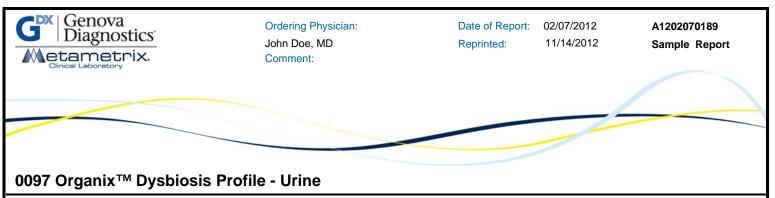
Genova Diagnostics Diagnostics Dinical Laboretory 3425 Corporate Way • Duluth GA 30096 U 770.446.5483 • Fax: 770.441.2237 www.gdx.net/www.metametrix.com Ordering Physician: John Doe, MD 1234 Main St. Anywhere, GA 30096	JSA		Accession #: Reference #: Patient: Date of Birth: Age: Sex: Reprinted: Comment:	A1202070189 Sample Report 02/05/1962 50 Female 11/14/2012	Date Collected Date Received Date of Report Telephone: Fax:	: 02/07/2012
Organix Urine Organic Acids						
0097 Organix™ Dysbiosis Profile - Urine						
Methodology: LC/Tandem	Mass Spectroscopy	, Colc	rimetric			
Ranges are for ages 13 and over	Results mcg/mg creatinine		1st 2nd	Quintile Ranking d 3rd	4th 5th	95% Reference Range
Bacterial - general						
1. Benzoate	<dl*< td=""><td></td><td>- </td><td></td><td>0.6</td><td><= 9.3</td></dl*<>		-		0.6	<= 9.3
2. Hippurate	1075	н	+		548	<= 1070
3. Phenylacetate	0.09		+ +		0.11	<= 0.18
4. Phenylpropionate	<dl*< td=""><td></td><td>-11</td><td>· · ·</td><td></td><td><= 0.06</td></dl*<>		-11	· · ·		<= 0.06
5. p-Hydroxybenzoate	1.0		+		1.1	<= 1.8
6. p-Hydroxyphenylacetate	35	н	+ +		19	<= 34
7. Indican	19		 		64	<= 90
8. Tricarballylate	0.75	н	+		0.73	<= 1.41
L. acidophilus / general bact	erial					
9. D-Lactate	1.3		+ +		1.9	<= 4.3
Clostridial species						
10. 3,4-Dihydroxyphenylpropionate	e <dl*< td=""><td></td><td>-11</td><td></td><td></td><td><= 0.05</td></dl*<>		-11			<= 0.05
Yeast / Fungal						
 11. D-Arabinitol <i>Creatinine</i> = 175 mg/dL <dl =="" detection="" less="" li="" limit<="" than=""> </dl>	71	н	+ +	- + - +	36	<= 73
Georgia Lab Lic. Code #067-007CLIA ID# 11D0255349TestingNew York Clinical Lab PFI #4578Florida Clinical Lab Lic. #800008124	Performed by Genova	Diagno	ostics-Metametrix, Inc. 34 Page 1	125 Corporate Way, Dul		ctors: Robert M. David, PhD David L. Scott, Jr. PhD



Methodology: LC/Tandem Mass Spectroscopy, Colorimetric

All of the compounds reported are produced by bacteria, yeast, fungi and protozoa that may colonize or grow in the small or large intestines. Dysbiosis involves overgrowth of one or more species leading to increased production of these compounds that are absorbed and excreted in urine.

Bacterial and Protozoal Markers

Compounds 1-8 are elevated in the presence of unusual bacteria or protozoal overgrowth. This type of dysbiosis is accompanied by abnormally high populations of bacteria not found in high numbers in normal intestinal flora. p-Hydroxyphenylacetate is elevated in Giardiasis as well as in bacterial overgrowth. When carbohydrate malabsorption is present, the otherwise favorable genus Lactobacillus, or other D-Lactate producing strains, can overgrow and produce toxic amounts of D-lactate. Clostridia are the apparent major producers of dihydroxyphenylpropionate.

Yeast and Fungal Markers

Current evidence suggests that yeast and fungi are the predominant source of compound 11. D-Arabinitol is a sensitive and specific marker of invasive candidiasis.

Clinical Significance

The most common symptoms of intestinal dysbiosis are bloating, abdominal cramping, and diarrhea. Toxic neuromuscular and hormonal interference may be present and nutritional deficiencies are more likely when these markers are elevated. Lactose intolerance, increased gut permeability, food intolerances, fatigue, and immune suppression frequently accompany intestinal dysbiosis.

Yeast overgrowth causes multiple problems with the integrity of the intestinal mucosa. A variety of symptoms, including behavioral disorders, autism in children, and mental/emotional disorders in adults, have been associated with overgrowth of these microbes.

Treatments for dysbiosis may involve removal of the offending organisms with antimicrobials. Dietary changes and food supplements are used for replacement of beneficial bacteria, restoration of digestive function and mucosal repair. High fiber, low sugar diet and increased water intake are important to maintain healthy intestinal ecology. A repeat test should show improvement within 90 days.