

### Virtual conference agenda

# Wednesday, 5 May 2021

Start (BST)	Finish (BST)	Presenter details
13:00	13:10	Welcome
		Scientific Programme Committee:
		Alan Christoffels, South African National Bioinformatics Institute, South Africa Jennifer Gardy, Bill and Melinda Gates Foundation, USA
		Kathrvn Holt, Monash University, Australia
		Nick Loman, University of Birmingham, UK
13:10	13:55	Keynote 1
		Introduction to the session
		Chair: Nick Loman, University of Birmingham, UK
13:10	13:40	Global COVID-19 Situation and Strategic Response
		Maria van Kerkhove, World Health Organisation, Switzerland
13:40	13:55	Q&A
		Chair: Nick Loman, University of Birmingham, UK
		Moderator: Jennifer Gardy, Bill and Melinda Gates Foundation, USA
13:55	14:05	Break

14:05	15:35	Session 1: COVID lessons learned, pandemic preparedness, funding agencies
		Introduction to the session
		Chair: Nick Loman, University of Birmingham, UK
14:05	14:25	SARS-CoV-2, metagenomic sequencing, & pandemic preparedness <u>Eddie Holmes, The University of Sydney, Australia</u>
14:25	14:45	Genomics for COVID-19 at the public health interface in Australia  Ben Howden, Doherty Institute, Australia
14:45	14:55	The SARS-CoV-2 spike mutation N439K; from genomic surveillance to multidisciplinary characterisation  James Shepherd, MRC-University of Glasgow Centre for Virus Research
14:55	15:05	SARS-CoV-2 within-host diversity and transmission  Tanya Golubchik, University of Oxford
15:05	15:35	Q&A Chair: Nick Loman, University of Birmingham, UK Moderator: Kathryn Holt, Monash University, Australia
15:35	15:55	Networking / Break



15:55	17:25	Session 2: Environmental Genomics for Public Health
		Introduction to the session
		Chair: Kathryn Holt, Monash University, Australia
15:55	16:15	Genome-resolved insights of bacterial metabolism in drinking water systems <u>Ameet Pinto, Northeastern University, USA</u>
16:15	16:35	Tracing the spread and evolution of microbial populations in hospital rooms and sewage with metagenomics
		Matt Olm, Stanford University, USA
16:35	16:45	Pilot program for SARS-CoV-2 screening and environmental monitoring in an urban public school district in the United States  Catherine Pratt, University of Nebraska Medical Center
16:45	16:55	Identifying overlapping pathogenic and antimicrobial-resistant Escherichia coli strains in humans, animals, and urban slum environments through long-read sequencing Jenna Swarthout, Tufts University
16:55	17:25	Q&A Chair: Kathryn Holt, Monash University, Australia Moderator: Alan Christoffels, South African National Bioinformatics Institute, South Africa
17:25	17:45	Networking in Spatial Chat
17:45	18:15	Lightning talks 1
18:15	18:45	Poster session 1 (odd number posters)



### Thursday, 6 May 2021

13:00	14:30	Session 3: Global Public Health Genomics
		Introduction to the ecosion
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10.00	10.00	Chair: Jennifer Gardy, Bill and Melinda Gates Foundation, USA
13:00	13:20	Using genomics to track azithromycin resistance in typhoidal Salmonella in Bangladesh Seniuti Saha, Child Health Research Foundation, Bangladesh
13:20	13:40	AMR & genetic characterization of Shigella flexneri in the Philippines
13.20	13.40	Sonia Sia, Research Institute for Tropical Medicine - Department of Health, Phillippines
13:40	13:50	The House that Jack Built: Reaching aspirations for whole genome sequence-based clinical
		microbiology in rural Nigeria
		Ifeoluwa Akintayo, University of Ibadan
13:50	14:00	Simultaneous emergence of multiple clades of Salmonella Typhi resistant to fluoroquinolones due
		to QRDR mutations in Blantyre, Malawi
14.00	1.00	Philip Ashton, Malawi-Liverpool-Wellcome Unit
14:00	14:30	Q&A Chair, Japaitar Cardy, Bill and Malinda Catas Foundation, USA
		Chair: Jennifer Gardy, Bill and Melinda Gates Foundation, USA Moderator: Kathryn Holt, Monash University, Australia
14:30	14:50	Networking / Break
14.50	14.50	Networking / Dieak
14:50	16:20	Session 4: Bioinformatics Showcase
		Introduction to the session
44.50	45.40	Chair: Alan Christoffels, South African National Bioinformatics Institute, South Africa
14:50	15:10	The COMBAT-TB Workbench: powerful, accessible tools for M. tuberculosis bioinformatics in
		public health
15:10	15:30	public health  Peter van Heusden, South African National Bioinformatics Institute, South Africa
15:10	15:30	public health  Peter van Heusden, South African National Bioinformatics Institute, South Africa  Investigating outbreaks of SARS-CoV-2 using civet
		public health <u>Peter van Heusden, South African National Bioinformatics Institute, South Africa</u> Investigating outbreaks of SARS-CoV-2 using civet <u>Verity Hill, University of Edinburgh, UK</u>
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# Friday, 7 May 2021

