COUNTY OF SAN LUIS OBISPO
PUBLIC HEALTH LABORATORY

Messenger

OCTOBER 2019

IN THIS ISSUE
New Pneumonia PCR Panel

New Pneumonia PCR Panel Now Available

The County of San Luis Obispo Public Health Laboratory (SLOPHL) has initiated molecular amplification testing for multiple agents of lower respiratory tract illness.

The Pneumonia PCR panel #6620 (PN for short) allows medical providers to make a rapid specific diagnosis of pneumonia by submitting sputum or bronchoalveolar lavage specimens to the lab and receiving results the same day.

Among the 34 targets detected by sensitive polymerase chain reaction (PCR) chemistry of the PN panels are bacteria such as *Streptococcus pneumoniae*, *Legionella pneumophila*, *Moraxella catarrhalis* and *Klebsiella pneumoniae*, viruses such as influenza and RSV, and numerous antibiotic resistance markers.

Certain bacteria are reported in semi-quantitative fashion, with a molecular estimate of bacteria numbers in the specimen, providing additional data to inform clinicians on the probability of a signal representing infection, rather than simple colonization.

Complete array is shown below:

Bacteria reported with numeric values of 10^4, 10^5, 10^6, or 10^7

- *Acinetobacter calcoaceticus-baumannii* complex
- *Klebsiella oxytoca*
- *Serratia marcescens*
- *Enterobacter cloacae* complex
- *Klebsiella pneumoniae* group
- *Staphylococcus aureus*
- *Escherichia coli*
- *Moraxella catarrhalis*
- *Streptococcus agalactiae*
- *Haemophilus influenzae*
- *Proteus* spp.
- *Streptococcus pneumoniae*
- *Klebsiella aerogenes*
- *Pseudomonas aeruginosa*
- *Streptococcus pyogenes*

Atypical bacteria:

- *Chlamydia pneumoniae*

- *Legionella pneumophila*
- *Mycoplasma pneumoniae*

Viruses
- Adenovirus
- Human Rhinovirus/Enterovirus
- Parainfluenza Virus
- Coronavirus
- Influenza A
- Influenza B
- Respiratory Syncytial Virus
- Human Metapneumovirus

Antimicrobial Resistance Genes
- CTX-M
- NDM
- *mecA/C* and MREJ
- IMP
- OXA-48-like
- KPC
- VIM

This extraordinary array of markers provides enhanced diagnostic scope for medical providers while equipping the Public Health Laboratory with a sensitive method to detect pathogens of interest and importance to public health (such as *legionella* and carbapenem-resistant enterobacteria), allowing for the selective culture and isolation of these agents.

Molecular characterization of culture isolates using whole genome sequencing and sophisticated bioinformatic analysis by the laboratory--plus sharing of the information with state and federal partners--promises to shorten the time needed to demonstrate important individual cases and link cases to define an outbreak.

Erratum: The September issue of the*Messenger* reported that the Pneumonia PCR (PN) panel would also detect fungi such as *Aspergillus* and *Cryptococcus*. This is incorrect; the PN panel does not detect fungi.

Questions?

Please contact the Laboratory Director at 805-781-5512 or jbeebe@co.slo.ca.us.
