

Curriculum Vitae

David Simons, BSc, MBBS, DTM&H, MSc, PhD

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Professional Appointments

Birgitta Sintring Independent Research Fellow	Sept 2026 – Present
<i>Department of Ecology and Genetics, Uppsala University, Sweden</i>	
External Expert	2025 – Present
<i>European Centre for Disease Prevention and Control (ECDC), Stockholm, Sweden</i>	
Postdoctoral Scholar	2023 – Present
<i>The Pennsylvania State University, Department of Anthropology & Center for Infectious Disease Dynamics, USA</i>	
Fellow-in-Residence	2023 – Present
<i>The VERENA Institute, USA</i>	
Senior Analyst, Outbreak Surveillance Team	2021 – 2022
<i>UK Health Security Agency, London, UK</i>	
Resident Doctor, Hospital for Tropical Diseases	2019 – 2022
<i>University College London Hospital, London, UK</i>	
Visiting Researcher	2020
<i>EcoHealth Alliance, New York, USA</i>	
Locum Senior House Officer	2018 – 2019
<i>Various NHS Hospitals, London, UK</i>	
Foundation Doctor	2016 – 2018
<i>North-East London Foundation Training School, London, UK</i>	
Research Assistant, Dept. of Microbiology, Tumour & Cell Biology	2012
<i>Karolinska Institute, Stockholm, Sweden</i>	
Clinical Research Scientist (Industrial Placement)	2008 – 2009
<i>GlaxoSmithKline, Harlow, UK</i>	

Education

PhD, Epidemiology of Emerging Zoonotic Infectious Diseases	2024
<i>University of London (RVC, UCL, LSHTM), London, UK</i>	
MSc, Tropical Medicine and International Health	2019
<i>London School of Hygiene and Tropical Medicine, London, UK</i>	
Professional Diploma in Tropical Medicine and Hygiene (DTM&H)	2018
<i>London School of Hygiene and Tropical Medicine, London, UK</i>	
Membership of the Royal College of Physicians (Part 1)	2017
<i>The Royal College of Physicians, London, UK</i>	
MBBS, Bachelor of Medicine and Bachelor of Surgery	2016
<i>King's College London, GKT School of Medical Education, London, UK</i>	
MSc & BSc, Natural Sciences	2011
<i>University of Leeds, Leeds, UK</i>	

Research Funding and Grants

Principal Investigator, Birgitta Sintring Fellowship (Funded)	2026 – Present
<i>Functional connectivity and microbial transmission pathways in Fennoscandian rodents. Uppsala University.</i>	
Principal Investigator, Vetenskapsrådet (VR) Starting Grant (Under Review)	2026
<i>HOST-V: Harnessing One-health Surveillance for Transforming Vaccine Trials for Epidemic Threats. SEK 6,000,000</i>	
Principal Investigator, Vetenskapsrådet (VR) Sweden-Korea Project Grant (Under Review)	2026
<i>An AI-Directed One Health Risk Prediction Framework for Active Learning in Rodent-Borne Zoonoses. Uppsala University.</i>	
Principal Investigator, FORMAS Project Grant (Under Review)	2026
<i>Climate change impacts on public health and zoonotic dynamics in Sweden.</i>	
Principal Investigator, Huck Seed Award Application (Under Review)	2026
<i>Spillover Interface Surveillance: Geographically Informed Ecological Momentary Assessments (GEMA) for Lassa Fever Risk. \$50,000</i>	
Co-Principal Investigator, VERENA Institute Grant (Funded)	2023 – 2024
<i>Project ArHa: Arenaviruses and Hantaviruses. \$5,000</i>	
Principal Investigator, PhD Studentship (BBSRC LIDo DTP - Funded)	2019 – 2024
<i>Investigating rodent ecology to understand Lassa fever spillover. £85,000</i>	
Principal Investigator, EcoHealth Alliance Grant (Funded)	2020
<i>Forecasting Global Veterinary Disease: Modelling African Swine Fever. \$5,000</i>	
Marie Skłodowska-Curie Postdoctoral Fellowship (Awarded Seal of Excellence)	2025
<i>HOST-V framework score evaluated in top-tier threshold globally.</i>	

