



TEST PATIENT

Sample Test Name
 Sex : F
 Date Collected : 00-00-0000
 111 TEST ROAD TEST SUBURB
LAB ID: 00000000 UR#:0000000

TEST PHYSICIAN

DR JOHN DOE
 111 CLINIC STREET
 CLINIC SUBURB VIC 3000

P: 1300 688 522
 E: info@nutripath.com.au
 A: PO Box 442 Ashburton VIC 3142

2200 GI Effects™ Comprehensive Profile – Stool

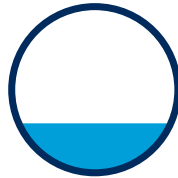
Interpretation At-a-Glance

INFECTION

Blastocystis hominis ▲



INFLAMMATION



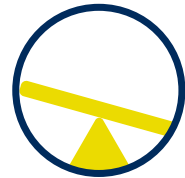
INSUFFICIENCY

Total Fecal Fats ▲

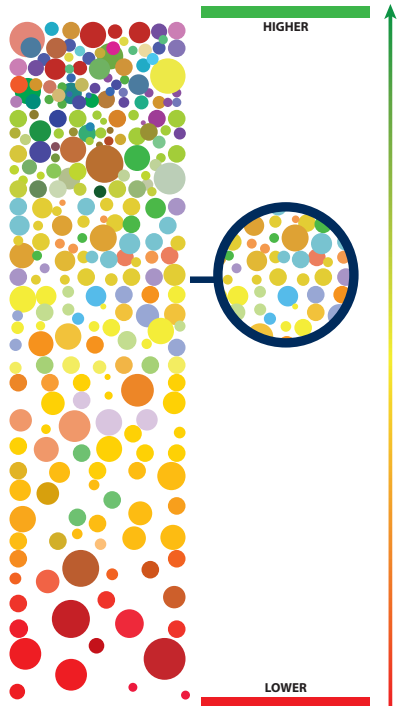


IMBALANCE

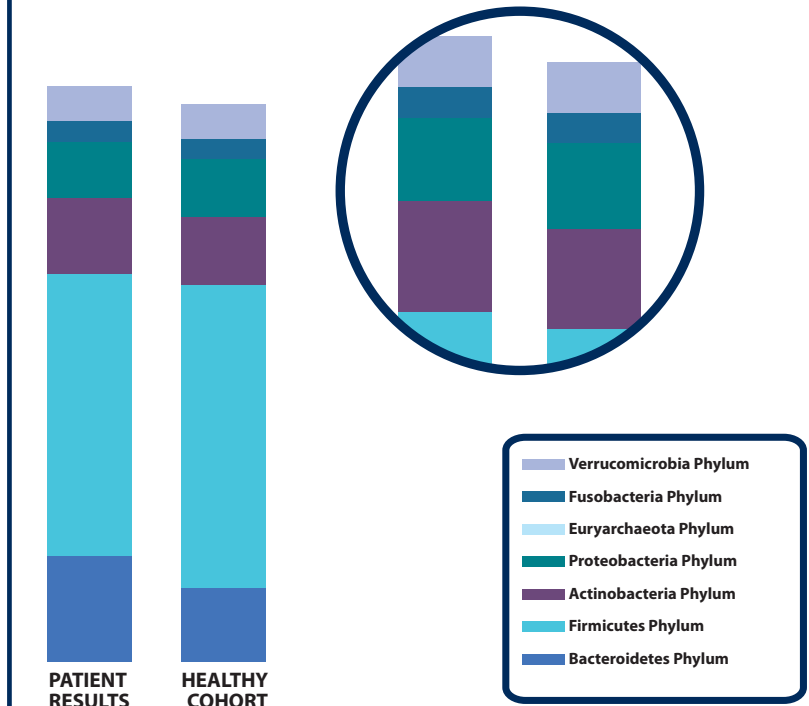
PP Bacteria ▲
 PP Yeast/Fungi ▲
 n-Butyrate ▼
 Total SCFA ▼



