### 11<sup>th</sup> Global Microbial Identifier Program



16 - 18 May 2018 Centre International de Conférences, Geneva, Switzerland

## Tentative Programme Last updated: 26.02.18

### Day 1: Wednesday 16th May 2018

# Interactive discussions on the impact of Whole Genome Sequencing on Global Health and Food Safety guided by The World Health Organization

Whole Genome Sequencing (WGS) allows the identification and characterization of microorganisms with a level of precision not previously possible. As the most sensitive and specific tool available today, it is revolutionizing the way in which countries detect, assess, investigate, manage and monitor disease threats. WGS enables cross-referenceable typing systems across animal, environmental, food and human sectors. WGS is a technology with the ability to more rapidly and accurately identify the source of an outbreak and track its evolution allowing for swift responses to be mounted, preventing cases and saving lives. It is also fast becoming an important tool for surveillance of antimicrobial resistance (AMR) and clinical management of communicable diseases. Realizing the true power of WGS as a tool for global health is dependent on the open and widespread sharing of pathogen sequence and relevant meta data.

#### Aim

To provide advice to WHO on the benefits and risks to global health of rapid, widespread sharing of sequence data and associated meta data and to highlight potential roles for WHO in this area of work.

#### **Objectives**

- To identify the short and long-term benefits to public health, clinical medicine, and biomedical research of global data sharing of sequence and metadata.
- To identify risks associated with any constraints to global data sharing of sequence and metadata.
- To identify the different roles WHO could play in global data sharing of sequence and meta data.

#### **Format**

The process will focus on facilitated discussion and consensus building. There will be limited presentations:

- OPENING: setting the scene
- Overview of WHO WGS activities
- Global data sharing and the meeting process and objectives

Day 2: Thursday 17<sup>th</sup> May 2018

	Active Systems and Barriers to Internation	anal Data Sharing	
00.00.00.50		Tial Data Shalling	
08:30-08:50	Welcome – the future of WGS	E : D   I   IIIIANA NAV	
08:50-09:10	Active Systems and Overcoming NGS Barriers in the Developing World	Enrique Delgado, UNAM, MX	
09:10-09:20	Genomic Data Sharing under Nagoya Protocol – Future International Initiatives	George Haringhuizen, RIVM, NL	
09:20-09:40	The Vision of Sharing	Eric Stevens, US FDA, USA	
09:40-10:00	Metagenomic Sewage Surveillance	Frank Moeller Aarestrup, DTU, DK	
10:00-10:30	Discussion Panel: Data Sharing		
10:30-11:00 Coffee Break			
Advances in the Use of WGS in Clinical Microbiology and Functional Genomics			
11:00-11:20	Biology and Epidemiology of Shiga Toxin- Producing E. coli – NGS Investigations	Eelco Franz, RIVM, NL	
11:20-11:40	Practical Issues in Implementing Next- Generation-Sequencing in Routine Diagnostic Microbiology	John WA Rossen, University of Groningen, NL	
11:40-12:00	Prospective Genomic Surveillance in a Clinical Environment: Tracking Resistance and its Mobilization.	Lynn Bry, Harvard Medical School, USA	
12:00-12:20	The Impact of Pathogen Genomics in U.S. Public Health	Greg Armstrong, US CDC, USA	
12:20-12:40	NGS Provides Functional Insight into the Survival and Persistance of Bacterial Pathogens: The Case of Salmonella	Jie Zheng, US FDA, USA	
	12:40-13:50 Lunch		
	NGS Proficiency Testing and Ne	ew Areas	
13:50-14:10	Next Generation Sequencing Technologies for Plant Pest Diagnostics	Baldissera Giovani, EUPHRESCO, FR	
14:10-14:30	UNSGM PT + GMI PT Bacs	Rene Hendriksen, DTU, DK	
14:30-14:50			
14:50-15:10	Certification/PT issues in PulseNet /GenomeTrakr	Eija Trees and Ruth Timme -TBC	
15:10-15:30	The CDC NGS Quality Survey	Eija Trees -TBC	
15:30-16:00 Coffee Break			
	AMR NGS and Accreditation of N	IGS Labs	
16:00-16:20	AMR Genes	David L. Trees, US CDC, USA	
16:20-16:40	NARMS/Resistome Tracker	Patrick McDermott, US FDA, USA	
16:40-17:00	The NCBI Pathogen Detection Browser: Integrating Antimicrobial Resistance Genotypes and Phenotypes	Bill Klimke, NCBI, USA	
17:00-17:20	The EUCAST Consultations on WGS for Predicting Antimicrobial Susceptibilities	Matthew Ellington, Public Health England, UK - TBC	
17:20-17:40	Establishment of Quality Control in PulseNet/GenomeTrakr	Eija Trees, US CDC / joint input from USFDA	
	Conclusion of Day 2		

