What’s In Your Probiotic?

A probiotic is only as good as its bacterial components. Organized by genus, species and strains, bacteria do battle in the body with different strains exerting discrete benefits for different parts of the body. *Lactobacilli* and *Bifidobacterium*, are the most common genus and an effective probiotic should contain both. At Innate Response, we have also incorporated *Streptococcus* and *Lactococcus* genuses into our formulas.

Our probiotic primer is your guide to the quality components within our Flora product line. We’ve provided source, characteristic, gastrointestinal performance and health benefits for each strain. Behold the power of the probiotic.

**Strain Name: Lactobacillus acidophilus**

**Characteristics**
- Lactic acid producing bacteria. Common inhabitant of human intestinal tract, mouth & vagina. Also found in certain fermented products (i.e.; kefir, yogurt, sauerkraut)
- Gram-positive, non-spore forming, homofermentative, rod-shaped
- Long-history of safe human consumption with no acquired antibiotic resistance

**Gastrointestinal Performance**
- In vitro studies have shown this strain to be resistant to constituents in gastric juices (acid, bile, pepsin, pancreatin) found in the stomach and duodenum, therefore remaining viable in the intestinal tract
- Has demonstrated good adhesion to human epithelial cells -- thus better able to modulate the immune response and protects against pathogenic microbes colonizing*

**Health Benefits**
- In vitro and in vivo studies strongly support its health-enhancing probiotic properties*
- Supports modulation of immune function (ie; improved specific immune response and regulation)*
- Supports digestion of milk sugar lactose thus reducing issues associated with intolerance*

**Strain Name: Lactobacillus brevis**

**Characteristics**
- Gram positive, rod-shaped lactic acid bacteria
- Frequently found in fermented foods such as sauerkraut and kimchi

**Gastrointestinal Performance**
- Has been shown to survive in the intestinal tract of humans*

**Health Benefits**
- Supports healthy functioning of the human digestive tract*
- Supports healthy immune function*
- Supports healthy elimination*
**Strain Name: Lactobacillus bulgaricus**

**Characteristics**
- Gram positive, rod-shaped, non-spore forming bacteria
- Found in yogurt and other naturally fermented foods
- Feeds on lactose to produce lactic acid

**Gastrointestinal Performance**
- In vitro studies show that it produces bacteriocins that kill undesirable bacteria (1.)*
- Shown to survive low pH of digestive tract*

**Health Benefits**
- Supports immune health*
- Healthy elimination*
- Supports digestion of dairy products*

**Strain Name: Lactobacillus casei**

**Characteristics**
- Common inhabitant of human intestinal tract -- also naturally found in fermented vegetables, meats, cheeses and milk
- Strain originally isolated from a dairy source
- Gram-positive, non-spore forming, homofermentative bacilli
- Studies show a long history of safe human consumption with no acquired antibiotic resistance*

**Gastrointestinal Performance**
- In vitro studies have shown this strain to be very resistant to low pH conditions (acid) in the stomach and survives the presence of bile at concentrations found in duodenum.*
- Has demonstrated excellent adhesion to human epithelial cells*
- Produces acids, hydrogen peroxide, bacteriocins and other antibiotic-like agents not beneficial to pathogenic microbes*

**Health Benefits**
- Competes for adhesion sites with pathogens, stimulates immunoglobulin A (IgA)*

**Strain Name: Lactobacillus plantarum**

**Characteristics**
- Frequently found in lactic acid, fermented, plant-based foods (i.e.; sauerkraut, kimchi)
- Strains used as starter cultures for certain foods (i.e.; sourdough bread, meats, wine)
- Strain originally isolated from plant material
- Gram-positive, non-spore forming, homofermentative bacilli
- Studies show a long history of safe human consumption with no acquired antibiotic resistance*
Gastrointestinal Performance

