

Lab ID
Patient ID PAT-100009
Ext ID 25243-0001

Sex: Male • 45yrs • 01-Jan-80
123 Home Street, Test Suburb Vic 3125

RECEIVED
31-Aug-25

Specimen type - Stool

27-Aug-25

MACROSCOPIC EXAMINATION		OCCULT BLOOD	
TEST	RESULT	TEST	INTERPRETATION
Stool Colour	Green	Occult Blood	POSITIVE
Stool Form	Unformed		
Mucous	PRESENT		

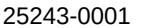
GIT FUNCTIONAL MARKERS						
TEST	RESULT	H/L		REFERENCE	UNITS	
Calprotectin	78.0	H		(<100.0)	ug/g	
b-Glucuronidase	6850	H		(368-6266)	U/g	
Pancreatic Elastase 1	410			(>200)	ug/g	
pH	6.2	L		(6.3-7.7)		
Secretory IgA	350	L		(200-1300)	ng/mL	
Steatocrit	18.0	H		(<10.0)	%	
Transglutaminase IgA	122.0	H		(<100.0)	ug/g	
Zonulin	122	H		(<120)	ng/mL	

Short Chain Fatty Acids						
Test	Result	H/L		Reference	Units	
Short Chain Fatty Acids, Beneficial	12.2	L		(>13.6)	umol/g	
Acetate	56.00			(44.00-72.00)	%	
Butyrate	24.00			(10.00-33.00)	%	
Propionate	13.00			(0.00-32.00)	%	
Valerate	7.00			(0.50-7.00)	%	

Ascaris species, Roundworm
Blastocystis hominis
Giardia intestinalis

- Campylobacter species
- Desulfovibrio piger
- Fusobacterium species
- Helicobacter pylori
- Klebsiella pneumoniae complex
- Methanobrevibacter smithii
- Pseudomonas aeruginosa
- Rotavirus A

Candida albicans
Candida parapsilosis



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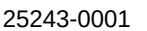
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TEST	RESULT	H/L		REFERENCE	UNITS
Blastocystis hominis	1.0	H		(<1.00)	x10^5 org/g
Cryptosporidium species	<DL			(<1.00)	x10^5 org/g
Dientamoeba fragilis	<DL			(<1.00)	x10^5 org/g
Entamoeba histolytica	<DL			(<1.00)	x10^5 org/g
Giardia intestinalis	1.0	H		(<1.00)	x10^5 org/g
Cyclospora cayetanensis	<DL			(<1.00)	x10^5 org/g
Enterocytozoon species	<DL			(<1.00)	x10^5 org/g

TEST	RESULT
Ancylostoma species Hookworm	Not Detected
Ascaris species, Roundworm	DETECTED
Enterobius vermicularis, Pinworm	Not Detected
Hymenolepis spp, Tapeworm	Not Detected
Necator americanus, Hookworm	Not Detected
Strongyloides spp, Roundworm	Not Detected
Taenia species, Tapeworm	Not Detected
Trichuris trichiura, Whipworm	Not Detected

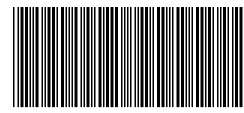
TEST	RESULT
Adenovirus 40/41	Not Detected
Astrovirus (hAstro)	Not Detected
Norovirus GI/II	Not Detected
Rotavirus A	DETECTED
Sapovirus (I,II,IV,V)	Not Detected



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Actinobacteria Phylum Bacteroidetes Phylum Euryarchaeota Phylum Firmicutes Phylum Proteobacteria Phylum Verrucomicrobia Phylum



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Dr Test Doctor (Test Doctor) Test Clinic. 123 Test Street, Test Suburb Victoria 3125

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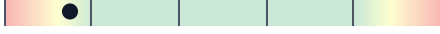
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MYCOLOGY

[illegible]