DIVERSITY ASSOCIATION



RELATIVE ABUNDANCE





2200 GI Effects™ Comprehensive Profile – Stool

Methodology: GC/MS, Automated Chemistry, EIA

Results	QUINTILE DISTRIBUTION					Reference Range
	1st	2nd	3rd	4th	5th	

Digestion and Absorption

Test	Result	Quintile Distribution	Reference Range
Pancreatic Elastase 1†◆	606	100 200	>200 mcg/g
Products of Protein Breakdown (Total) (Valerate+Isobutyrate+Isovalerate)	2.8		1.8 - 9.9 micromol/g
Fecal Fat (Total*)	32.2		3.2 - 38.6 mg/g
Triglycerides	2.0		0.3 - 2.8 mg/g
Long Chain Fatty Acids	21.7		1.2 - 29.1 mg/g
Cholesterol	1.6		0.4 - 4.8 mg/g
Phospholipids	6.9		0.2 - 6.9 mg/g

Inflammation and Immunology

Test	Result	Quintile Distribution	Reference Range
Calprotectin†◆	19.7	50 120	<= 50 mcg/g
Eosinophil Protein X (EPX)†	1.4	2 7	<= 7.0 mcg/g
Fecal sIgA	622		<1019 mcg/g

Gastrointestinal Microbiome

Metabolic

Test	Result	Quintile Distribution	Reference Range
SCFA (Total*) (Acetate, n-Butyrate, Propionate)	25.6		> = 23.3 micromol/g
n-Butyrate Concentration	4.0		> = 3.6 micromol/g
n-Butyrate %	15.4		11.8 - 33.3 %
Acetate%	25.6		48.1 - 69.2 %
Propionate%	16.2		11.9 - 29.7%
Beta-Glucuronidase	1514		368 - 6266 U/g

*Total Value equals the sum of all measurable parts.

†These results are not represented by quintile values.

Tests were developed and their performance characteristics determined by Genova Diagnostics. Unless otherwise noted with ◆, the assays have not been cleared or approved by the U.S. Food and Drug Administration.



Methodology: DNA by PCR

Gastrointestinal Microbiome

	Result CFU/g stool	QUINTILE DISTRIBUTION					Reference Range CFU/g stool
		1st	2nd	3rd	4th	5th	
Commensal Bacteria (PCR)							
Bacteroidetes Phylum							
<i>Bacteroides-Prevotella</i> group	4.3E7						7.3E6 - 2.3E9
<i>Bacteroides vulgatus</i>	1.2E8						<4.6E9
<i>Barnesiella</i> spp.	<DL						<3.3E8
<i>Odoribacter</i> spp.	5.6E7						<2.0E8
<i>Prevotella</i> spp.	8.6E5						2.4E5 - 3.0E7
Firmicutes Phylum							
<i>Anaerotruncus colihominis</i>	6.4E6						<6.1E7
<i>Butyrivibrio crossotus</i>	1.5E5						7.8E3 - 8.6E5
<i>Clostridium</i> spp.	2.7E9						3.1E8 - 3.2E10
<i>Coprococcus eutactus</i>	2.7E7						<2.0E8
<i>Faecalibacterium prausnitzii</i>	8.2E8						1.2E5 - 7.1E7
<i>Lactobacillus</i> spp.	6.9E8						1.5E7 - 7.6E9
<i>Pseudoflavonifractor</i> spp.	2.9E7						1.2E5 - 2.1E8
<i>Roseburia</i> spp.	2.8E9						1.7E8 - 4.1E9
<i>Ruminococcus</i> spp.	8.9E8						1.2E8 - 6.9E11
<i>Veillonella</i> spp.	1.4E6						2.6E5 - 1.0E8
Actinobacteria Phylum							
<i>Bifidobacterium</i> spp.	<DL						<1.5E10
<i>Bifidobacterium longum</i>	<DL						<1.3E9
<i>Collinsella aerofaciens</i>	1.4E8						1.5E7 - 3.7E9
Proteobacteria Phylum							
<i>Desulfovibrio piger</i>	<DL						<2.8E7
<i>Escherichia coli</i>	6.0E7						5.5E4 - 7.9E8
<i>Oxalobacter formigenes</i>	3.9E6						<2.8E7
Euryarchaeota Phylum							
<i>Methanobrevibacter smithii</i>	<DL						<1.9E8
Fusobacteria Phylum							
<i>Fusobacterium</i> spp.	1.9E4						<4.8E5
Verrucomicrobia Phylum							
<i>Akkermansia muciniphila</i>	1.8E7						>1.7E6
Firmicutes/Bacteroidetes Ratio							
<i>Firmicutes/Bacteroidetes</i> (F/B Ratio)	53						21 - 620

