

# WOAH Collaborative Centre Reports Activities 2022

## Activities in 2022

This report has been submitted : 8 juin 2023 11:58

<b>Title of WOA Collaborating Centre</b>	Viral Genomics and Bioinformatics
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<b>Name Director of Institute (Responsible Official):</b>	Prof. Massimo Palmarini
<b>Name (including Title and Position) of Head of the Collaborating Centre (WOAH Contact Point):</b>	Prof. Massimo Palmarini, Director of Centre for Virus Research (Virology)
<b>Name of the writer:</b>	Prof David L Robertson

1. Activities as a centre of research, expertise, standardisation and dissemination of techniques within the remit of the mandate given by WOA

### Zoonosis

Title of activity	Scope
Molecular virology and computational analysis of animal and human viruses	CVR researchers carry out basic research on the threats viruses pose to human health and spillover risk from animals

Epidemiology, surveillance, risk assessment

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Title of activity	Scope
Genome sequencing of human and animal viruses	CVR Genomics regularly sequence animal and human viruses relevant to animal and human health and CVR Bioinformatics provides bioinformatics analysis of this data
Training, capacity building	
Title of activity	Scope
Viral genomics and bioinformatics training	We accommodate visiting researchers for training purposes, participate in a genome sequencing course and regularly run viral bioinformatics training courses

2. Proposal or development of any procedure that will facilitate harmonisation of international regulations applicable to the main focus area for which you were designated

Proposal title	Scope/Content	Applicable area
Training in viral genomics and bioinformatics	We run yearly training courses with the main focus on the appropriate analysis of viral genome sequence data in collaboration with Wellcome Connecting Science ( <a href="https://www.wellcomeconnectingscience.org">https://www.wellcomeconnectingscience.org</a> ) and a course we run at the University of Glasgow ( <a href="https://bioinformatics.cvr.ac.uk/training/">https://bioinformatics.cvr.ac.uk/training/</a> ). The focus is on Linux/Unix command line analysis and using software for analysing NGS sequencing data. Topics include: data formats, read cleaning, de novo sequence assembly and reference alignment, consensus and variant calling, multiple alignment and phylogenetics, relevant statistics, metagenomics and virus discovery, and transcriptomics.	Training and education

4. Did your Collaborating Centre maintain a network with other WOH Collaborating Centres (CC), Reference Laboratories (RL), or organisations designated for the same specialty, to coordinate scientific and technical studies?

No

5. Did your Collaborating Centre maintain a network with other WOH Collaborating Centres, Reference laboratories, or organisations in other disciplines, to coordinate scientific and technical studies?

No

6. Did your Collaborating Centre place expert consultants at the disposal of WOH?

Yes

NAME OF EXPERT	KIND OF CONSULTANCY	SUBJECT
Massimo Palmarini	Expert in BTV	Molecular virology of BTV
Pablo Murcia	Expert in influenza	Molecular virology of influenza viruses
David Robertson	Viral bioinformatics	Computational and evolutionary analysis of viruses
Richard Orton	Viral bioinformatics	Computational analysis of virus genome sequence data
Ana da Silva Filipe	Virus genome sequencing	Sequencing strategies for animal and human viruses

7. Did your Collaborating Centre provide advice/services to requests from Members in your main focus area?

Yes

*Robertson provided advice and Orton training in bioinformatics data analysis to IAEA's Zoonotic Disease Integrated Action (ZODIAC) project.*

8. Did your Collaborating Centre provide scientific and technical training, within the remit of the mandate given by WOA, to personnel from WOA Members?

No

9. Did your Collaborating Centre organise or participate in the organisation of scientific meetings related to your main focus area on behalf of WOA?

No

10. Publication and dissemination of any information within the remit of the mandate given by WOA that may be useful to Members of WOA

a) Articles published in peer-reviewed journals:

*We published regularly on both human and animal viruses <https://www.gla.ac.uk/research/az/cvr/research/cvrpublications/#2022>*

b) International conferences:

c) National conferences:

d) Other (Provide website address or link to appropriate information):

*Information on our virus research focus can be found here: <https://www.gla.ac.uk/research/az/cvr/research/viruseswestudya-z/>*

11. What have you done in the past year to advance your area of focus, e.g. updated technology?

*We have run several courses on Viral Genomics and Bioinformatics: <https://bioinformatics.cvr.ac.uk/training/>.*

12. Additional comments regarding your report:

*The Viral Genomics and Bioinformatics course we ran in person at the University of Glasgow was paused due to the COVID-19 pandemic. It will start running in person on a yearly basis from August 2023. The bioinformatics courses that were run online with Welcome Connecting Science will return to in person in 2024. Both courses attract international participants.*