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TEST	RESULT	H/L		REFERENCE	UNITS
Akkermansia muciniphila	118.00	H		(1.00-50.00)	x10^7 CFU/g
TOTAL BIFIDOBACTERIA	21.00			(<2000.00)	x10^6 CFU/g
Bifidobacterium adolescentis	3.00			(<1000.00)	x10^6 CFU/g
Bifidobacterium bifidum	9.00			(<1000.00)	x10^6 CFU/g
Bifidobacterium breve	4.00			(<1000.00)	x10^6 CFU/g
Bifidobacterium longum	5.00			(<1000.00)	x10^6 CFU/g
Clostridium species	120.00	H		(5.00-50.00)	x10^7 CFU/g
Enterococcus species	56.50			(<2000.00)	x10^3 CFU/g
Escherichia species	5385.00	H		(3.70-3800.00)	x10^4 CFU/g
Faecalibacterium prausnitzii	890.00			(100.00-3500.00)	x10^6 CFU/g
TOTAL LACTOBACILLI	11.00			(<3000.00)	x10^3 CFU/g
Lactobacillus acidophilus	4.00			(<500.00)	x10^3 CFU/g
Lactobacillus casei	<DL			(<500.00)	x10^3 CFU/g
Lactobacillus delbrueckii	<DL			(<500.00)	x10^3 CFU/g
Lactobacillus plantarum	<DL			(<500.00)	x10^3 CFU/g
Lactobacillus rhamnosus	7.00			(<500.00)	x10^3 CFU/g
Lactobacillus salivarius	<DL			(<500.00)	x10^3 CFU/g
Oxalobacter formigenes	5.69			(<50.00)	x10^6 CFU/g

● Actinobacteria Phylum ● Bacteroidetes Phylum ● Euryarchaeota Phylum ● Firmicutes Phylum ● Proteobacteria Phylum ● Verrucomicrobia Phylum