The gray-shaded portion of a quintile reporting bar represents the proportion of the reference population with results below detection limit.

Commensal results and reference range values are displayed in a computer version of scientific notation, where the capital letter "E" indicates the exponent value (e.g., 7.3E6 equates to 7.3 x 10⁶ or 7,300,000).

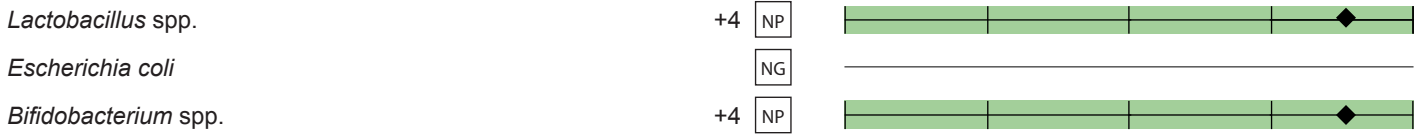
The Firmicutes/Bacteroidetes ratio (F/B Ratio) is estimated by utilizing the lowest and highest values of the reference range for individual organisms when patient results are reported as <DL or >UL.



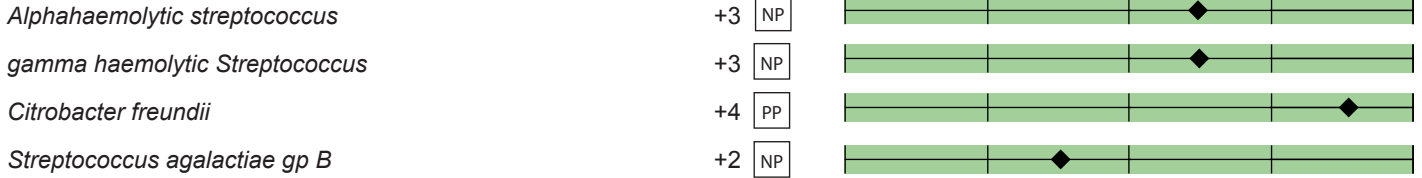
Methodology: culture/MALDI-TOF MS, Automated and Manual Biochemical Methods, Vitek 2® System Microbial identification and Antibiotic susceptibility

Gastrointestinal Microbiome

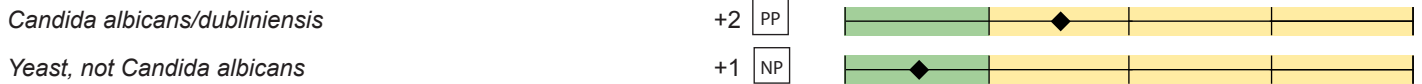
Bacteriology (Culture)



Additional Bacteria



Mycology (Culture)



Human microflora is influenced by environmental factors and the competitive ecosystem of the organisms in the GI tract. Pathogenic significance should be based upon clinical symptoms.

Microbiology Legend			
NG	NP	PP	P
No Growth	Non-Pathogen	Potential Pathogen	Pathogen

Additional bacteria

Non-pathogen: Organisms that fall under this category are those that constitute normal, commensal flora, or have not been recognized as etiological agents of disease.

Potential Pathogen: Organisms that fall under this category are considered potential or opportunistic pathogens when present in heavy growth.