Publications

1. S Friant, **D Simons**, C Harden, N Imirzian, O Bjornstad, R Gibb, K Jones, ... (2026). Scaling Lassa Virus Dynamics within Anthropogenic Ecosystems (SCAPES) Study Protocol: a mixed-methods observational cohort study of humans, rodents, and landscapes in Nigeria.. *Wellcome Open Research*.
2. **D Simons**, R Gibb, U Bangura, D Sondufu, J Lamin, J Koninga, M Foday, ... (2026). Land use gradients drive spatial variation in Lassa fever host communities in the Eastern Province of Sierra Leone. *Journal of Animal Ecology*.
3. N Imirzian, A Trebski, E Johnson, M Hewitson, **D Simons**, C Harden, ... (2026). 'SiteTool': a 'Shiny' application for field site selection and evaluation. *Ecography, e*.
4. C Leppin, J Brown, C Garnett, D Kale, T Okpako, **D Simons**, O Perski (2026). Optimising supervised machine learning algorithms predicting cigarette cravings and lapses for a smoking cessation just-in-time adaptive intervention (JITAI). *PloS one*.
5. **D Simons**, D Watson-Jones, D Manno, S Friant (2026). A One Health trial design to accelerate Lassa fever vaccines. *Nature Medicine*.
6. **D Simons**, C Harden, N Imirzian, KET Thompson, NM Ifebueme, ... (2026). Local heterogeneity in Lassa fever serology in rural Nigeria: Implications for vaccine trial site selection. *PLOS Neglected Tropical Diseases*.
7. **D Simons** (2026). Map Liberator: An open-source tool for recovering spatial epidemiological data from static situation reports. *medRxiv*.
8. **D Simons**, R Rivero, G Rickard, A Martinez-Checa, H Gordon, ... (2026). Viral reservoir status in small mammals emerges as a predictable life-history trait after correcting for surveillance bias. *bioRxiv*.
9. S Friant, J Mistrick, AD Luis, C Harden, **D Simons**, E Fichet-Calvet, R Gibb, ... (2025). Reducing the threats of rodent-borne zoonoses requires an understanding and leveraging of three key pillars: disease ecology, synanthropy, and rodentation. *The Lancet Planetary Health*.
10. CJ Schwantes, CA Sánchez, T Stevens, R Zimmerman, G Albery, ... (2025). A minimum data standard for wildlife disease research and surveillance. *Scientific Data*.
11. **D Simons**, R Rivero, AMC Guiote, HLM Gordon, GC Milne, G Rickard, ... (2025). Protocol to produce a systematic Arenavirus and Hantavirus host-pathogen database: Project ArHa. *Wellcome Open Research*.
12. **D Simons** (2025). Urbanisation as an Ecological Filter: Decoupling Lassa Virus Hazard from Spillover Risk in West Africa. *medRxiv*.
13. MD Catchen, F Banville, AC Boutin, CB Brookson, CJ Carlson, ... (2025). A protocol for biodiversity-informed wildlife disease surveillance. *EcoEvoRxiv*.
14. **D Simons**, R Goyal, U Bangura, R Gibb, B Rushton, D Sondufu, J Lamin, ... (2025). Contact networks of small mammals highlight potential transmission foci of Mammarenavirus lassaense. *bioRxiv*.
15. O Perski, D Kale, C Leppin, T Okpako, **D Simons**, SP Goldstein, E Hekler, ... (2024). Supervised machine learning to predict smoking lapses from Ecological Momentary Assessments and sensor data: Implications for just-in-time adaptive intervention development. *PLOS Digital Health*.
16. DG Streicker, ME Griffiths, R Antia, L Bergner, P Bowman, ... (2024). Developing transmissible vaccines for animal infections. *Science*.
17. H Allen, E Tessier, C Turner, C Anderson, P Blomquist, **D Simons**, ... (2023). Comparative transmission of SARS-CoV-2 Omicron (B. 1.1. 529) and Delta (B. 1.617. 2) variants and the impact of vaccination: national cohort study, England. *Epidemiology & Infection*.
18. **D Simons**, LA Attfield, KE Jones, D Watson-Jones, R Kock (2023). Rodent trapping studies as an overlooked information source for understanding endemic and novel zoonotic spillover. *PLoS neglected tropical diseases*.
19. O Perski, K Li, N Pontikos, **D Simons**, SP Goldstein, F Naughton, J Brown (2023). Classification of lapses in smokers attempting to stop: a supervised machine learning approach using data from a popular smoking cessation smartphone app. *Nicotine and Tobacco Research*.

