

Respiratory Pathogen ID Panel - Next Generation Sequencing

Acute respiratory tract infections are a leading cause of disease worldwide [3].

Lower respiratory tract infections are estimated to be responsible for 4.4% of all deaths worldwide in people of all ages, with higher rates in the young, old, and immunocompromised [4].

Athena Esoterix is pleased to announce the addition of the Respiratory Pathogen ID Panel- NGS for broad-range detection of respiratory pathogens and antimicrobial resistance identification.

Broad range enrichment panels that detect large numbers of pathogens and co-infections have the potential to transform clinical microbiology (2).

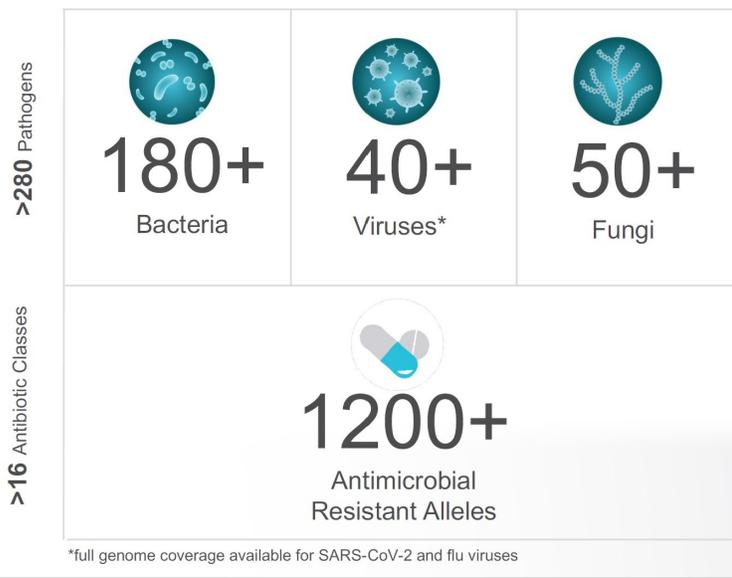
An estimated 55% of antibiotic prescriptions for acute respiratory tract infections are unnecessary, facilitating the development of antibiotic-resistant infections (1).

Conventional testing can be slow and often return negative results, especially for fastidious organisms, including many fungal pathogens.

RPIP- NGS

>280 Targets in One Test

A comprehensive panel of over 280 respiratory viral, bacterial, and fungal pathogens. With its innovative PCR technology, the RPIP- NGS panel identifies fungal, viral, and bacterial pathogens in addition to over 1200 antimicrobial resistant alleles.



Impact on Clinical Workflow

Efficient: Simultaneous detection of >280 pathogens and 16 antibiotic classes, all in a single test

Informative: Full genome information for critical pathogens to inform epidemiology and understand transmission

Comprehensive: Accelerates pathogen detection missed by standard laboratory tests.



ADVANTAGES TO ORDERING RPIP- NGS

- **Better Results** – Compared to traditional or targeted methods, a hypothesis-free approach increases the probability of identifying a pathogen in patients with symptoms of an infectious disease, and it increases the capability of detection of co-infections.
- **Accurate Organism Identification** – NGS technology for the detection of fungi, viruses, and bacteria offers increased sensitivity and specificity over traditional methods, particularly for fungal pathogens and difficult-to-culture organisms.
- **Specimen Requirements** – NP Swabs, BAL, Tracheal aspirate, and tissue* The NGS format minimizes sample requirements increasing efficiency. A single specimen can be tested for multiple infectious agents simultaneously.

For Additional Information on Respiratory Infections:

Clinical care of severe acute respiratory infections – Tool kit- (Updated 2022)
<https://www.who.int/publications/i/item/clinical-care-of-severe-acute-respiratory-infections-tool-kit>

National Center for Immunization and Respiratory Diseases
<https://www.cdc.gov/ncird/index.html>

Test Name:	RPIP- NGS
Methodology:	Next-Generation Sequencing
Specimen Requirements:	Nasopharyngeal Swab BAL Tracheal Aspirate Tissue* No FFPE,

REFERENCES

1. CDC. Antibiotic Resistance Threats in the United States, 2019. <https://www.cdc.gov/drugresistance/pdf/threats-report/2019-ar-threats-report-508.pdf>
2. IDbyDNA https://idbydna.com/wp-content/uploads/2022/03/M_US-00073_IDbyDNA-Technical-Design-Customer-Facing-Deck_CAP-Approved.pdf
3. Vos T, Allen C, Arora M, et al. Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990–2015: a systematic analysis for the global burden of disease study 2015. *Lancet* 2016; 388:1545–602.
4. GBD 2016 Lower Respiratory Infections Collaborators. Estimates of the global, regional, and national morbidity, mortality, and aetiologies of lower respiratory infections in 195 countries, 1990–2016: a systematic analysis for the global burden of disease study 2016. *Lancet Infect Dis* 2018; 18:1191–210.



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