Day 3: Friday 18th May 2018

	NGS in One Health – Surveillance and	d Investigation	
08:30-08:50	Application of WGS in Food	Ivan Nastasijevic, Institute of Meat	
	Establishments: One Health Context	Hygiene & Technology, CS	
08:50-09:10	The Impact of NGS at the Intersection of	Rebecca Bell, US FDA, USA	
	Good Agricultural Practices and Human		
	Food Consumption		
09:10-09:30	NGS in the Detection of Genetic Exchange	Christoph Jans, ETH, Zurich, CH	
	in Streptococci and Staphylococci from		
	Food, Human and Animal Sources		
09:30-09:50	Metagenomic Approaches for Complete	Heather Carleton, US CDC, USA	
	Char. of Human Enteric Diseases		
09:50-10:10	WGS in vectorborne diseases as an add-	Nuno Faria, University of Oxford,	
	on to public health: when and why?	UK-TBC	
10:10-10:40 Coffee Break			
Use of NGS in Clinical and Public Health Virology			
10:40-11:00	Virome Profiling of Sewage for Human Disease Surveillance	My Phan, Erasmus MC, NL	
11:00-11:20	One Health Surveillance and Risk	Ron Fouchier, Erasmus MC, NL	
11.00 11.20	Prediction in Influenza	Troni odonici, Erasinas Wo, NE	
11:20-11:40	Bringing NGS to Diagnostic Virology	Judith Breuer, UCL, UK	
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11:40-12:00	NGS in the Clinical Virology Lab:	Marion Koopmans, Erasmus MC,	
	Possibilities and Challenges	NL	
12:00-12:20	Fast and Cost-effective Sequencing of	Alban Ramette, University of Bern,	
	RNA Virus Genomes in Clinical Samples	CH	
12:20-12:40	Viromes As Genetic Reservoir for the	Diego Mora, University of Milan, ITL	
	Microbial Communities in Food-Associated		
	Environments: A Focus on Antimicrobial-		
10:10 10:00	Resistance Genes	Andreas Nitasha DKI DE	
12:40-13:00	GMI Proficiency Testing- Virus	Andreas Nitsche, RKI, DE	
	13:00-14:10 Lunch		
14:10-16:10	WG 1-4 Break-out Session	WG 1-4 Chairs	
16:10-16:40 Coffee Break			
16:40-16:50	WG1 Outcome	Joergen Schlundt, NAFTEC, SG	
16:50-17:00	WG2 Outcome	Bill Klimke, NCBI, USA	
17:00-17:10	WG3 Outcome	Marion Koopmans, Erasmus MC,NL	
17:10-17:20	WG4 Outcome	Rene Hendriksen, DTU, DK	
17:20-17:50	Concluding Discussion		
Conclusion of Day 3			

### **Further details**

The meeting will be held at the Centre International de Conférences (CICG). A list of suggested nearby accommodation, further details and updates of the programme are available at: <a href="http://www.globalmicrobialidentifier.org/news-and-events/11th-meeting-on-global-microbial-identifier-in-genva-switzerland">http://www.globalmicrobialidentifier-in-genva-switzerland</a>.

For any enquiries, please contact Vibeke Dybdahl Hammer, vdha@food.dtu.dk.

Register for your attendance at: <a href="https://reg.unog.ch/event/23651/">https://reg.unog.ch/event/23651/</a>