

# Optimal Skin Health

## It All Starts with the GI-MAP®

Find underlying causes of acne, rosacea, eczema, and other skin conditions. Results provide insight into the gut-skin connection so practitioners can help patients heal from the inside out.



### DNA Stool Analysis by qPCR

**Intestinal barrier permeability (aka "Leaky Gut")** drives systemic and local skin inflammation and can be a root cause of clinical skin conditions.<sup>9</sup> Furthermore, barrier disruption in one mucosal area can translate to other mucosal areas enforcing the concept that "leaky gut" can drive "leaky skin."

#### The Following GI-MAP Pattern Reflects Gut Barrier Permeability

<b>Intestinal Permeability</b>	Any Pathogen	High; Detected
	<i>Lactobacillus</i> spp.	Low
	<i>Akkermansia muciniphila</i>	Low; <dl
<b>Low Butyrate/SCFA Production</b>	<i>Candida albicans</i> Anti-gliadin IgA Zonulin	High
	<i>Faecalibacterium prausnitzii</i>	Low; <dl
<b>Poor Mucosal Health</b>	<i>Roseburia</i> spp. <i>Firmicutes</i> phylum	Low
	<i>Bifidobacterium</i> spp. <i>Escherichia</i> spp. <i>Lactobacillus</i> spp.	Low
	<i>Akkermansia muciniphila</i>	Low; <dl
	<i>Bacteroidetes</i> phylum	Low

# GI-MAP<sup>®</sup> Patterns Associated with Skin Manifestations

**HIGH LEVELS** of the following microbial targets on GI-MAP are associated with clinical skin manifestations.

<b>Pan-gastritis and Hypochlorhydria</b>	<i>Helicobacter pylori</i>	<i>Helicobacter pylori</i> is associated with many skin disorders including, but not limited to, chronic urticaria, rosacea, lichen planus, atopic dermatitis, psoriasis, pemphigus vulgaris, vitiligo, are more. <sup>1</sup> Most patients chronically infected with <i>H. pylori</i> manifest pangastritis with hypochlorhydria <sup>2</sup> which sets the stage for further opportunistic overgrowth.
<b>Mast-Cell Activation</b>	<i>Staphylococcus aureus</i>	<i>Staphylococcal</i> super antigens (SAG's) play role in the pathogenesis of inflammatory skin diseases. <sup>4</sup> Severity of psoriasis is significantly correlated to enterotoxin production of the isolated <i>S. aureus</i> strains in the gut. <sup>3</sup> On the skin, <i>S. aureus</i> has been dubbed a marker of eczema severity, and higher fecal concentrations have been found in AD patient. <sup>5,6</sup> The organism is highly pH sensitive (grows at a higher pH ~7-7.5) so elevated levels are often seen with digestive insufficiency/hypochlorhydria.
<b>Protozoa</b>	<i>Blastocystis hominis</i>	<i>B. hominis</i> is a non-pathogenic parasite that inhabits the colon. It is a very common coinfection with <i>H. pylori</i> and has strong correlations with skin manifestations such as urticaria (hives), rash/itching, eczema, psoriasis, cutaneous lesions, clinical allergies, in addition to IBS symptoms. <sup>7</sup>
<b>Fungal Overgrowth</b>	<i>Candida</i> spp.	<i>Candidiasis</i> on the skin is well documented with skin symptoms and thrush. Skin is a primary route of sensitization for gut <i>Candida</i> overgrowth through the gut-skin axis.
<b>Excess Histamine Production</b>	<i>Morganella</i> spp. <i>Pseudomonas</i> spp. <i>Pseudomonas aeruginosa</i> <i>Citrobacter freundii</i> <i>Klebsiella</i> spp. <i>Klebsiella pneumoniae</i> <i>Proteus</i> spp. <i>Proteus mirabilis</i>	Histamine intolerance has been associated with a wide variety of skin manifestations including pruritus, flush, urticaria, eczema, and swelling. Excesses histamine production through the gut microbiome can be gauged by identifying high levels of histamine-producing species. <sup>8</sup>

**Make the Gut-Skin Connection Today!**



GI-MAP-SKIN | 082522

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