Genpax

IDEM

Advanced Whole Genome Sequencing Analysis for Infection Prevention and Control and Public Health

PROBLEM

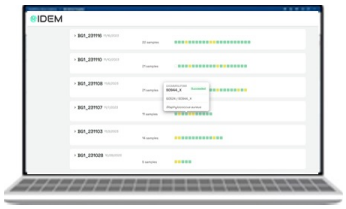
Transmissions in healthcare systems can go undetected due to lack of discernment in current bacterial identification methods, putting patient and healthcare workers at risk.

Whole Genome Sequencing (WGS) allows discrimination between strains which until recently has not been possible both at scale and at high resolution, preventing its routine use.

SOLUTION

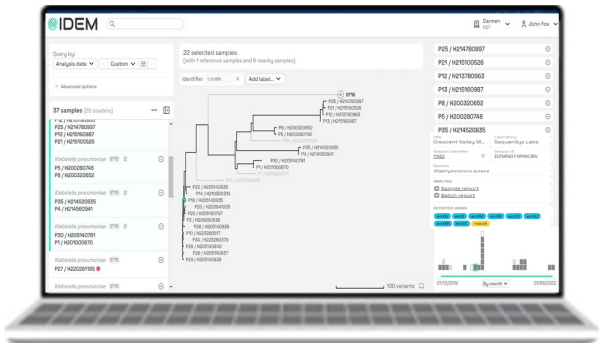
IDEM provides advanced, high definition, natural reference-free analysis of WGS data from bacterial pathogens, with easy-to-interpret results delivered in real clinical time to the clinical teams enabling prompt Infection Prevention interventions.

Laboratory



Automated QC for all isolates

IPC



User-friendly, continuously updated, and interactive display of relationships between samples

Reporting

Summary information for IPC/clinical teams and patient records

BENEFITS

- **No** specialist bioinformatics required
- **Identifies** previously undetected transmission events
- **Rules out** suspected connections
- **Enables detection of** transmissions originating in other settings

422 infections avoided per year*

£2.7M savings per year*

Use existing samples: All priority HAI pathogens are selected following routine culture and prepped for WGS

Sequencing: Compatible with Illumina platforms, we can provide guidance on the most cost-effective protocols across your hospitals and healthcare environments

Monitoring: Continuous detection of potential outbreaks and transmission events.

* Based on proactive use in 800 bed hospital in England.

Fox, Saunders, and Jerwood. Microb Genom, 9 (2023)

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SPECIES COVERED

Our prioritized species address the most common Healthcare Associated Infections and Food Safety Species.

Species Name	
Acinetobacter baumannii	HD
Campylobacter coli	HD
Campylobacter jejuni	HD
Campylobacter lari	HD
Citrobacter freundii	SD
Clostridiodes difficile	HD
Corynebacterium diphtheria complex	SD
Cronobacter sakazakii	SD
***Enterobacter cloacae* complex:** • *Enterobacter asburiae* • *Enterobacter cloacae* • *Enterobacter hormaechei* • *Enterobacter kobei* • *Enterobacter ludwigii* • *Enterobacter roggenkampii*	HD
Enterococcus faecalis	HD
Entercoccus faecium	HD
Escherichia coli	HD
Haemophilus influenzae	SD
Klebsiella aerogenes	SD
Klebsiella oxytoca	HD

Species Name	
Klebsiella pneumoniae	HD
Klebsiella quasipneumoniae	HD
Klebsiella variicola	HD
Legionella pneumophila	SD
Listeria monocytogenes	HD
Mycobacterium tuberculosis	HD
Neisseria gonorrhoeae	SD
Neisseria lactamica	SD
Pseudomonas aeruginosa	HD
Salmonella enterica	HD
Serratia marcescens	HD
Shigella species: • *Shigella boydii (S1 & S3)* • *Shigella dysenteriae (S1 & S3)* • *Shigella flexneri* • *Shigella sonnei*	HD
Staphylococcus aureus	HD
Staphylococcus epidermidis	SD
Stenotrophomonas maltophilia	SD
Streptococcus pneumoniae	SD
Vibrio cholera	SD

HD = High definition SD = Standard definition

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