



## **MICROGEN DIAGNOSTICS**

2002 W LOOP 289, SUITE 116 | LUBBOCK, TX 79407 FAX: 1 - 407 - 204 - 1401 | PHONE: 1 - 855 - 208 - 0019

PATIENT	PATIENT NAME	SPECIMEN	URINE	PHYSICIAN	Langford, Timothy
DOB	MM/DD/YYYY	RECEIVED	MM/DD/YYYY	PHONE	(###)###-####
PATIENT ID	PATIENT ID	COMPLETED	MM/DD/YYYY	FAX	(###)###-####
GENDER	Male	ACCESSION	ACCESSION #	COLLECTED	MM/DD/YYYY

**RESISTANCE GENES DETECTED** 

Beta-lactam, Macrolide, Aminoglycoside, Tetracycline

						AN	ITIN	<b>IIC</b> R	OB	IAL	RE	COI	ИМЕ	END	ΑΤΙ	ON			
LEVEL 2 NGS REPORT					bid	cillins/Beta- Augmentin	E	vofloxacin				mycin		n e.g. Suprax			Gen e.g		Amikacin
COMPREHENSIVE IDENTIFICATION <b>NEXT-GEN DNA SEQUENCING</b> RESULTS with PRIOR <b>PCR</b> RESULTS.			Gram Stain	Respiration	Nitrofurantoin e.g. Macrobid	Extended spectrum penicillins/Beta- lactamase inhibitors e.g. Augmentin	ms e.g. Merre	Fluoroquinolones e.g. Levofloxacin	Fosfomycin	Antifolates e.g Bactrim	Quinolones e.g. Cipro	Glycopeptides e.g Vancomycin	Linezolid (Zyvox)	Cephalosporins Third Gen	Lipopeptides e.g. Cubicin	Metronidazole (Flagyl)	Cephalosporins Second ( Cefotan	Colistin	Aminoglycosides e.g.
	DNA copies per mL	NGS	ram	esp															R
BACTERIAL LOAD High	> 107	%	G	Ř	PO	PO		PO		PO	PO	IV	PO	PO	IV	PO	PO		IV
Escherichia coli	NGS	81%	-	FAn	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$									
Aerococcus urinae	NGS	6%	+	Ae	$\checkmark$						$\checkmark$								
Streptococcus anginosus	NGS	4%	+	FAn		$\checkmark$						$\checkmark$	$\checkmark$	$\checkmark$					
Enterococcus faecalis	2.27 x 10⁵	2%	+	FAn	$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$			$\checkmark$	$\checkmark$		$\checkmark$				
Pseudomonas aeruginosa	5.63 x 10 <sup>3</sup>		-	Ae				$\checkmark$											
Prevotella bivia	1.03 x 10 <sup>6</sup>		-	An							$\checkmark$								
Klebsiella pneumoniae	1.17 x 10⁵		-	FAn	V	√	V	√	V	$\checkmark$	$\checkmark$			V			$\checkmark$	V	
FUNGI DETECTED		%					ANT	[  FU	NG	AL I	REC	OM	ME	ND/		DN			
None																			

	LAB REP	ORT KEY	
DNA copies per g:	Gram Stain:	Respiration:	Antimicrobial:
[NGS] = Detected by Next-Gen Seq. Only	[+] = Positive	[Ae] = Aerobic	[v] = Proven to be effective.
Bacterial Load: < 10 <sup>5</sup> = LOW	[-] = Negative	[An] = Anaerobic	[R] = Resistance genes detected.
10 <sup>5</sup> to 10 <sup>7</sup> = MED	[V] = Variable	[Fan] = Facultative anaerobic	[]=Empty Fields denote Unknown.
> 10 <sup>7</sup> = HIGH	[N] = Not Applicable	[Unk] = Unknown	[PO]= Available in Oral formulations.
	[U] = Unknown		[IV] = Intravenous; [TP] = Topical.

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qPCR TESTS FOR BACTERIA			FUNGI	STIs	RESIST	ANCE GENES
Enterococcus faecalis	Klebsiella pneumoniae	Streptococcus agalactiae	None	None	Vancomycin	Methicillin
Pseudomonas aeruginosa	Staphylococcus aureus	Escherichia coli			Beta-lactam	Aminoglycoside
Proteus mirabilis	Mobiluncus curtisii	Mobiluncus mulieris			Tetracycline	Carbapenem
Gardnerella vaginalis	Staphylococcus saprophyticus	Ureaplasma urealyticum			Macrolide	Quinolone
Ureaplasma parvum	Mycoplasma hominis	Prevotella bivia				
Lactobacillus crispatus/acidophilus	Lactobacillus gasseri					

## Next Generation Sequencing Results

MicroGen Diagnostics' comprehensive testing (patent pending) is a relative quantitative universal test for bacteria/fungi. DNA sequencing methods are used to identify the microorganisms' genetic signatures and the estimated percentage of organisms present in the specimen. Virtually all bacteria/fungi are screened for and the most predominant populations are reported.

