ORBITO ASIA
diagnostics

Name	:	XXXXXXXXXX	Referred By	:	XXXXXXXXXX
Id	:	XXXXXXXXXX	Billed	:	XXXXXXXXXX
Age	:	XX	Collected On	:	XXXXXXXXXX
Gender	:	M	Reported	:	XXXXXXXXXX
Phone	:	XXXXXXXXXX	Vid	:	XXXXXXXXXX

Test	Result	Units	Biological Reference Interval
DEPARTMENT OF MOLECULARBIOLOGY - BLOOD (EDTA)			
Orbito Sepsis II (1456) *(Method: RT PCR)*			
Specimen	BLOOD		
PANBACTERIA DNA	*DETECTED*		
Streptococcus Specific gene (DNA)	NOT DETECTED		
Streptococcus pneumoniae (DNA)	NOT DETECTED		
Streptococcus agalactiae (DNA)	NOT DETECTED		
Group A Streptococcus	NOT DETECTED		
Klebsiella pneumoniae (DNA)	NOT DETECTED		
Enterococcus faecium (DNA)	NOT DETECTED		
Enterococcus faecalis (DNA)	NOT DETECTED		
Staphylococcus spp. (DNA)	NOT DETECTED		
Staphylococcus aureus (DNA)	NOT DETECTED		
Pseudomonas aeruginosa (DNA)	NOT DETECTED		
Proteus mirabilis (DNA)	NOT DETECTED		
Chlamydia trachomatis (DNA)	NOT DETECTED		
Ureaplasma (DNA)	NOT DETECTED		
Listeria monocytogenes (DNA)	NOT DETECTED		
Salmonella spp. (DNA)	NOT DETECTED		
Acinetobacter baumannii (DNA)	NOT DETECTED		
Toxoplasma gondii (DNA)	NOT DETECTED		
Enterobacteriaceae	*DETECTED (LOW LEVEL)*		
Serratia marcescens	*DETECTED (LOW LEVEL)*		
Escherichia coli	NOT DETECTED		
Bacteroides fragilis (DNA)	*DETECTED*		
Cytomegalovirus (DNA)	NOT DETECTED		
Beta lactamase CTX-M Group1	NOT DETECTED		
Beta lactamase SHV	NOT DETECTED		
Beta lactamase TEM	NOT DETECTED		
Beta lactamase CTX-M Group9	NOT DETECTED		
OXA 1	NOT DETECTED		

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Test	Result	Units	Biological Reference Interval
oxa 48	NOT DETECTED		
KPC	NOT DETECTED		
VIM	NOT DETECTED		
NDM -1	NOT DETECTED		
Vancomycin A/B	NOT APPLICABLE		
pan CMY+DHA-1	NOT DETECTED		
Methicillin Resistance gene	NOT APPLICABLE		
PANFUNGAL (DNA)	NOT DETECTED		
Candida spp. (C.albicans and C. glabrata)	NOT DETECTED		
Aspergillus spp. (DNA)	NOT DETECTED		

INTERPRETATION

- ***DETECTED:** Indicates organism detected and identified is likely causing symptoms of disease. Co-Infection by more than one organism is not uncommon. However it does not distinguish between a viable or replicating organism and the presence of a nonviable organism or nucleic acid, nor do they exclude the potential for co-infection by organisms not contained within the panel.*
- ***NOT DETECTED:** Indicates organisms tested in the panel were not detected and the symptoms may be caused by a condition other than an infection or a pathogen that was not tested for. Also a negative result maybe in concentrations below the level of detection by this assay or organisms is not included in this panel.*
- *Streptococcus agalactiae: Streptococcus agalactiae [group B Streptococcus (GBS)], an opportunistic Gram-positive human pathogen, is a major causative agent of pneumonia, sepsis, and meningitis in neonates and a serious cause of disease in parturient women and immunocompromised and elderly people. S. agalactiae is also a frequent cause of bone and joint infections. GBS is found in the intestine and urogenital tracts of adult women and these women's newborn babies may develop infection during exposure to the bacterium before birth or during the neonatal period.*
- *Streptococcus pneumoniae : Streptococcus pneumoniae remains the leading cause of bacterial meningitis. It is the commonest cause of meningitis between the ages of 1 and 23 months, and above the age of 19 .The nasopharynx is the primary site of colonization, and the vast majority of pneumococcal isolates are encapsulated. In the majority of these people, the bacteria are not growing or active and will not cause illness. However, anyone who carries these bacteria can transmit it to others, potentially causing any of the illnesses or pneumococcal meningitis.*

Klebsiella pneumoniae: Klebsiella pneumoniae is a gram-negative, non-motile, encapsulated, lactose-fermenting, facultative anaerobic, rod-shaped bacterium. Klebsiella bacteria are mostly spread through person-to-person contact. Less commonly,they are spread by contamination in the environment.

