

Biographical Sketch

Peter Simmonds, BM, PhD, FRCPath, FRS(E)

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PROFESSIONAL PREPARATION

Completion of Clinical Virology training, College of Pathologists, UK			1991-1995
University of Edinburgh	Genetics	Post-doc	1987 – 1990
University of Edinburgh	Med. Micro.	PhD	1984 – 1987
University of Southampton	Med. School	BM	1977 - 1982

APPOINTMENTS

University of Oxford

Professor of Virology (tenure), Nuffield Department of Medicine	2016-present
Honorary Consultant in Virology, Oxford University Hospitals Trust	2016-Present

University of Edinburgh

Professor of Virology, Dept. Medical Microbiology	2001-2016
Honorary Consultant in Virology, Lothian Universities Hospitals Trust	2004-2016
Darwin Research Fellow, Dept. Medical Microbiology	1995-2001
Clinical Lecturer, Dept. Medical Microbiology	1990-1995.

Taxonomy-related Publications

- Lee BD, Neri U, Roux S, Wolf YI, Camargo AP, Krupovic M, **Simmonds P**, et al. Mining metatranscriptomes reveals a vast world of viroid-like circular RNAs. *Cell*. 2023;186(3):646-61.e4.
- Simmonds P**, Adriaenssens EM, Zerbini FM, Abrescia NGA, Aiewsakun P, Alfenas-Zerbini P, et al. Four principles to establish a universal virus taxonomy. *PLoS biology*. 2023;21(2):e3001922.
- Lee BD, Neri U, Oh CJ, **Simmonds P**, Koonin EV. ViroidDB: a database of viroids and viroid-like circular RNAs. *Nucleic Acids Res*. 2022;50(D1):D432-d8.
- Ghafari M, **Simmonds P**, Pybus OG, Katzourakis A. 2021. A mechanistic evolutionary model explains the time-dependent pattern of substitution rates in viruses. *Curr Biol* 31:4689-4696.e5.
- Simmonds P**, Aiewsakun P, Katzourakis A. Prisoners of war - host adaptation and its constraints on virus evolution. *Nat Rev Microbiol*. 2019;17(5):321-8.
- Simmonds P**, Aiewsakun P. Virus classification - where do you draw the line? *Arch Virol*. 2018;163(8):2037-46.
- Aiewsakun P, Adriaenssens EM, Lavigne R, Kropinski AM, **Simmonds P**. Evaluation of the genomic diversity of viruses infecting bacteria, archaea and eukaryotes using a common bioinformatic platform: steps towards a unified taxonomy. *Journal of General Virology* 2018; 99(9):1331-1343.

- Simmonds P.** A clash of ideas - the varying uses of the 'species' term in virology and their utility for classifying viruses in metagenomic datasets. *J Gen Virol.* 2018.
- Simmonds P,** Adams MJ, Benko M, Breitbart M, Brister JR, *et al.* Consensus statement: Virus taxonomy in the age of metagenomics. *Nat Rev Microbiol* 2017, 15:161-168.
- Aiewsakun P, **Simmonds P.** The genomic underpinnings of eukaryotic virus taxonomy: creating a sequence-based framework for family-level virus classification. *Microbiome.* 2018;6(1):38.

Other Significant Publications:

- Odon V, Fiddaman SR, Smith AL, **Simmonds P.** 2022. Comparison of CpG- and UpA-mediated restriction of RNA virus replication in mammalian and avian cells and investigation of potential ZAP-mediated shaping of host transcriptome compositions. *RNA* 28:1089-1109.
- Simmonds P,** Ansari MA. 2021. Extensive C->U transition biases in the genomes of a wide range of mammalian RNA viruses; potential associations with transcriptional mutations, damage- or host-mediated editing of viral RNA. *PLoS Pathog* 17:e1009596.
- Fros JJ, Visser I, Tang B, Yan K, Nakayama E, Visser TM, Koenraadt CJM, van Oers MM, Pijlman GP, Suhrbier A, **Simmonds P.** 2021. The dinucleotide composition of the Zika virus genome is shaped by conflicting evolutionary pressures in mammalian hosts and mosquito vectors. *PLoS Biol* 19:e3001201.
- Fischer TK, **Simmonds P,** Harvala H. 2021. The importance of enterovirus surveillance in a post-polio world. *Lancet Infect Dis* doi:10.1016/s1473-3099(20)30852-5.
- Odon V, Fros JJ, Goonawardane N, Dietrich I, Ibrahim A, Alshaikhahmed K, Nguyen D, **Simmonds P.** 2019. The role of ZAP and OAS3/RNaseL pathways in the attenuation of an RNA virus with elevated frequencies of CpG and UpA dinucleotides. *Nucleic Acids Res* 47:8061-8083.
- Simmonds P,** Kuypers L, Irving WL, McLauchlan J, Cooke GS, Barnes E, Ansari MA. 2020. Impact of virus subtype and host IFNL4 genotype on large-scale RNA structure formation in the genome of hepatitis C virus. *RNA* 26:1541-1556.
- Fros JJ, Dietrich I, Alshaikhahmed K, Passchier TC, Evans DJ, **Simmonds P.** CpG and UpA dinucleotides in both coding and non-coding regions of echovirus 7 inhibit replication initiation post-entry. *Elife.* 2017;6.

SYNERGISTIC ACTIVITIES

- Member of the Advisory Committee on the Safety of Blood, Tissues and Organs (SaBTO)
- Elected member of International Committee for the Taxonomy of Viruses (ICTV) Executive Committee (2011, re-elected 2014, 2017, 2020)
- Animal +strand RNA virus Sub-Committee Chair, 2020-2023
- Member of ICTV Flavivirus and Picornavirus Study Groups since 2010.
- Developed the universal genotype classification system for hepatitis C virus.
- Contributed to the classification of enteroviruses, rhinoviruses, and hepeviruses, and is involved in re-examining flavivirus taxonomy.
- Total peer-reviewed publications: 588 (co-)authored papers listed on PubMed
- Citations record : h-index = 133; 66,595 citations