

Dr Charlotte-Eve Short **DOB: 14TH September 1981** **Email: c.short@imperial.ac.uk**
Address: Room VD4, 2nd Floor Variety Wing, Wright-Fleming Institute, St Mary's Campus

Employment

2020-current: **NIHR matched Academic Clinical Lecturer GU/HIV Medicine** Imperial College London
2013-2020: **Wellcome Trust Clinical PhD Programme** Imperial College London
2010-2013: **NIHR Academic Clinical Fellow GU/HIV Medicine** Imperial College Healthcare NHS Trust
2008-2010: **Core Medical Training ST1-2**, Brighton and Sussex University Hospitals (BSUH) NHS Trust
2006-2008: **NIHR matched Academic Foundation Programme FY1-2 GU/HIV Medicine**, BSUH

Education:

2023: **CCT in GU/HIV Medicine** Imperial College Healthcare NHS Trust
2022: Genomic Medicine MSc Infectious Disease & Bioinformatics modules, Imperial College London
2021: Diploma in HIV Medicine (**DipHIV**)
Letter of Competency: Sub Dermal Implants Insertion and Removal (**LoC SDI IR**)
Letter of Competency: Intrauterine techniques (**LoC IUT**)
2020: Doctor of Philosophy Clinical Medicine Research (**PhD**), Imperial College London
Diploma of Imperial College London (**DIC**)
2013: Diploma in Family Planning and Sexual Reproductive Health (**DFRSH**)
2012: Diploma in Genitourinary Medicine with Distinction (**DipGUM**)
2009: **MRCP (UK)**
2000-2006: **MBChB with Honours**, University of Birmingham (Honours: top 10% of year)
2003: **Intercalated BMedSci**: with Honours Class I, University of Birmingham

Grants:

- **Imperial College AHSC**: Post-Doctoral Bridging Support Research Fellowship 07/23 (£18,000)
- **UNITAID** (DolPHIN RCT Consortium) 01/23 (£40,000)
- **Academy of Medical Sciences: Starter grant for Clinical Lecturers** 09/21 (£30,000)
- **March of Dimes** 04/2019 (£1,250,000)
- **Wellcome Trust Clinical PhD Programme** 08/2013 (£246,000)
- **BHIVA Research Award 2011** 10/2011 (£10,000)
- **Abbott Virology External Collaborations Grant** 01/2011 (£20,000)
- **The Health Foundation: Medical Student Intercalated year Award** 07/2003 (£6,000)

Awards and Prizes:

- Imperial College CATO Research Symposium: Best Oral Presentation Prize ACL 06/2021
- Young Investigator Award: 27th Annual International Conference on Retroviruses and Opportunistic Infection (CROI) 03/2020
- BHIVA/MSD Travel Scholarship for the 25th Annual CROI 03/2018
- Young Investigator Award: 9th International Workshop on HIV Paediatrics 07/2017
- Imperial College Academic Training Event: Best Oral Presentation Prize ACF 05/2013
- Science Scholarship Award: British HIV Association (BHIVA) 04/2013
- Young Investigator Award: 19th Annual CROI 03/2012
- BHIVA/MSD Travel Scholarship for the 19th Annual CROI 03/2012
- Kent Sussex and Surrey Deanery: Core Medical Training Award 12/2009
- Young Investigator Award: National Osteoporosis Society 06/2009
- MBChB with Honours in Continued Professional Development 07/2006
- The Wellcome Trust: Medical Student Elective Prize 09/2005
- Birmingham University: The Arthur Thomson Travel Fellowship 07/2005

Published papers:

- 2023 • **Short CE**, Quinlan R, Lee Y, et al. Comparative analysis of vaginal microbiota sampling using menstrual cups and high vaginal swabs in pregnant women living with HIV-1 infection. *Frontiers Cell Infect Microbiol.* 2023;13: 1190160. PMID: 37228662
- 2022 • **Maher A**, Burnham K, **Short CE** et al. Transcriptional reprogramming from innate immune functions to a pro-thrombotic signature upon SARS-CoV-2 sensing by monocytes in COVID-19. *Nature Com* 22;13(1):7947. PMID 36572683
- **Khan M**, Rosadas C, **Short CE** et al. Simple, sensitive, specific self-sampling assay secures SARS CoV-2 antibody signals in sero-prevalence and post-vaccine studies. *Sci Rep* 22; 12: 1885. PMID 35115570
- **Rosadas C**, Khan M, **Short CE** et al. Detection and Quantification of Antibody to SARS CoV 2 Receptor Binding Domain provides enhanced Sensitivity, Specificity and Utility. *J Virol Methods* 22; 302:114475. ePub Jan 2022. PMID 35077719
- 2021 • **Short CE**, Quinlan R, Wang X, et al. Vaginal microbiota, genital inflammation and extracellular matrix remodelling collagenase: MMP-9 in pregnant women with HIV, a potential preterm birth mechanism warranting further exploration. *Frontiers Cell Infect Microbiol.* 2021 Nov 29;11:750103. PMID: 34912728