Salmonella: Salmonella infection (salmonellosis) is a common bacterial disease that affects the intestinal tract. Humans become infected most frequently through contaminated water or food. Most people develop diarrhea, fever and stomach (abdominal) cramps within 8 to 72 hours after exposure.

Staphylococcus aureus: Staphylococcus aureus is a facultative anaerobic Gram-positive coccus, and it is frequently found as a commensal organism in the respiratory tract and on the skin. These bacteria are spread by having direct contact with an infected person, by using a contaminated object, or by inhaling infected droplets dispersed by sneezing or coughing. This versatile bacterium can invade many tissues and then causes a wide spectrum of infections (cutaneous abscesses, endocarditis, septic shock, etc.).

Streptococcus pyogenes: Streptococcus pyogenes also known as Group A streptococcus (GAS) is a leading cause of pharyngitis in children and adolescents. Clinicians should use clinical and epidemiological findings to determine the

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- *likelihood of GAS pharyngitis. S. pyogenes is a gram-positive, catalase-negative, oxidase negative, β- hemolytic streptococci. Streptococcus pyogenes is a major human-specific bacterial pathogen that causes a wide array of manifestations ranging from mild localized infections to life-threatening invasive infections. Ineffective treatment of S. pyogenes infections can result in the postinfectious sequela acute rheumatic fever and post-streptococcal glomerulonephritis.*
- *Enterococci: Enterococci are gram-positive, facultative anaerobic organisms. Enterococcus faecalis and E. faecium cause a variety of infections, including endocarditis, urinary tract infections, prostatitis, intra-abdominal infection, cellulitis, and wound infection as well as concurrent bacteremia.*
- *Pseudomonas aeruginosa: Pseudomonas aeruginosa is a Gram-negative, rod-shaped, asporogenous, and monoflagellated bacterium. It has a pearlescent appearance and grape-like or tortilla-like odour. P. aeruginosa has become an emerging opportunistic pathogen in the clinics. Recent epidemiological studies demonstrate its nosocomial pathogen status, particularly those strains with increased antibiotic resistance.*
- *Proteus mirabilis: Proteus mirabilis, a Gram-negative rod-shaped bacterium, is well-known for its urease production and distinctive ability to differentiate into elongated swarm cells and characteristic bull's-eye pattern of motility on agar plates. P. mirabilis belongs to the class Gammaproteobacteria, and has long been recognized as a member of the order Enterobacteriales, family Enterobacteriaceae. Proteus mirabilis is the main pathogen causing complicated urinary tract infections (UTIs), especially catheter-associated urinary tract infections.*
- *Chlamydia trachomatisis: Chlamydia trachomatisis an intracellular human pathogen and shows a broad spectrum of clinical manifestations, including urethritis, cervicitis and pelvic inflammatory disease (PID). Intense mucosal inflammation is characterized by erythema, swelling and mucous secretions caused by mucopurulent cervicitis in women and Nongonococcal urethritis (NGU) in men.*
- *Ureaplasma: Ureaplasma species are sometimes detected in the commensal bacteria of the lower genital tract. Some studies demonstrated that the association of Ureaplasma species with NGU depends on the detected species and thatU. urealiticum is an etiologic agent of NGU, unlike U. parvum. In addition, it is reported that U. urealyticum can cause infections in the lower genital tract and is a pathogen agent of urethritis in males.*
- *Acinetobacter baumannii: Acinetobacter is a gram-negative coccobacillus that has emerged from an organism of questionable pathogenicity to an infectious agent of importance to hospitals worldwide. The organism has the ability to accumulate diverse mechanisms of resistance, leading to the emergence of strains that are resistant to all commercially available antibiotics. Acinetobacter baumannii is one of the ESCAPE organisms, a group of clinically important, predominantly health care-associated organisms that have the potential for substantial antimicrobial resistance.*
- *Toxoplasma gondii : Toxoplasma gondii is a protozoan parasite that is the causative agent of toxoplasmosis, an infection with high prevalence worldwide. Most of the infected individuals are either asymptomatic or have mild symptoms, but T.gondii can cause severe neurologic damage and even death of the fetus when acquired during pregnancy. It is also a serious condition in immunodeficient patients.*
- *Enterobacteriaceae are a large family of Gram-negative bacteria that includes a number of bacteria such as Klebsiella, Enterobacter, Citrobacter, Salmonella, Escherichia coli, Shigella, Proteus, Serratia and other species. These pathogens are present in the human intestinal tract and are a normal part of the gut flora. They are a common cause of urinary tract infections (UTIs), and some species can also cause diarrhoea. These pathogens can spread to the bloodstream resulting in life-threatening complications. Enterobacteriaceae, like all bacteria, can develop resistance to antibiotics, including the carbapenem group of antibiotics, which are sometimes referred to as the last line of antibiotic treatment against resistant organisms.*
- *Serratia marcescens: Serratia marcescens is an opportunistic, gram negative, nosocomial pathogen which belongs to family, Enterobacteriaceae. It is associated with urinary and respiratory infections, endocarditis, osteomyelitis, septicemia, wound infections, eye infections, and meningitis. Transmission is by direct contact.*
- *Escherichia coli (E. coli): Escherichia coli (E. coli) bacteria normally live in the intestines of people and animals. MostE. coli are harmless and actually are an important part of a healthy human intestinal tract. However, some E. coli are pathogenic, meaning they can cause illness, either diarrhea or illness outside of the intestinal tract. The types of E. coli that can cause diarrhea can be transmitted through contaminated water or food, or through contact with animals or persons.*
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- *Cytomegalovirus (CMV): Cytomegalovirus (CMV) is a wide-spread virus, with manifestations ranging from asymptomatic to severe end-organ dysfunction in immunocompromised patients with congenital CMV disease. Human cytomegalovirus is a member of the viral family known as herpes viruses, Herpesviridae, or human herpesvirus-5 (HHV-5). Human cytomegalovirus infections commonly are associated with the salivary glands. CMV infection may be asymptomatic in healthy people, but they can be life-threatening in an immunocompromised patient.*