Introduction to the session Chair: Jennifer Gardy, Bill and Melinda Gates Foundation, USA Closing the loop: connected diagnostics and digital epidemiology for global health Entity Tumer, Gates Foundation, USA  13:20 13:40 Computational Epidemiology During the COVID-19 Pandemic Maia Majumder, Harvard University, USA Real-time genomic epidemiology with millions of samples John Lees, Imperial College London, UK Real-time genomic opidemiology with millions of samples John Lees, Imperial College London, UK Real-time genomic opidemiology with millions of samples John Lees, Imperial College London, UK Real-time genomic opidemiology with millions of samples John Lees, Imperial College London, UK Real-time genomic opidemiology with millions of samples John Lees, Imperial College London, UK Real-time genomic opidemiology with millions of samples John Lees, Imperial College London, UK Real-time genomic opidemiology with millions of samples Chair: Jennifer Gardy, Bill and Melinda Gates Foundation, USA Moderator: Nick Loman, University of Birmingham, UK  14:30 14:50 Introduction to the session Chair: Kathryn Holt, Monash University, Australia  14:50 Long-read metagenomics using PromethiON uncovers oral bacteriophages and their interaction with host bacteria Koji Yahara, National Institute of Infectious Diseases, Japan  Genomic surveillance of a novel SARS-CoV-2 variant of concern in Manaus, Brazil Dardan da Silva Candido, University of Oxford, UK  15:30 I5:40 An International Common Mechanism for Screening Synthetic DNA Orders Nicole Wheeler, University of Birmingham, Consultant to NTI, bio, UK  15:50 Assessing Direct Whole Genome Sequencing feasibility from clinical samples in high-burden tuberculosis countries Carla Mariner Liicer, Instituto de Biomedicina de València-CSIC, Spain  15:50 I6:20 Real-time de Gates Foundation, University of Birmingham, UK Networking / Break	13:00	14:30	Session 5: Digital Epidemiology
13:20			Introduction to the session
13:20 13:40 Computational Epidemiology During the COVID-19 Pandemic  Maia Majumder, Harvard University, USA  13:40 13:50 Real-time genomic epidemiology with millions of samples  John Lees, Imperial College London, UK  13:50 14:00 Machine learning for rapid geographical source attribution of Salmonella Enteritidis infections  Sion Bayliss, University of Bath, UK  14:00 14:30 Q&A  Chair: Jennifer Gardy, Bill and Melinda Gates Foundation, USA  Moderator: Nick Loman, University of Birmingham, UK  14:50 16:20 Session 6: Late Breaking  Introduction to the session  Chair: Kathryn Hoit, Monash University, Australia  14:50 15:10 Developing a global genomics partnership to inform pneumococcal vaccine strategy  Stephen Bentley, Wellcome Sanger Institute, UK  15:10 15:20 Long-read metagenomics using PromethION uncovers oral bacteriophages and their interaction with host bacteria  Koji Yahara, National Institute of Infectious Diseases, Japan  15:20 15:30 Genomic surveillance of a novel SARS-CoV-2 variant of concern in Manaus, Brazil Darlan da Silva Candido, University of Oxford, UK  15:30 15:40 An International Common Mechanism for Screening Synthetic DNA Orders  Nicole Wheeler, University of Birmingham, Consultant to NTI, bio, UK  15:50 Assessing Direct Whole Genome Sequencing feasibility from clinical samples in high-burden tuberculosis countries  Carla Mariner Liicer, Instituto de Biomedicina de València-CSIC, Spain  15:50 16:20 Q&A  Chair: Kathryn Holt, Monash University, Australia  Moderator: Nick Loman, University of Birmingham, UK			,
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16:20   16:40   Networking / Break			Moderator: Nick Loman, University of Birmingham, UK
	16:20	16:40	Networking / Break



16:40	17:25	Keynote 2
		Introduction to the session
		Chair: Jennifer Gardy, Bill and Melinda Gates Foundation, USA
16:40	17:10	Genomic Pathogen Surveillance across Africa: Catalysts & Challenges <u>Ahmed Ouma, Africa CDC, Etheopia</u>
17:10	17:25	Q&A Chair: Jennifer Gardy, Bill and Melinda Gates Foundation, USA
17:25	17:35	Closing remarks
		Scientific Programme Committee: Alan Christoffels, South African National Bioinformatics Institute, South Africa Jennifer Gardy, Bill and Melinda Gates Foundation, USA Kathryn Holt, Monash University, Australia Nick Loman, University of Birmingham, UK