Test Patient

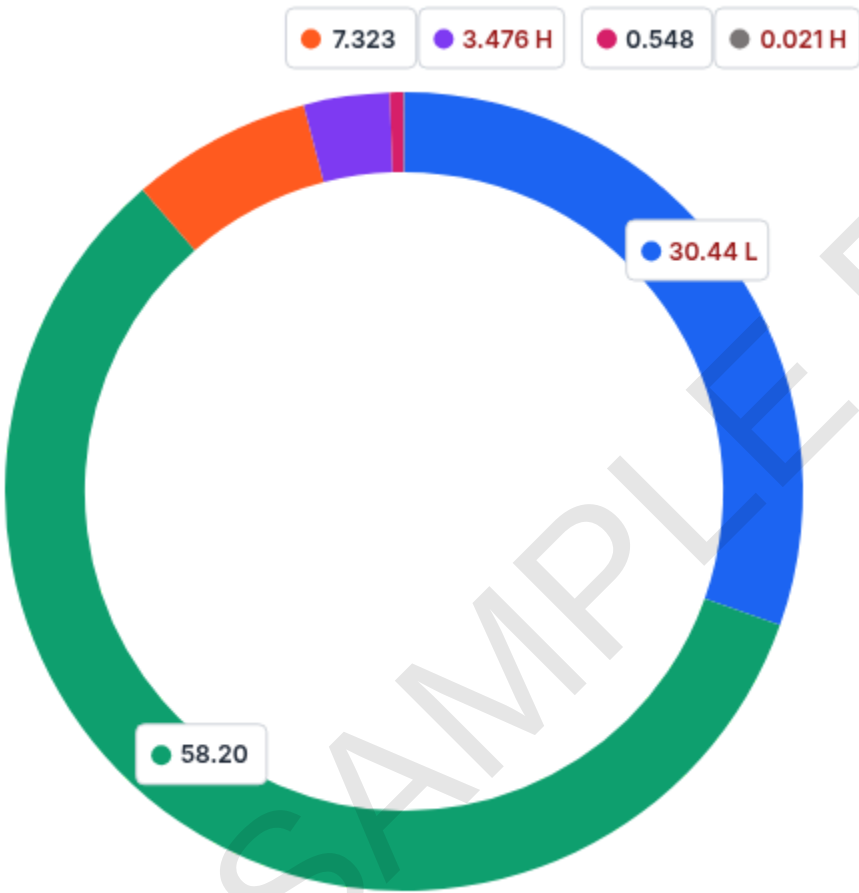
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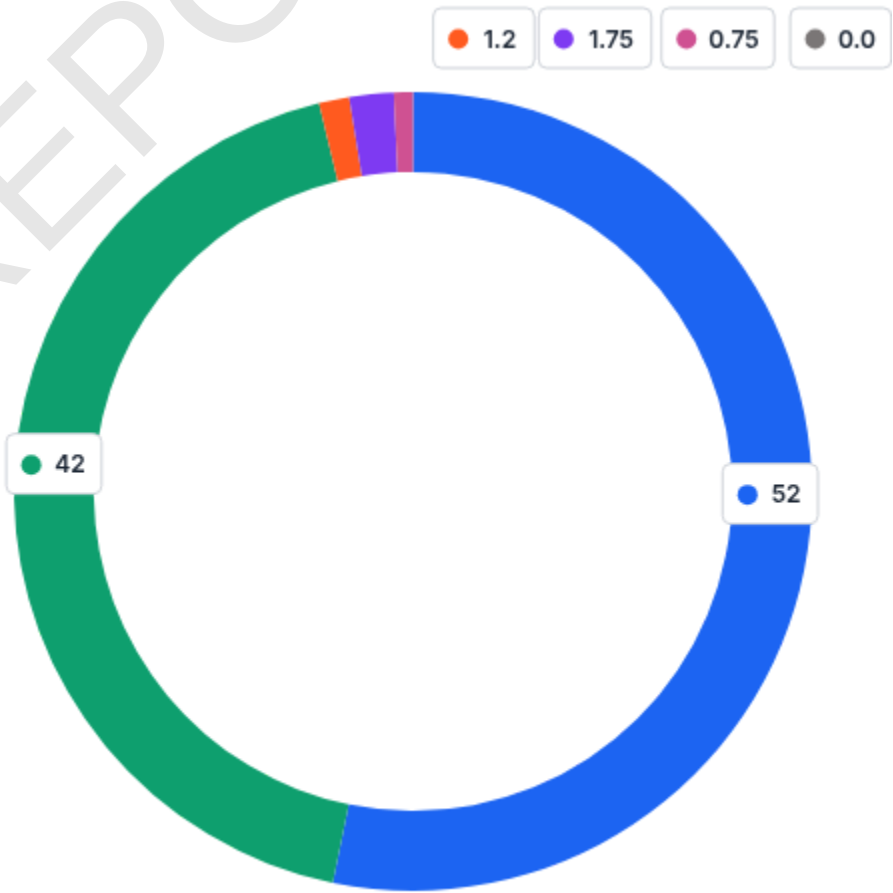
COMMENSAL RELATIVE ABUNDANCE

TEST	RESULT	H/L		REFERENCE	UNITS
Actinobacteria Phylum	0.548			(0.001-1.500)	%
Bacteroidetes Phylum	30.44	L		(40.00-87.00)	%
Euryarchaeota Phylum	0.021	H		(0.000-0.010)	%
Firmicutes Phylum	58.20			(10.00-60.00)	%
Proteobacteria Phylum	7.323			(0.250-5.000)	%
Verrucomicrobia Phylum	3.476	H		(0.000-2.400)	%

Your Phyla



Healthy Phyla



MICROBIOTA RATIO

TEST	RESULT	H/L		REFERENCE	UNITS
Firmicutes/Bacteroidetes Ratio	1.91	H	●	(<2.00)	ratio

Actinobacteria Phylum Bacteroidetes Phylum Euryarchaeota Phylum Firmicutes Phylum Proteobacteria Phylum Verrucomicrobia Phylum

