: Disease Dynamics and Digital Epidemiology, "Virus genomes reveal factors that spread and sustained the Ebola epidemic"
- Cambridge, 2017 Invited talk at Broad Institute, "Virus genomes reveal factors that spread and sustained the Ebola epidemic"
- Boston, 2017 Invited talk at Harvard T.H. Chan School of Public Health, "Virus genomes reveal factors that spread and sustained the Ebola epidemic"
- Atlanta, 2017 Oral presentation at the MIDAS Network Meeting, "Virus genomes reveal factors that spread and sustained the Ebola epidemic"
- Seattle, 2016 Oral presentation for Combi Seminar series, "Virus genomes reveal the factors that spread and sustained the West African Ebola epidemic"
- Cambridge, 2016 Oral presentation at Virus Genomics and Evolution, "Pattern and determinants of the geographic dissemination of Ebola virus in West Africa 2013-2016"
- Zürich, 2015 Invited talk at University of Zürich, "Lessons about virus biology from molecular clocks"
- Vienna, 2015 Oral presentation at SMBE 2015, "Population genetics of Ebola virus in West Africa"
- Lisbon, 2015 Oral presentation at Forecasting Evolution?, "Population genetics of Ebola virus in West Africa"

- Online, 2015 Invited talk at Phyloseminar.org, “Ebola virus epidemiology, transmission, and viral evolution from four months of sequencing in Sierra Leone”
- Seattle, 2015 Invited talk at Fred Hutchinson Cancer Research Center, “Reticulate evolution: unlikely lessons about RNA viruses and their hosts”
- Oxford, 2014 Invited talk at University of Oxford, “Phylodynamics of co-circulating influenza virus lineages”
- London, 2014 Invited talk at Imperial College London, “Phylodynamics of co-circulating influenza virus lineages”
- Amsterdam, 2013 Oral presentation at Epidemics 4, “Inter-subtype reassortment patterns in influenza B reveal selective maintenance of co-reassorting segment complexes”
- Glasgow, 2012 Oral presentation at Popgroup 46, “Antagonistic interactions between co-circulating subtypes of human influenza viruses”
- Dublin, 2012 Poster at SMBE 2012, “Phylodynamics of influenza viruses before, during and after the 2009 swine flu pandemic”

Awards

- 2017 Young Investigator Award to attend “Next Generation Informatics for Global Health: Disease Dynamics and Digital Epidemiology” in Hong Kong.
- 2015 SMBE Young Investigator Travel Award to attend the SMBE 2015 meeting in Vienna.
- 2015 Wellcome Trust Travel Grant to attend the “Forecasting Evolution?” meeting in Lisbon.

Workshops

- University of Birmingham, 2015 “PoreCamp: A bootcamp to learn about operating the Oxford Nanopore MinION”, attendee.
- University of Zürich, 2015 “Temporal tree calibration in BEAST”, organiser.

Outreach

- Hutch News MERS remains primarily a camel virus – for now, *Fred Hutchinson Cancer Research Center newsletter*, interview.
2018 Jan 16
- Vancouver Bioinformatics Users Group Virus genomes reveal factors that spread and sustained the West African Ebola virus epidemic, *bioinformatics users meeting*, invited talk.
2018 Jan 11
- Cascadia Users of Geospatial Open Source Spring Fling Reconstructing the history of the Ebola epidemic, *open source geography and software meeting*, invited talk.
2017 May 20
- The Washington Post The March for Science could save lives, *daily newspaper*, editorial covering research.
2017 Apr 19

- GenomeWeb Ebola Genomes Help Reconstruct Virus' Spread During West African Outbreak, *online science newsletter*, interview.
2017 Apr 12
- Hutch News A big-picture look at the world's worst Ebola epidemic, *Fred Hutchinson Cancer Research Center newsletter*, interview.
2017 Apr 12
- BioPOD April 2015 episode, *podcast*, interview.
2015 Apr
- Eu:Sci podcast Episode 101, *podcast*, interview.
2014 Nov 12
- The Scotsman Edinburgh plays a part in solving Ebola crisis, *Local newspaper*, interview.
2014 Oct 31
- NERC news NERC-funded student helps analyse Ebola genome sequence, *Natural Environment Research Council newsletter*, interview.
2014 Sep 05
- SciDev.net Ongoing Ebola outbreak highlights research shortcomings, *online science news portal*, interview.
2014 Jun 04