

# Gytis Dudas

## Curriculum Vitae

✉ [gytisdudas@gmail.com](mailto:gytisdudas@gmail.com)

### Postgraduate career

- 2018– Remote consultant, *CZ Biohub*, San Francisco, CA, USA.  
Based at the Gothenburg Global Biodiversity Center in Sweden
- 2018– Remote consultant, *The Scripps Research Institute*, San Diego, CA, USA.  
Based at the Gothenburg Global Biodiversity Center in Sweden
- 2016–2018 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

- 2019 Karcher MD, Suchard MA, **Dudas G**, Minin VN., *Estimating effective population size changes from preferentially sampled genetic sequences*, arXiv: 1903.11797.
- 2019 **Dudas G**, Bedford T., *The ability of single genes vs full genomes to resolve time and space in outbreak analysis*, bioRxiv: 582957.
- 2019 Tang M, **Dudas G**, Bedford T, Minin VN., *Fitting stochastic epidemic models to gene genealogies using linear noise approximation*, arXiv: 1902.08877.
- 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.

<sup>1</sup>[ ] denotes joint first authorship

- 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 [<sup>1</sup>Grubaugh 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.
- 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

- London, 2019 Informal presentation at Imperial College London, "Virus genomes reveal the factors that spread and sustained the West African Ebola epidemic"
- Basel, 2019 Invited talk at ETH Zürich, "Beyond (two) button phylogenetics"
- Phoenix, 2019 Invited talk at Arizona State University, "Reconstructing the history and drivers of viral epidemics from genomes of emerging RNA viruses"
- Flagstaff, 2019 Invited talk at Northern Arizona University, "MERS-CoV spillover at the camel-human interface"
- Edinburgh, 2018 Invited talk at ARTIC network meeting, "MERS-CoV spillover at the camel-human interface"
- 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 19<sup>th</sup> 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, "Phylogenetics of co-circulating influenza virus lineages"
- London, 2014 Invited talk at Imperial College London, "Phylogenetics 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, "Phylogenetics of influenza viruses before, during and after the 2009 swine flu pandemic"

## Awards

- 2018 SciPy John Hunter Excellence in Plotting Prize, 1st place, for "History of Ebola Virus Epidemic in West Africa 2013-2015", a matplotlib-based phylogeographic visualisation.
- 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

Moteris magazine 2019 Mar 22 Ebolos virusą perpratęs Gytis Dudas: "Lietuvoje vis dar jauti, kad gali kažką pakeisti", *Lithuanian language magazine*, interview.

NYLA podcast 2018 Dec 14 Perpratęs ebolą: Gytis Dudas, *Lithuanian language podcast*, interview.

Hutch News 2018 Jan 16 MERS remains primarily a camel virus – for now, *Fred Hutchinson Cancer Research Center newsletter*, interview.

Vancouver Bioinformatics Users Group 2018 Jan 11 Virus genomes reveal factors that spread and sustained the West African Ebola virus epidemic, *bioinformatics users meeting*, invited talk.

Cascadia Users of Geospatial Open Source Spring Fling 2017 May 20 Reconstructing the history of the Ebola epidemic, *open source geography and software meeting*, invited talk.

The Washington Post 2017 Apr 19 The March for Science could save lives, *daily newspaper*, editorial covering research.

GenomeWeb 2017 Apr 12 Ebola Genomes Help Reconstruct Virus' Spread During West African Outbreak, *online science newsletter*, interview.

Hutch News 2017 Apr 12 A big-picture look at the world's worst Ebola epidemic, *Fred Hutchinson Cancer Research Center newsletter*, interview.

BioPOD 2015 Apr April 2015 episode, *podcast*, interview.

Eu:Sci podcast 2014 Nov 12 Episode 101, *podcast*, interview.

The Scotsman 2014 Oct 31 Edinburgh plays a part in solving Ebola crisis, *Local newspaper*, interview.

NERC news 2014 Sep 05 NERC-funded student helps analyse Ebola genome sequence, *Natural Environment Research Council newsletter*, interview.

SciDev.net Ongoing Ebola outbreak highlights research shortcomings, *online science news portal*,  
interview.  
2014 Jun 04