Precision Microbio

UTI Molecular Lab Report

CLINIC INFORMATION	PA	TIENT INFORMATION	SPECIMEN INFORMATION	
Provider:	Name:	John Jones	Date Collected:	9/7/2019
Dr. Smith	DOB:	11/2/1965	Date Received by Lab:	9/7/2019
	Gender:	Male	Run Date:	9/7/2019
			Date Reported:	9/7/2019
			Source:	URINE
<u>Controls</u>				
Patient Extraction Control 1	PASS	(1) Endogenous control confirms sample collection, DNA/RNA extraction, and assay enzyme activity		
Endogenous Positive Control 1	PASS	(2) Positive control is synthetic inactive pathogen.		
Pathogen Positive Control 2	PASS	(3) Negative Control contains primers, probe, and enzymes with no DNA/RNA template		
Pathogen Negative Control 3	PASS	(4) A "Detected" result indicates the presence of a pathogen (99.99% confidence) above the assay cutoff.		

(4) A "Detected" result indicates the presence of a pathogen (99.99% confidence) above the assay cutoff.
 Assay cutoff is represented by CFU (bacteria), PFU (viruses) or Copy Number (DNA).

Test Performed	Lab Result (Qualitative)	Recommended Treatment
UTI Pathogens		
A. baumannii	Not detected	N/A
C. freundii/braakii	Not detected	N/A
Citrobacter koseri	Not detected	N/A
E. aerogenes	Not detected	N/A
E. cloacae	Not detected	N/A
B. fragilis	Not detected	N/A
Enterococcus spp. (E. faecalis/E.faecium)	Not detected	N/A
E. coli	Not detected	N/A
K. oxytoca	Not detected	N/A
K. pneumoniae	Not detected	N/A
Morganella morganii	Not detected	N/A
Proteus mirabilis	Not detected	N/A
Pseudomonas aeruginosa	Not detected	N/A
S. epidermidis	Not detected	N/A
S. saprophyticus	Not detected	N/A
Staphylococcus aureus	Not detected	N/A
MRSA	Not detected	N/A
S. pyogenes (Group A)	Not detected	N/A
Serratia marcescens	Detected - HIGH	treated with an aminoglycoside plus an antipseudomonal beta-lactam

Technician: David Ray

*This test detects the presence of pathogen and must be evaluated with clinical symptoms to/ diagnose disease. All test established and validated by Laboratory and not FDA approved.

Methodology statement: Real-time PCR assays are designed to detect pathogens with clinical significance and analytical sensitivity and specificity greater than 99%. Limitations: While these assays are very sensitive and specific, theoretically these assays could detect pathogens not listed, resulting in a false positive. In addition, while these assays are very specific, there may be target pathogen sequences with unknown sequence variability which may not be detected, resulting in a false negative result.

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Class and (Gene Name)	Lab Result (Qualitative)	Resistane Gene Targets Identified	Associated Resistances		
ABX Resistance Markers					
Class A Beta-lactamase (CTX-M-Group 1)	Not detected	blaCTX-M-1,3,10, 12,15,22,23,28, blaFEC-1	cephalosporins, penicillins, aztreonam		
Class A Beta-lactamase (blaKPC)	Not detected	KPC-2-8,10,11,13-22,24-33	carbapenems, cephalosporins, penicillins, beta-lactamase inhibitors, aztreonam		
Class B metallo Beta- lactamase (blaNDM)	Not detected	NDM (1-21)	carbapenems, cephalosporins, penicillins, beta-lactamase inhibitors		
vanA Vancomycin	Not detected	vanA	vancomycin		
vanB Vancomycin	Not detected	vanB	vancomycin		
mecA	Not detected	mecA	methicillin, oxacillin		
Sulfonamides	Not detected	sul1, sul2, sul3	sulfadiazine, sulfamethizole, sulfamethoxazole, sulfasalazine, sulfisoxazole		
Fluoroquinones	Not detected	qnrS 1,3,4,5,7,8,9	ciprofloxacin, gemifloxacin, levofloxacin, moxifloxacin, norfloxacin, ofloxacin		
		 qnrB Group 1: qnrB 1, 2, 3, 6, 13, 14, 15, 16, 17, 18, 20, 23, 26, 29, 30, 41, 42, 43, 45, 48, 49, 52, 54, 57, 58, 64, 66, 75, 77, 80 qnrB Group 5: qnrB 5, 10, 19, 36, 40, 46, 47, 50, 56, 59, 61, 62, 67, 			
Trimethoprim	Not detected	dfrA1, dfrA5, dfrA11, dfrA17	Primsol		

Low = <10,000 CFU/ml Medium = 50,000-100,000 CFU/ml High = >100,000 CFU/ml

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