ANTIBIOTIC CLASSES AND MOST-COMMONLY USED EXAMPLES							
CLASS	GENERIC formulations	CLASS	GENERIC formulations				
Allylamines	Amorolfine; Naftifine	Flucytosine	5-fluorocytosine (Ancobon)				
Aminoglycosides	Gentamycin; Tobramycin	Fluoroquinolones	Norfloxacin(PO); Levofloxacin;				
Aminoglycosides+Aminopenicillins	Ampicillin/Gentamicin	-	Oxafloxacin(PO)				
Aminopenicillins	Amoxicillin; Ampicillin(PO)	Glycopeptides	Vancomycin; Teicoplanin				
Antifolates	TMP/SMX	Imidazoles	Ketoconazole(PO); Clotrimazole;				
Anti-Pseudomonal Penicillins	Piperacillin; Nafcillin		Oxiconazole				
Anti-Pseudomonal penicillins/Beta-	Piperacillin/Tazobactam	Lipopeptides	Daptomycin				
lactamase inhibitors		Macrolides	Erythromycin; Azithromycin(PO)				
Anti-tuberculosis	Isoniazid; Rifampin; Streptomycin	Naphthyridones	Nalidixic acid				
Aztreonam	Azactam	Oxacephems	Moxalactam				
Carbapenems	Cilistatin/Imipenem; Meropenem	Penicillins	Penicillin G; Penicillin V(PO)				
Cephalosporins First Gen	Cephalexin(PO); Cefazolin	Polyenes	Natamycin; Amphotericin B				
Cephalosporins Fourth Gen	Cefepime	Polyenes+Flucytosine	Amphotericin B/5-fluorocytosine				
Cephalosporins Second Gen	Cefprozil; Cefotetan	Quinolones	Ciprofloxacin (PO); Levofloxacin;				
Cephalosporins Third Gen	Cefixime; Cefdinir; Ceftazidime		Moxifloxacin(PO)				
Cephamycins	Cefoxitin	Tetracyclines	Doxycycline(PO); Minocycline				
Echinocandins	Caspofugin; Micafungin	Triazoles	Fluconazole(PO); Terconazole				
Extended spectrum penicillins /	Amoxicillin / Clavulanate(PO);	Triazoles+Echinocandins	Voriconazole/Anidulafungin				
Beta-lactamase inhibitors	Ampicillin / Sulbactam						

## **Complete Antibiotic Analysis**

ANTIBIOTIC DISCLAIMER: Southwest Regional PCR, DBA MicroGen Diagnostics, LLC assumes no liability to patients with respect to the actions of physicians, health care facilities and other users, and is not responsible for any injury, death or damage resulting from the use, misuse or interpretation of information obtained through this antibiotic report. Therapeutic options listed by the program are based upon national antibiotic susceptibility data and antibiograms. Therapy should not be undertaken without a thorough assessment of the indications, contraindications and side effects of any prospective drug or intervention. Furthermore, the database is curated and derived from incidence and prevalence statistics whose accuracy will vary widely for individual diseases and regions of the country. Changes in endemicity, incidence, and drugs of choice may occur. The list of drugs, infectious diseases and even country names will vary with time. Although we endeavor to include such new information on a timely basis, a delay cannot be avoided. For more information please contact us at 855-208-0019.

DISCLAIMER: (i)This test was developed and performance characteristics have been determined by Southwest Regional PCR Laboratory dba MicroGen DX. It has not been cleared or approved by the U.S.Food and Drug Administration(FDA), however, the FDA has determined that such clearance or approval is not necessary. This test is used for clinical purposes. Its use should not be regarded as investigational or for research. This laboratory is certified under the Clinical Laboratory Improvement Amendments of 1988(CLIA 88) as qualified to perform high complexity clinical laboratory testing. (ii) A negative result does not rule out the presence of PCR inhibitors, or DNA extraction inhibitors such as lidocaine, in patients' specimens or microbial DNA concentrations below the level of detection of the assay. (iii) This test is performed pursuant to an agreement with Roche Molecular Systems, Inc. (iv) Relative quantitation of swabs refers to analyte load levels of < 10<sup>5</sup>, 10<sup>5</sup> to 10<sup>7</sup>, and > 10<sup>7</sup> for low, medium and high respectively.

ANTIBIOTIC ANALYSIS

This antimicrobial recommendation sheet is not based on antibiotic sensitivities but is based on antimicrobial reference guides such as the John Hopkins ABX Guide.