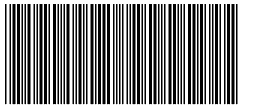
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Organism	Growth	H/L	Ref Range	Classification
Citrobacter freundii complex	3+		(<4+)	Non-Pathogen
Klebsiella pneumoniae complex	4+	H	(<4+)	Possible Pathogen
Klebsiella species	1+		(<4+)	Non-Pathogen
Pseudomonas aeruginosa	4+	H	(<4+)	Possible Pathogen

Antimicrobials	<i>Citrobacter freundii</i> Susceptible	<i>Klebsiella pneumoniae</i> Susceptible	<i>Pseudomonas aeruginosa</i> Susceptible
Ampicillin	R	S	NT
Augmentin	S	R	NT
Ciprofloxacin	S	S	S
Gentamicin	S	S	NT
Meropenem	S	S	S
Norfloxacin	S	S	NT
Trimethoprim/Sulpha	S	S	NT

R Resistant
 S Susceptible
 I Intermediate
 NT Not Tested

Disclaimer: The antibiotics listed have been reported as requested by the treating healthcare practitioner. Clinical necessity for antibiotic use may vary, and prescription should be based on the professional judgment of the healthcare practitioner and patient case. Information regarding natural inhibitors is provided for reference purposes only and is not intended to replace medical advice or treatment.



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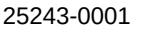
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Citrobacter freundii complex	Low Inhibition	High Inhibition
Berberine	Low	High
Black Walnut	Low	High
Caprylic Acid	Low	High
Citrus Seed (GSE)	Low	High
Coptis	Low	High
Garlic	Low	High
Golden Seal	Low	High
Oregano	Low	High

Klebsiella pneumoniae complex	Low Inhibition	High Inhibition
Berberine	Low	High
Black Walnut	Low	High
Caprylic Acid	Low	High
Citrus Seed (GSE)	Low	High
Coptis	Low	High
Garlic	Low	High
Golden Seal	Low	High
Oregano	Low	High

Klebsiella species	Low Inhibition	High Inhibition
Berberine	Low	High
Black Walnut	Low	High
Caprylic Acid	Low	High
Citrus Seed (GSE)	Low	High
Coptis	Low	High
Garlic	Low	High
Golden Seal	Low	High
Oregano	Low	High

Pseudomonas aeruginosa	Low Inhibition	High Inhibition
Berberine		
Black Walnut		
Caprylic Acid		
Citrus Seed (GSE)		
Coptis		
Garlic		
Golden Seal		
Oregano		

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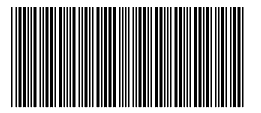
Organism	Growth	H/L	Ref Range	Classification
Candida albicans	2+	H	(<2+)	Possible Pathogen
Candida parapsilosis	1+		(<2+)	Non-Pathogen
Geotrichum species	NEG		(<4+)	No Growth

R Resistant **S** Susceptible **I** Intermediate **NT** Not Tested

Candida albicans	Low Inhibition	High Inhibition
Nystatin	[Green bar from 0 to 90]	
Berberine	[Yellow bar from 0 to 45]	
Black Walnut	[Red bar from 0 to 20]	
Caprylic Acid	[Green bar from 0 to 90]	
Citrus Seed (GSE)	[Green bar from 0 to 85]	
Coptis	[Red bar from 0 to 20]	
Garlic	[Yellow bar from 0 to 50]	
Golden Seal	[Red bar from 0 to 10]	
Oregano	[Red bar from 0 to 25]	

Candida parapsilosis	Low Inhibition	High Inhibition
Nystatin		
Berberine		
Black Walnut		
Caprylic Acid		
Citrus Seed (GSE)		
Coptis		
Garlic		
Golden Seal		
Oregano		