20. O Perski, **D Simons**, L Shahab, J Brown (2023). Smoking, nicotine, and COVID-19: triangulation of methods and preregistration are required for robust causal inference. *Nicotine and Tobacco Research*.
21. LB Arruda, HB Free, **D Simons**, R Ansumana, L Elton, N Haider, ... (2023). Current sampling and sequencing biases of Lassa mammarenavirus limit inference from phylogeography and molecular epidemiology in Lassa fever endemic regions. *PLOS global public health*.
22. **D Simons**, LA Attfield, KE Jones, D Watson-Jones, R Kock (2023). A dataset of small-mammal detections in West Africa and their associated micro-organisms. *Gigabyte*.
23. N Andrews, J Stowe, F Kirsebom, S Toffa, T Rickeard, E Gallagher, ... (2022). Covid-19 vaccine effectiveness against the Omicron (B. 1.1. 529) variant. *New England Journal of Medicine*.
24. R Vivancos, C Anderson, P Blomquist, S Balasegaram, A Bell, L Bishop, ... (2022). Community transmission of monkeypox in the United Kingdom, April to May 2022. *Eurosurveillance*.
25. N Haider, J Guitian, **D Simons**, D Asogun, R Ansumana, I Honeyborne, ... (2022). Increased outbreaks of monkeypox highlight gaps in actual disease burden in Sub-Saharan Africa and in animal reservoirs. *International Journal of Infectious Diseases*.
26. **D Simons** (2022). Lassa fever cases suffer from severe underreporting based on reported fatalities. *International Health*.
27. PB Blomquist, J Bridgen, N Bray, AM O'Connell, D West, N Groves, ... (2022). Enhancing epidemiological surveillance of the emergence of the SARS-CoV-2 Omicron variant using spike gene target failure data, England, 15 November to 31 December 2021. *Eurosurveillance*.
28. **D Simons**, O Perski, L Shahab, J Brown, R Bailey (2022). Association of smoking status with hospitalisation for COVID-19 compared with other respiratory viruses a year previous: a case-control study at a single UK National Health *F*.
29. **D Simons**, L Shahab, J Brown, O Perski (2021). The association of smoking status with SARS-CoV-2 infection, hospitalization and mortality from COVID-19: a living rapid evidence review with Bayesian meta-analyses (version 7). *Addiction*.
30. BJ Quilty, S Clifford, J Hellewell, TW Russell, AJ Kucharski, S Flasche, ... (2021). Quarantine and testing strategies in contact tracing for SARS-CoV-2: a modelling study. *The Lancet Public Health*.
31. FG Sandmann, NG Davies, A Vassall, WJ Edmunds, M Jit, FY Sun, ... (2021). The potential health and economic value of SARS-CoV-2 vaccination alongside physical distancing in the UK: a transmission model-based future scenario analysis and economic *The Lancet infectious diseases*.
32. J Hellewell, TW Russell, R Beale, G Kelly, C Houlihan, E Nastouli, ... (2021). Estimating the effectiveness of routine asymptomatic PCR testing at different frequencies for the detection of SARS-CoV-2 infections. *BMC medicine*.
33. A Endo, QJ Leclerc, GM Knight, GF Medley, KE Atkins, S Funk, ... (2021). Implication of backward contact tracing in the presence of overdispersed transmission in COVID-19 outbreaks. *Wellcome open research*.
34. S Clifford, BJ Quilty, TW Russell, Y Liu, YWD Chan, CAB Pearson, ... (2021). Strategies to reduce the risk of SARS-CoV-2 importation from international travellers: modelling estimations for the United Kingdom, July 2020. *Eurosurveillance*.
35. LB Arruda, N Haider, A Olayemi, **D Simons**, D Ehichioya, ... (2021). The niche of One Health approaches in Lassa fever surveillance and control. *Annals of clinical microbiology and antimicrobials*.
36. SA Elmi, **D Simons**, L Elton, N Haider, MM Abdel Hamid, YA Shuaib, ... (2021). Identification of Risk Factors Associated with Resistant Escherichia coli Isolates from Poultry Farms in the East Coast of Peninsular Malaysia: A Cross Sectional Study. *Antibiotics*.
37. AY Osman, SA Elmi, **D Simons**, L Elton, N Haider, MA Khan, I Othman, ... (2021). Antimicrobial Resistance Patterns and Risk Factors Associated with Salmonella spp. Isolates from Poultry Farms in the East Coast of Peninsular Malaysia: A Cross *Pathogens*.
38. **D Simons**, L Shahab, J Brown, O Perski (2021). Smoking and COVID living review (v11): a Bayesian analysis.

Qeios.