- Rosa A, Cherepanov P, Short CE, et al. SARS-CoV-2 recruits a haem metabolite to evade antibody immunity. *Sci Adv*. 2021; Apr 22;eabg7607. PMID: 33888467
- Shiva F, Short CE, Winston A et al. The predictive value of neurological symptoms in persons with suspected neurosyphilis. *Sexual Trans Infect*. 2021 Apr 19; sextrans-2021-055035. PMID: 33875567
- Thwaites R, Openshaw P, Short CE, et al. Inflammatory profiles across the spectrum of disease reveal a distinct role for GM-CSF in severe COVID-19. *Sci Immunol*. 2021; Mar 10;6(57):eabg9873. PMID: 33692097
- Pereira C, Harris B, Short CE, et al. Antibody response to SARS-CoV-2 infection is not associated with Post-COVID-19 Syndrome in healthcare workers. *J Infect Dis*. 2021; Mar 2;jiab120. PMID: 33675366
- 2020. •Short CE, Brown R, Quinlan R, et al. Lactobacillus-depleted vaginal microbiota in pregnant women living with HIV-1 infection are associated with increased local inflammation and preterm birth. *Frontiers Cell Infect Microbiol*. 2021; Feb 11; 10 :596917. epub Dec 2020. PMID: 33643930
- Harris B, Zuhair M, Short CE, et al. Asymptomatic COVID-19 in a rehabilitation facility: evolution of the presence of nasopharyngeal SARS-CoV-2 and serological antibody responses. *J Infect Dis*. 2021; 223(2): 192–196. epub Oct 2020. PMID: 33063824
- 2018 •Short CE, Quinlan R, Brown R, et al. The vaginal microbiome of HIV –infected pregnant mothers: associations with local inflammation and gestational age at delivery. *Rev Anti Ther& Infect Dis*. 2018; 8:82.
- Short CE, Quinlan R, Bennett P, et al. Optimising the collection of female genital tract fluid for cytokine analysis in pregnant women. *J Immunol Methods*. 2018; 458: 15-20. PMID 29625077
- 2017 •Short CE, Quinlan R, Russell J, et al. The immunological basis of preterm delivery in HIV infection: an exploration of systemic immune activation. *Rev Anti Ther& Infect Dis*. 2017; 7: 76.
- 2016 •Buell K, Puri A, Short CE, et al. Effect of Pulsed Methylprednisolone on Pain, in Patients with HTLV-1 Associated Myelopathy. *PLoS*. 2016; Apr 14;11(4):e0152557. PMID: 27077747
- 2014 •Samuel M, Bradshaw D, Short CE, et al. Antenatal atazanavir: a retrospective analysis of pregnancies. *Inf Dis Ob Gynae*. 2014, ID: 961375, 1-7. PMID 25328370
- Short CE, Shaw S, Fisher M, et al. Comparison of peripheral forearm DXA and clinical risk factor screening using FRAX to assess the risk of HIV-associated low bone-mass: a cross-sectional study. *Arch Osteoporos*. 2014, 9:181. PMID: 24847675
- Short CE and Taylor GP. Does antiretroviral therapy cause preterm birth in HIV infected women. *Expert Rev Anti Infect Therap*. 2014; 12: 293-306. PMID 24502750
- Charlton T, Franklin J, Short CE, et al. The impact of HIV infection and antiretroviral therapy on the predicted risk of Down's Syndrome. *Prenat Diagn*. 2014; 34: 121-127. PMID: 24284802
- Short CE, Douglas M, Smith J, et al. Preterm delivery risk in women initiating antiretroviral therapy to prevent human immunodeficiency virus mother-to-child transmission. *HIV Med*. 2014; 15: 233-238. PMID: 24025074 epub Sept 2013
- Short CE, Shaw S, Fisher M, et al. Fracture rates and risk factors for osteoporosis among a male HIV infected population in the UK. *Int J Std AIDS*. 2014; 25: 113-12. PMID: 23970632
- 2013 •Olubaniyi A, Short CE, Remedios D and Kapembwa, M. An unexpected cause of digital gangrene: HIV associated peripheral arterial thrombosis. *Br J Gen Pract*. 2013; 63: 162-163. PMID: 23561781
- 2011 •Short CE and Foster C. Pre-term delivery: the role of antiretrovirals. eChapter, *Treatment Strategies AIDS*, 10/2011. [<http://viewer.zmags.com/publication/56b3ab6c#/56b3ab6c/86>]
- 2009 •Short CE, Gilleece YC, Fisher M, et al. Trimetrexate and folinic acid: a valuable salvage option for *Pneumocystis jirovecii* pneumonia. *AIDS*. 2009; 23(10): 1287-1290. PMID: 19424049
- 2007 •Short CE, Iwuji C, Gilleece Y, et al. HIV infection in the elderly-further support for opt-out testing. *BMJ*. 2007; 334:1352.