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Macroscopy Comment

An UNFORMED stool specimen classified as Type 5 or 6 on the Bristol Stool Chart suggests rapid colonic transit, leading to inadequate water reabsorption and a looser stool consistency. This may result from mild digestive disturbances, dietary changes (such as high fibre or fat intake), stress, or gut microbiota imbalances (dysbiosis). Type 6, in particular, may indicate early-stage diarrhea, commonly linked to irritable bowel syndrome with Diarrhea (IBS-D), food intolerances (e.g., lactose, gluten, FODMAPs), gastrointestinal infections, or inflammatory responses. Clinical recommendations include identifying dietary triggers, ensuring adequate but not excessive fibre intake, and considering probiotic therapy (especially strains like *Lactobacillus* and *Bifidobacterium*) to help restore microbial balance. Persistent symptoms may warrant further evaluation for malabsorption syndromes (e.g., celiac disease, pancreatic insufficiency), small intestinal bacterial overgrowth (SIBO), or inflammatory markers to assess for underlying pathology.

- Investigate and treat possible underlying cause.
- Assess other Gut markers (e.g. calprotectin, M2PK, etc).

Faecal occult blood has been detected in this specimen. The presence of blood in the stool may be the result of several causes besides colorectal bleeding, including hemorrhoids or gastrointestinal infection. Results should be considered with other clinical information available to the physician. Please note: A positive result indicates that the sample likely contains a human haemoglobin concentration >20ng/ml (Limit of detection). Review this result with other inflammation markers such as calprotectin.

Short Chain Fatty Acids Comment

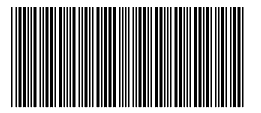
Low Short chain Fatty Acid, Beneficial levels may be indicated by reduced beneficial flora such as Lactobacillus, Bifidobacterium, Escherichia and other normal bacterial gut flora levels. Suspect increased susceptibility to pathogenic bacterial infection, increased toxic enzyme exposure, increased risk for mucosal barrier defects and immune dysregulation.

GIT Markers Comment

A faecal pancreatic elastase level >200 ug/g indicates normal exocrine pancreatic function.

Consider Calcium-D-glucarate which may assist with lowering B-glucuronidase levels. It is also suggested to introduce a low-calorie/vegetarian diet for 4 weeks which may also be beneficial with lowering faecal B-glucuronidase levels. Additionally, one human study has suggested that consuming glucomannan can reduce fecal beta-glucuronidase activity. Glucomannan is a type of prebiotic fiber found in konjac root which is commonly used to make low calorie pasta and noodles.

ACCREDITATION SCOPE: Please note that the above test is currently not under the laboratory's scope of accreditation.



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- o Supplement hydrochloride, digestive enzymes or other digestive aids
- o Investigate underlying causes
- o Investigate food sensitivities and allergies
- o Remove potential irritants
- o Review markers such as pancreatic elastase 1 and calprotectin

pH LOW:

A lower-than-normal stool pH suggests increased fermentation of carbohydrates, often due to gut dysbiosis, excessive short-chain fatty acid (SCFA) production, or malabsorption of sugars. This is commonly seen in lactose intolerance, SIBO, high-fibre diets, or imbalanced gut flora. Excessive acidity may contribute to gut irritation and barrier dysfunction.

Parasites/Worms Comment

ELEVATED BLASTOCYSTIS HOMINIS LEVEL:

Blastocystis hominis may be the cause of persistent, mild diarrhoea. Although considered endemic, it may also be associated with recent overseas travel. Detection suggests the ingestion of contaminated material or contact with farm animals. Continued symptoms may require further testing for the detection of bacterial, viral and/or parasitic co-pathogens.

TREATMENT SUGGESTIONS: Mild symptoms are self-limiting. If treatment is warranted, metronidazole 400 - 750mg (child 12-17mg/kg up to 750mg) three times daily for at least 10 days. Lower dosages are usually associated with treatment failure. Paromomycin has also shown to be effective as an alternative treatment option. Rule out allergy to above medication before prescribing/taking. Consult ID specialist if patient is showing severe symptoms or immunocompromised.

