

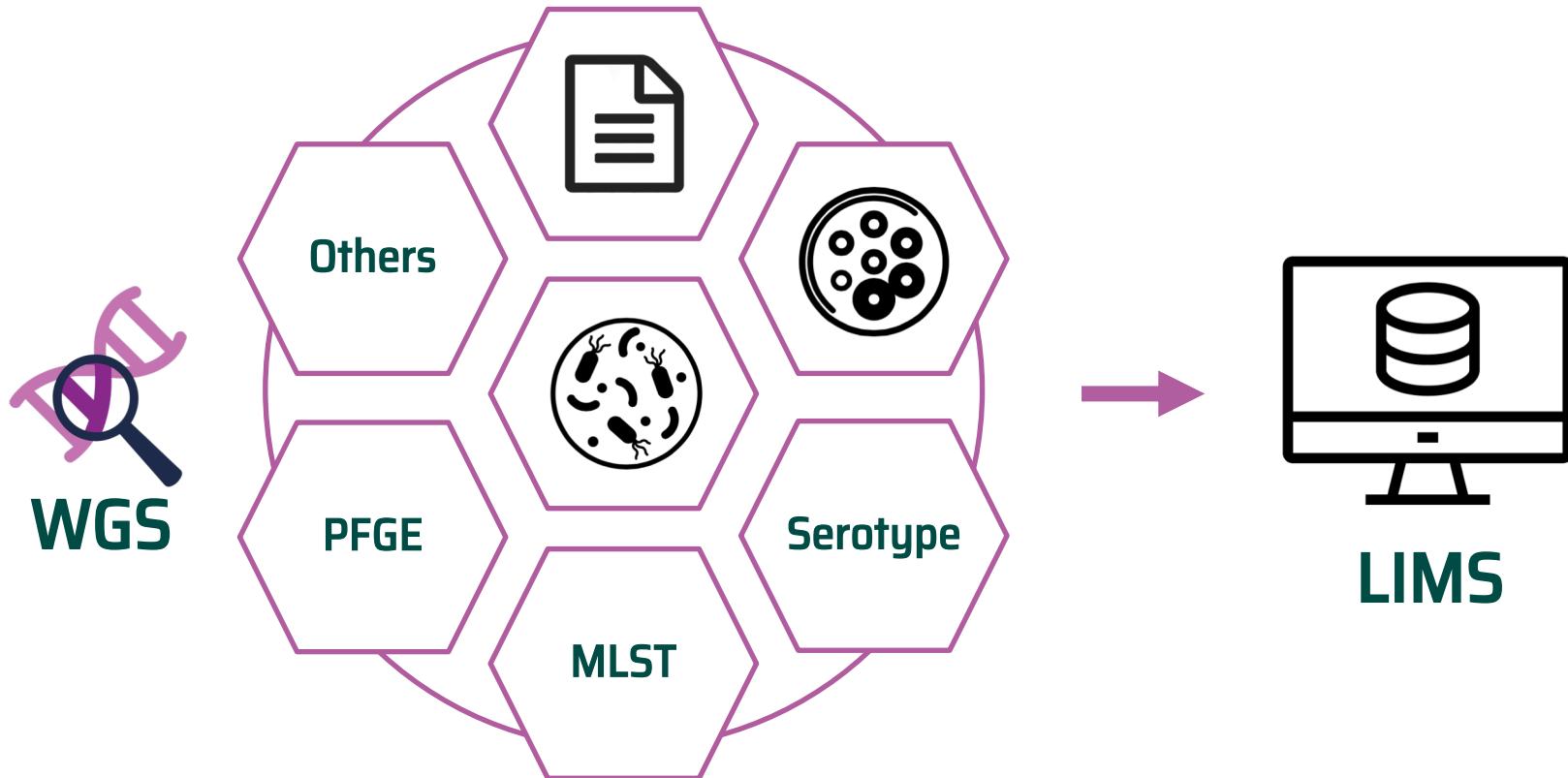
A global resource for genomic pathogen surveillance at Pathogenwatch