Peer Reviewed Oral Presentations: * presenting author

- 2022 • Preda VP*, Roberts L, Short CE et al. Antiretroviral therapy (ART) inhibits the growth of cervicovaginal microbiome species in vitro: potential role in preterm birth. BHIVA 2023. HIV Med 23 abstract sup
- 2021 • Short CE*, Quinlan R, Wang X, et al. Vaginal microbiota, genital inflammation and extracellular matrix remodelling collagenase: MMP-9 in pregnant women with HIV, a potential mechanism for excess preterm birth? 13th International Workshop on HIV Pediatrics, virtual 2021. *Reviews in Antiviral Therapy& Inf Dis*. 2021. (oral_poster)
- 2020 •Short CE*, Quinlan R, Lee Y, et al. Comparative analysis of vaginal microbiota sampling using the menstrual cups and high vaginal swabs in HIV-1 infected pregnant women. Program 6th International Workshop on Microbiome in HIV. Maryland USA 2020. *Reviews in Antiviral Therapy & Inf Dis* 2020. (oral_poster)
- 2017 •Short CE*, Quinlan R, Russell J, et al. The immunological basis of preterm delivery in HIV Infection: an exploration of systemic immune activation. 9th International Workshop on HIV Pediatrics, Paris, France 2017. *Reviews in Antiviral Therapy& Inf Dis*. 2017 (oral_poster)

- 2013 •Short CE, Foster R, Iveson H, et al. Elevated leukocyte adhesion marker VCAM-1 in HIV-1 infected in women initiating PI-based ART during pregnancy compared to women conceiving on PI-based ART and women initiating triple-NRTI ART. 18th BHIVA. HIV Med 2013; 14 (S2): 6. PMID: 23551377
- 2012 •Short CE, Foster R, Douglas M, et al. Reduced IL-10 in Pregnant HIV+ Women Receiving PI/NNRTI-based ART compared to NRTI-Only Regimens: a Potential Contributor to Preterm Delivery. 19th CROI, Seattle USA 2012.
- Charlton T^{*1}, Franklin J, Short CE, et al. The impact of HIV infection and antiretroviral therapy on the predicted risk of Down's syndrome. 17th BHIVA. HIV Med 2012; 13 (S1): 2. PMID 22532976.
- Byrne L^{*1}, de Alwis O, Short CE, et al. Managing the pregnancies of HIV elite controllers: what are we doing? 17th BHIVA. HIV Med 2012; 13 (S1): 1. PMID 22532976.
- 2011 •Samuel M^{*1}, Bradshaw D, Short CE, et al. Atazanavir in pregnancy: a review of 155 cases. -16th BHIVA. HIV Med 2011; 12 (S1): 9-10. PMID: 21418502
- 2009 •Short CE, Shaw S, Fisher M, et al. Evaluating peripheral DEXA to detect osteoporosis in an HIV-seropositive male population. 14th BHIVA conference, Liverpool 2009. HIV Medicine 2009; 10 (S1): 1. PMID: 19356165 and 14th National Osteoporosis Society conference, Manchester 2009. Osteoporosis Int 2009; 20 (S4): 269-270. PMID: 19468664.