ELEVATED GIARDIA LEVEL:

Giardia intestinalis is a protozoan parasite occurring worldwide, especially common in areas with poor sanitary conditions and insufficient water. Clinical presentation ranges from asymptomatic carriage to acute and chronic giardiasis (including sudden onset of diarrhoea, malaise, steatorrhea, abdominal cramps, bloating, flatulence, nausea, weight loss, vomiting and fever). Treatment of patients with asymptomatic passage of giardia is not necessary.

TREATMENT SUGGESTIONS: For symptomatic patients, treatments include; Tinidazole (child: 50mg/kg up to) 2g orally, as one dose. or Metronidazole (child: 30mg/kg up to) 2g orally, daily for 3 days. or If the above treatment fails, a longer course of metronidazole is sometimes required. Metronidazole (child: 10mg/kg up to) 400mg orally, 8-hourly for 7 days. Rule out allergy to above medication before prescribing/taking. Consult ID specialist if patient is showing severe symptoms or immunocompromised.

PLEASE NOTE: Giardia detection has been confirmed through a secondary PCR test. Giardia is a Notifiable Disease in ACT, WA, TAS and NSW. If Applicable: This result has been notified to the Department of Health.

NOTIFICATION BY THE REFERRING PRACTITIONER may also be required under the Public Health and Wellbeing Act 2009.

ASCARIS SPECIES (Roundworm) DETECTED:

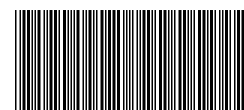
Ascaris species (including *A. lumbricoides* and *A. suum*) are the most common parasitic roundworm in humans. Hosts may be asymptomatic, causing only malnutrition and growth retardation or present with severe gastrointestinal (abdominal pain, nausea, vomiting, bloating or diarrhoea) or lung symptoms (fever, cough or wheezing). Adult worms can also migrate causing cholecystitis, cholangitis, pancreatitis, small bowel obstruction or appendicitis. Infection occurs via ingestion of eggs, usually found in stool-contaminated soil.

TREATMENT SUGGESTIONS:

Effective treatments include Albendazole or Mebendazole single oral dose. Rule out allergy to above medication before prescribing/taking. Can repeat dose after 4-6 weeks. Whole family to be treated simultaneously. Hand hygiene and washing bedding /clothes in hot water cycle is recommended to prevent recurrence. A repeat test should be suggested post therapy.

Viral Pathogens Comment

ROTAVIRUS DETECTED:



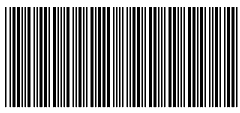
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TREATMENT: Triple therapy: PPI, clarithromycin and amoxicillin or metronidazole, 7-14 days. If penicillin allergic: PPI, clarithromycin and clindamycin or metronidazole, 7-14 days. If the patient is asymptomatic consider other alternative therapies including:

- o Black currant seed oil and fish oil
- o Lactobacillus Probiotics
- o Vitamin C
- o Mastic gum.

Blood Group Antigen Binding Adhesion (BabA) promotes DNA breakage in host cell, Improves *H. pylori* adherence ("stickiness") to epithelial cells and can promote other virulence factors, especially CagA.

Treatment: More aggressive treatment may be warranted; consider the use of adhesion inhibitions.

CANDIDA ALBICANS ELEVATED: PHYLUM: Ascomycota

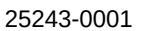
TREATMENT SUGGESTIONS: Dietary: Reduce intake of sugars, starches, and fungi. Candida infections may be treated if warranted with antifungal medications such as nystatin, clotrimazole, amphotericin B or miconazole. Probiotic Lactobacillus treatment may also be effective. Rule out allergy to above medication before prescribing/taking.

Candida parapsilosis is a yeast species that is part of the normal human microbiota but can become opportunistic under certain conditions. Overgrowth of *C. parapsilosis* in the gut can disrupt the microbial balance and lead to symptoms such as bloating, gas, and diarrhea. In immunocompromised individuals, *C. parapsilosis* is a potential pathogen and has been linked to invasive infections, though gastrointestinal symptoms are more common in cases of mild dysbiosis. When elevated guided susceptibility testing should be considered.