Pathogen: The organisms that fall under this category are well-recognized pathogens in clinical literature that have a clearly recognized mechanism of pathogenicity and are considered significant regardless of the quantity that appears in culture.



Methodology: Direct Microscopic Examination, EIA

Parasitology

Microscopic Exam Results:

Blastocystis hominis: Many

Parasitology

Parasite Recovery: Literature suggests that >90% of enteric parasitic infections may be detected in a sample from a single stool collection. Increased sensitivity results from the collection of additional specimens on separate days.

Lab Comments

SENSI'S: All yeast, add'l bacteria

Parasitology EIA Tests:

	In Range	Out of Range
<i>Cryptosporidium</i> ◆	Negative	
<i>Giardia lamblia</i> ◆	Negative	
<i>Entamoeba histolytica</i> ◆	Negative	



Bacteria Sensitivity

Prescriptive Agents

	S	I	R
Citrobacter freundii	S	I	R
Ampicillin			R
Amox./Clavulanic Acid			R
Cephalothin			R
Ciprofloxacin	S		
Tetracycline	S		
Trimethoprim/Sulfa	S		

Prescriptive Agents:

Microbial testing has been performed in vitro to determine antibiotic sensitivity and resistance at standard dosages. Prudent use of antimicrobials requires knowledge of appropriate blood or tissue levels of those agents. Antibiotics that appear in the “S” (susceptible) column are more effective at inhibiting the growth of this organism. Antibiotics that appear in the “I” (intermediate) column are partially effective at inhibiting the growth of this organism. Antibiotics that appear in the “R” (resistant) column allow continued growth of the organism in vitro and are usually less effective clinically. Inappropriate use of antibacterials often results in the emergence of resistance.

Natural Agents

	LOW INHIBITION	HIGH INHIBITION
Citrobacter freundii		
Berberine		
Oregano		
Plant tannins		
Uva Ursi		

Natural Agents:

In this assay, “inhibition” is defined as the reduction level on organism growth as a direct result of inhibition by a natural substance. The level of inhibition is an indicator of how effective the natural substance was at limiting the growth of an organism in an in vitro environment. High Inhibition indicates a greater ability by the natural substance to limit growth, while Low Inhibition a lesser ability to limit growth. In accordance with laboratory guidelines for reporting sensitivities, results for Nystatin are now being reported with natural antifungals in this category.



Mycology Sensitivity

Azole Antifungals

	S	I	R
Candida albicans/dubliniensis	S		R
Fluconazole	=0.25		
Caspofungin		=0.25	
Voriconazole	=0.25		

Non-absorbed Antifungals

	LOW INHIBITION	HIGH INHIBITION
Candida albicans/dubliniensis		
Nystatin		

Natural Agents

	LOW INHIBITION	HIGH INHIBITION
Candida albicans/dubliniensis		
Berberine		
Caprylic Acid		
Garlic		
Undecylenic Acid		
Plant tannins		
Uva Ursi		

Prescriptive Agents:

Microbial testing has been performed in vitro to determine antibiotic sensitivity and resistance at standard dosages. Prudent use of antimicrobials requires knowledge of appropriate blood or tissue levels of those agents. Antibiotics that appear in the "S" (susceptible) column are more effective at inhibiting the growth of this organism. Antibiotics that appear in the "I" (intermediate) column are partially effective at inhibiting the growth of this organism. Antibiotics that appear in the "R" (resistant) column allow continued growth of the organism in vitro and are usually less effective clinically. Inappropriate use of antibacterials often results in the emergence of resistance.

Natural Agents:

In this assay, "inhibition" is defined as the reduction level on organism growth as a direct result of inhibition by a natural substance. The level of inhibition is an indicator of how effective the natural substance was at limiting the growth of an organism in an in vitro environment. High Inhibition indicates a greater ability by the natural substance to limit growth, while Low Inhibition a lesser ability to limit growth. In accordance with laboratory guidelines for reporting sensitivities, results for Nystatin are now being reported with natural antifungals in this category.