- *Aspergillus fumigatus: Aspergillus fumigatus is a species of mold that is commonly found in the environment, especially in soil and decaying organic matter. It can cause a range of infections, particularly in people with weakened immune systems, such as those with HIV/AIDS, cancer, or undergoing organ transplantation. Aspergillus fumigatus infections can affect different parts of the body, including the lungs, sinuses, and brain. In the lungs, it can cause a condition called invasive pulmonary aspergillosis, which can be life-threatening. In the sinuses, it can cause chronic sinusitis, which can be difficult to treat. In the brain, it can cause a rare but serious condition called cerebral aspergillosis.*

- *Aspergillus flavus: Aspergillus flavus infections can affect different parts of the body, including the lungs, sinuses, and skin. In the lungs, it can cause a condition called invasive pulmonary aspergillosis, which can be life-threatening. In the sinuses, it can cause chronic sinusitis, which can be difficult to treat. In the skin, it can cause a fungal infection called onychomycosis, which affects the nails.*

- *Aspergillus niger: Aspergillus niger infections can affect different parts of the body, including the lungs, sinuses, and skin. In the lungs, it can cause a condition called invasive pulmonary aspergillosis, which can be life-threatening. In the sinuses, it can cause chronic sinusitis, which can be difficult to treat. In the skin, it can cause a fungal infection called onychomycosis, which affects the nails.*

- *Candida ablicans : Candidiasis is a fungal infection caused by yeasts from the genus Candida, most commonly Candida albicans. Candida yeasts are normally present in small amounts on the skin and in the mouth, digestive tract, and genital area, but under certain conditions, they can grow and cause infections.*

AMR Gene	*Applicable Bacteria*
van A/B	*Enterococcus faecalis, Enterococcus faecium*
mec A/C	*Staphylococcus epidermidis, Staphylococcus lugdunensis*
Mec A/C and MREJ (MRSA)	*Staphylococcus aureus*
OXA 1	*Escherichia coli, Klebsiella pneumoniae group, Salmonella spp.*
CTX-M,IMP, KPC, NDM, VIM	*Acinetobacter -baumannii complex, Enterobacterales, Escherichia coli, , Klebsiella pneumoniae group, Pseudomonas aeruginosa, Proteus spp., Salmonella spp., Serratia marcescens.*
OXA-48 like	*Enterobacterales, Escherichia coli, Klebsiella pneumoniae group, Proteus spp., Salmonella spp., Serratia marcescens*

--- End of the Report ---

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