39. QJ Leclerc, ES Nightingale, S Abbott, T Jombart (2021). Analysis of temporal trends in potential COVID-19 cases reported through NHS Pathways England. *Scientific reports*.
40. AE Blunsum, JS Perkins, A Arshad, S Bajpai, K Barclay-Elliott, ... (2021). Evaluation of the Implementation of the 4C Mortality Score in United Kingdom hospitals during the second pandemic wave. *medRxiv*.
41. O Perski, **D Simons**, H Tattan-Birch, E Beard, AS Walker, L Shahab, ... (2021). The association between smoking, nicotine and SARS-CoV-2 infection in the UK ONS COVID-19 Infection Survey. *OSF*.
42. AJ Kucharski, P Klepac, AJK Conlan, SM Kissler, ML Tang, H Fry, JR Gog, ... (2020). Effectiveness of isolation, testing, contact tracing, and physical distancing on reducing transmission of SARS-CoV-2 in different settings: a mathematical modelling study. *The Lancet infectious diseases*.
43. JA Firth, J Hellewell, P Klepac, S Kissler, AJ Kucharski, LG Spurgin (2020). Using a real-world network to model localized COVID-19 control strategies. *Nature medicine*.
44. N Kapata, C Ihekweazu, F Ntoui, T Raji, P Chanda-Kapata, P Mwaba, ... (2020). Is Africa prepared for tackling the COVID-19 (SARS-CoV-2) epidemic. Lessons from past outbreaks, ongoing pan-African public health efforts, and implications for the future. *International Journal of Infectious Diseases*.
45. N Haider, A Yavlinsky, **D Simons**, AY Osman, F Ntoui, A Zumla, R Kock (2020). Passengers' destinations from China: low risk of Novel Coronavirus (2019-nCoV) transmission into Africa and South America. *Epidemiology & Infection*.
46. H Gibbs, Y Liu, CAB Pearson, CI Jarvis, C Grundy, BJ Quilty, C Diamond, ... (2020). Changing travel patterns in China during the early stages of the COVID-19 pandemic. *Nature communications*.
47. RA Kock, WB Karesh, F Veas, TP Velavan, **D Simons**, LEG Mboera, O Dar, ... (2020). 2019-nCoV in context: lessons learned?. *The Lancet Planetary Health*.
48. G Chevance, EB Hekler, M Efoui-Hess, J Godino, N Golaszewski, ... (2020). Digital health at the age of the Anthropocene. *The Lancet Digital Health*.
49. N Davies, S Sweeney, S Torres-Rueda, F Bozzani, N Kitson, E Barasa, ... (2020). The impact of Coronavirus disease 2019 (COVID-19) on health systems and household resources in Africa and South Asia. *MedRxiv*.
50. D Dexter, **D Simons**, C Kiyaga, N Kapata, F Ntoui, R Kock, A Zumla (2020). Mitigating the effect of the COVID-19 pandemic on sickle cell disease services in African countries. *The Lancet Haematology*.
51. O Perski, **D Simons**, R West, S Michie (2020). Face masks to prevent community transmission of viral respiratory infections: A rapid evidence review using Bayesian analysis [Preprint, version 1]. *Qeios*.
52. **D Simons**, J Brown, L Shahab, O Perski (2020). Smoking and COVID-19: Rapid evidence review for the Royal College of Physicians, London (UK). *Qeios*.
53. **D Simons**, O Perski, J Brown (2020). Covid-19: the role of smoking cessation during respiratory virus epidemics. *The BMJ*.
54. BV O'Neill, ET Bullmore, S Miller, S McHugh, **D Simons**, CM Dodds, ... (2012). The relationship between fat mass, eating behaviour and obesity-related psychological traits in overweight and obese individuals. *Appetite*.

Invited Presentations

A selection of 36 invited talks and poster presentations at international conferences and institutions including the ECOWAS Lassa fever conference, ASTMH, EEID, LSHTM, and the University of Idaho. Full list available upon request.

Teaching, Mentoring, and Supervision

- Thesis Supervision** 2019 – Present
Joint or sole supervisor for 8 students on medical elective, undergraduate, and postgraduate research projects at UCL, LSHTM, and the Royal Veterinary College.
- Graduate & Professional Lecturing** 2021 – Present
Invited guest lecturer for postgraduate courses at LSHTM (DTM&H) and UCL (Infectious Diseases MSc).
- Undergraduate Lecturing** 2023 – Present
Lecturer for “Spillover: The Anthropology of Emerging Infectious Diseases” at The Pennsylvania State University.
- Field & Laboratory Capacity Building** 2019 – Present
Recruited, trained, and supervised multiple local field and laboratory teams in Sierra Leone and Nigeria in rodent sampling, molecular (PCR), and antibody-based (ELISA, LIPS) assays under BSL-3 conditions.

Professional Service

- External Expert, ECDC** 2025 – Present
Co-developing curriculum for an e-learning course on “Environmental Determinants of Communicable Diseases.”
- Peer Review** 26 peer reviews for 14 international journals; 2 book chapter reviews. Academic Editor at *PLOS Neglected Tropical Diseases*
- Grant Review** Reviewer for the Grant Agency of the Czech Republic.

Skills

Data Analysis & Programming

- **R:** Tidyverse, R Markdown/Quarto, Shiny, Stan, sf
- **GIS:** QGIS, ArcGIS
- **Version Control:** Git, GitHub
- **Databases:** SQL basics

Laboratory & Field

- Rodent trapping and handling
- Serological assays (ELISA)
- Molecular diagnostics (PCR)

Languages

- **English:** Native
- **Swedish:** In progress

Clinical

- Infectious Diseases
- Tropical Medicine
- Emergency Medicine
- General Medical Council (GMC) Registered