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Genomic Epidemiology Lead



SAGESA session on AMR genomic tools
18/03/2022

AMR Surveillance in Public Health Microbiology Labs

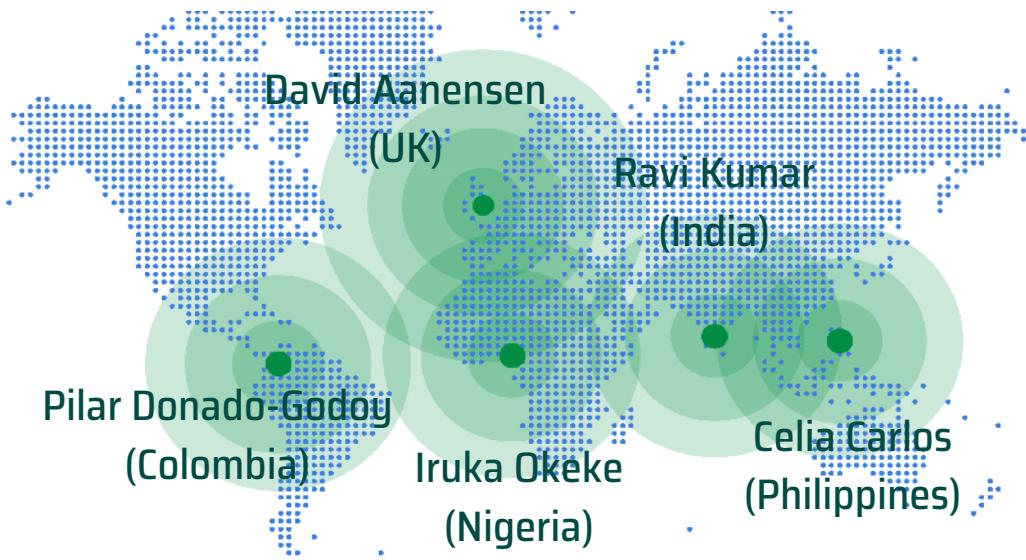


Challenges to the implementation of WGS



- Laboratory infrastructure and technical capacity
- Availability of reagents and cost
- IT infrastructure and bioinformatics capacity
- Linkage of clinical, microbiology lab and genomic data
- Interpretation of data in a broader context
- Translation to action

Capacity building for WGS in LMICs



WGS/AST 12K+ isolates
WHO priority pathogens
Laboratory
Financial
Bioinformatics
Genomic epidemiology



Global Health
Research Unit
Genomic Surveillance of AMR



<http://ghru.pathogensurveillance.net>



AGROSAVIA

UNIVERSITY
OF
IBADAN



BRIGHAM
AND
WOMEN'S HOSPITAL

CGPS (Free) Web Tools for Pathogen Surveillance



Collection

epi collect

<https://five.epicollect.net>

Integration

Data-flo The Data-flo logo consists of the word "Data-flo" in a large, purple, sans-serif font, followed by a stylized purple and teal arrowhead pointing right.

<https://data-flo.io/>

Interactive Visualization



Microreact

<http://microreact.org>

Analysis



Pathogenwatch

<https://pathogen.watch>



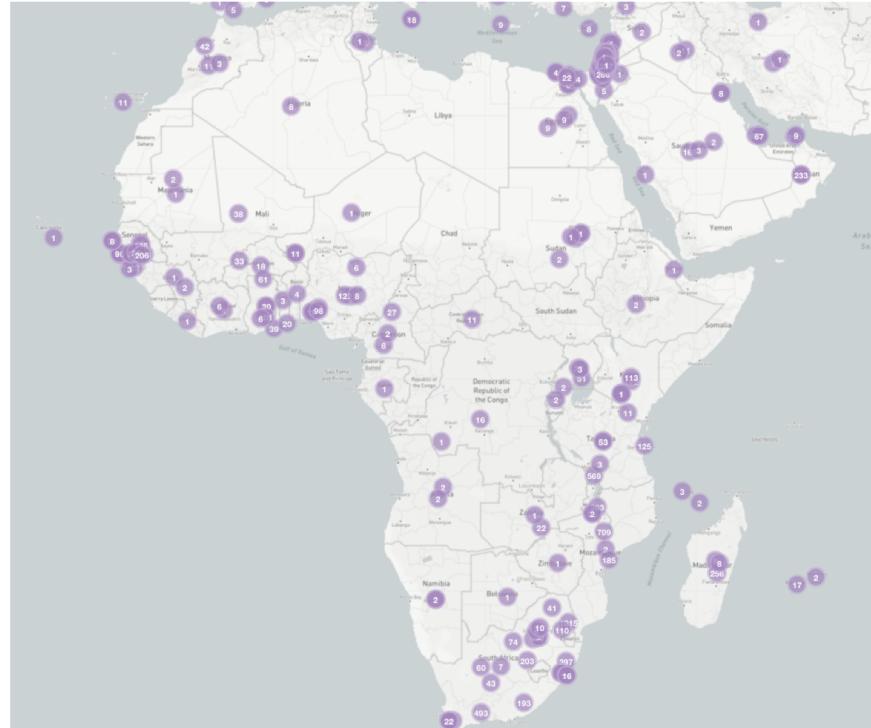
1. Analyze your genomes

- Species identification
- Subtyping (e.g. MLST sequence types, genotyping, genoserotyping)
- AMR and virulence genes
- Plasmid replicon types
- Clustering genomes based on genetic similarity (cgMLST, core SNPs)

2. Contextualize with public data

- 73,219 public genomes

10,402 genomes from Africa



Demo video <https://vimeo.com/542566630>



Global Health
Research Unit
Genomic Surveillance of AMR

NIHR | National Institute
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<http://www.pathogensurveillance.net>