BIFIDOBACTERIUM ADOLESCENTIS LOW: PHYLUM: Actinobacteria

TREATMENT SUGGESTIONS: Consider a probiotic supplement containing *B. adolescentis* and consuming prebiotic-rich foods like garlic, onions, and whole grains. Increase dietary fibre from fruits, vegetables, and legumes, and incorporate fermented foods such as yogurt and kefir.

DESCRIPTION: Bifidobacterium breve is a Gram-positive, anaerobic bacterium that is commonly found in the human gastrointestinal tract, particularly in the intestines of infants. B. breve is known for its ability to metabolise various carbohydrates, including human milk oligosaccharides, which is essential for the development of a healthy gut flora in newborns. Studies demonstrate that B. breve exhibits



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TREATMENT SUGGESTIONS: Treatment may involve the use of probiotics, treatment of any intestinal infections and dietary modification (reduce consumption of different fibres, such as inulin, oligofructose, arabinoxylan, guar gum and starch).

DESCRIPTION: Akkermansia muciniphila is a Gram-negative, strictly anaerobic, non-motile bacterium, often considered a human intestinal symbiont. There is growing evidence to suggest that the prevalence of this bacteria is associated with intestinal homeostasis, immunity, and a healthy gut. However, elevated colonisation may be associated with intestinal inflammation.

TREATMENT SUGGESTIONS: Treatment may involve the use of probiotics, treatment of any intestinal infections and dietary modification.

EURYARCHAEOTA (PHYLUM) ELEVATED:

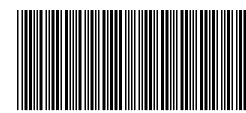
TREATMENT SUGGESTIONS: If treatment is warranted, Statins may be used to inhibit methanogenic archaea growth without affecting bacterial numbers. Symptoms may also be treated with dietary modification (low FODMAP) and probiotics. A lactulose SIBO test may be considered to assess Methanogen levels.

DESCRIPTION: Verrucomicrobia is a phylum of Gram-negative bacteria that contains only a few described species, found in the environment and gastrointestinal tract. Akkermansia spp. is involved in gut membrane integrity and may be increased with polyphenols and prebiotics. Verrucomicrobia aid in glucose homeostasis of the human gut and have anti-inflammatory properties that further aid in intestinal health.

TREATMENT SUGGESTIONS: Probiotic use and dietary modification use may assist in the rebalancing of microbial flora.

Elevated Firmicutes/Bacteroidetes ratio is frequently cited in the scientific literature as a hallmark of obesity, metabolic syndrome, irritable bowel syndrome or diabetes risk. The ratio may also be used to evaluate commensal microbial balance. The calculation provided in this report is made by the sum of abundance of Firmicutes tested divided by the sum of abundance Bacteroidetes. Reference ranges are based off internal cohort studies.

TREATMENT SUGGESTIONS: Balance commensal bacteria using the 4R Protocol which is located at the end of this test report. When firmicutes are high, consider using Bifidobacterium probiotics and Saccharomyces boulardii primarily. Lactobacillus spp. and Bacillus spp. (found in probiotics) can elevate firmicutes. It is further suggested to optimize the patient diet. A lower fat diet may assist to normalize the F/B ratio.



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fungemia, especially in hospital settings, where it can cause catheter-related bloodstream infections. In the gut microbiome, its role is generally minor, but its ability to form biofilms and resist certain antifungal agents makes it a concern when overgrowth occurs. Monitoring *C. parapsilosis* levels in the gut is important for understanding its potential contribution to infection, particularly in vulnerable populations.

Methodology

Automated Chemistry/Immunochemistry, Chemiluminescence Immunoassay (CLIA), Enzyme-Linked Immunosorbent Assay (ELISA), Microscopy, Fluorescence Enzyme Immunoassay (FEIA), pH Electrode, Gas Chromatography-MS (GC/MS), Quantitative PCR (qPCR), Polymerase Chain Reaction (PCR), MALDI-TOF (Matrix-Assisted Laser Desorption/Ionization Time of Flight)