Peer Reviewed Abstracts (posters):

- 2023 •Short CE, Butler M, Dosekun L et al. Syphilis: same disease, different population? Sexual Trans Infect BASSH 23 abstract sup
- Preda VP*, Roberts L, Short CE et al. Antiretrovirals as antibiotics: The effect in vitro of HIV nucleoside reverse transcriptase inhibitors (NRTIs) on vaginal microbiota. Microbiology Society Conference 2023. Microbiol Res abstract sup
- 2022 Bell, N, Logan, R, Goodhand, N, Wilkinson, D & Short, CE. An audit of first line Intrauterine contraception prescribing in a routine outpatient sexual health setting. Sexual Trans Infect, 22; 98: A27. epub June 2022.
- Bell N, Logan R, Goodhand N, Wilkinson, D & Short, CE. Routine assessment of patient pain during IUC fitting and how can we improve this? Sexual Trans Infect, 2022; 98: A28. epub June 2022.
- 2020 •Short CE, Quinlan R, Lee Y, et al Genital tract & plasma cytokines & systemic T-cell activation in HIV+ pregnant women' 27th Conference on Retroviruses and Opportunistic Infections (CROI), Boston, USA 2020.
- Shiva F^{*1}, Short CE, Goldmeier D, et al. The predictive value of symptoms and investigations in the diagnosis of neurosyphilis. Virtual BASSH Annual conference 2020. In J STDs&AIDs; 31(12): 20. doi.org/10.1177/0956462420967532
- 2018 •Short CE, Quinlan R, Brown R, et al. The vaginal microbiome in pregnancy differs by HIV status, ART exposure and ART class. 25th CROI, Boston, USA 2018. (poster) and 10th International Workshop on HIV Pediatrics, Amsterdam, Holland 2018. Reviews in Antiviral Therapy & Inf Dis. 2018.
- 2010 •Hildebrand S, Dosekun O, Short CE, et al. Lymph node sampling in HIV outcomes and waiting times for different methods. 16th BHIVA conference, Manchester 2010. HIV Med 2010; 11 (S1): 59. PMID: 20586809
- White S, Shaw S, Short CE et al. Bone mineral density and fracture risk among a UK cohort of HIV-positive men. British Society of Rheumatology Annual conference, Birmingham 2010. Rheumatology 2010; 49 (S1): 84-85. PMID: 20308123
- 2009 •Short CE, Shaw S, Gilleece Y, et al. Use of Peripheral DEXA as a Screening tool for in an HIV-Seropositive Male Population. 16th CROI, Montreal, Canada, 2009. British Society of Rheumatology Annual conference, Glasgow 2009. Rheumatology 2009; 48; i102. PMID: 19286699
- Short CE, Brejt N, Gilleece Y et al. Intensive care survival with HIV-infection is equivalent to HIV negative admissions: a single centre in the South East. 15th BHIVA conference, Liverpool 2009. HIV Medicine 2009; 10 (S1): 46. PMID: 19356165
- 2008 •Short CE, Churchill D, Fisher et al. Trimetrexate – further evidence for its role as salvage therapy for *Pneumocystis Jirovecii* Pneumonia. 14th BHIVA conference, Belfast 2008. HIV Medicine 2008; 9 (S 2): 42. PMID: 18399910
- 2007: •Shaw S, Fisher M, Short CE et al. Reduced bone mineral density in HIV-infected men is associated with disease status and gonadal state. 12th National Osteoporosis Society conference 2007. Osteoporosis Int 2007; 18 (S3): 293. PMID: 17963017

Academic Aspirations Through my NIHR matched Academic Clinical Lectureship, funded by the March of Dimes, Imperial College Academic Health Sciences Centre and NHS England, I lead the HIV-PTB group which studies the immune pathogenesis of HIV associated premature birth. I continue to develop my knowledge and skills in the molecular detection of vaginal bacterial species and study of mucosal immunology, as well as supervising both undergraduate and postgraduate students, and my research partnerships. I have successfully obtained further funding from the Academy of Medical Sciences and UNITAID to study microbiota and immune interactions in the female genital tract and am fostering fruitful collaborations with the European Prematurity Research Centre, the DoIPHIN RCT consortium and UK lead experts in Bacterial Vaginosis. I aim to continue to develop my independent research group's focus on the immuno-pathogenesis of STIs and HIV co-infection through application for NIHR programme grants, fellowship funding and appointment as either a Clinician Scientist or Clinical Senior Lecturer.