- In vitro studies have shown this strain to be extremely resistant to low pH conditions (acid) in the stomach and survives the presence of bile at concentrations found in duodenum.*
- Has demonstrated excellent adhesion to human epithelial cells*
- Produces acids, hydrogen peroxide, bacteriocins and other antibiotic-like agents not beneficial to pathogenic microbes
- Exhibits strong oxalate-degrading activity*

Health Benefits

- May improve specific immune response*
- Beneficial modulation of immune function*
- Competes for adhesion sites with pathogens, stimulates immunoglobulin A (IgA)*

Strain Name: Lactobacillus rhamnosus

Characteristics

- One of the most common species in breast-fed infants. Also found in cheese.
- Rod-shaped, gram-positive, anaerobic and non-spore forming microorganism.
- Long-history of safe human consumption with no acquired antibiotic resistance*

Gastrointestinal Performance

- In vitro studies have shown this strain to be resistant to low pH conditions (acid) in the stomach and bile in duodenum, therefore it remains viable in the intestinal tract*
- Demonstrated excellent adhesion to human epithelial cells in in vitro studies*
- Produces L(+)-lactic acid, a normal intermediate produced from the metabolism of carbohydrates and amino acids

Health Benefits

- Shown to exhibit a high tolerance of acid and intestinal bile as well as strong adhesion to intestinal cell lines*
- Promotes healthy immune function*
- Shown to help maintain healthy function of the intestinal tract*

Strain Name: Lactobacillus salivarius

Characteristics

- Long history of safe use -- common inhabitant of human intestinal tract and urogenital surfaces
- Widely used in probiotic formulations for humans and animals
- Gram-positive, non-spore forming, homofermentative bacilli
- Studies show a long history of safe human consumption with no acquired antibiotic resistance*

Gastrointestinal Performance

- In vitro studies have shown this strain to be resistant to low pH conditions (acid) in the stomach and survives the presence of bile in duodenum.*
- Has demonstrated excellent adhesion to human epithelial cells*

Health Benefits

- Able to modulate the immune response*
Strain Name: Bifidobacterium bifidum

Characteristics
- Naturally present in human breast milk, gut, mouth, vagina
- Lactic acid bacteria

Health Benefits
- Support healthy digestion*
- Vaginal health support*
- Supports assimilation of calcium*
- Supports immune health*

Strain Name: Bifidobacterium longum

Characteristics
- First discovered in 1899 -- present in food supply for decades with no harmful activities associated with humans.
- Most abundant species present in the intestines of breast-fed infants -- thought to be the primary reason for infant's greater resistance to disease
- Gram-positive, non-spore forming, anaerobic, pleomorphic bacilli
- Studies show a long history of safe human consumption with no acquired antibiotic resistance
- Dominant resident of intestinal microflora

Gastrointestinal Performance
- In vitro studies shown to be tolerant to low pH (acidic) conditions, and survives the presence of bile at concentrations present in the duodenum.*
- Has demonstrated good adhesion to human epithelial cells*

Health Benefits
- Well suited to intestinal survival*
- Supports healthy balance of intestinal microbiota*

Strain Name: Bifidobacterium infantis

Gastrointestinal Performance
- Acid resisting

Health Benefits
- Supports resistance to toxic microbes and pathogenic bacteria*
- Maintenance of healthy immune function*
- Healthy bowel function*
- Useful to maintain skin health*
- Protection against detrimental effects of wheat gliadin*
Strain Name: *Streptococcus thermophilus*

**Characteristics**
- Widely used as starter culture for production of yogurt and soft cheeses
- Gram-positive, non-motile, non-spore forming and homofermentative
- Considered safe and suitable for human consumption -- U.S. FDA has given this species GRAS status

**Gastrointestinal Performance**
- In vitro studies have shown this strain to be tolerant to low pH conditions (acid) in the stomach and bile in duodenum*
- Has demonstrated excellent adhesion to human epithelial cells*

**Health Benefits**
- May influence immune regulation*

Strain Name: *Bifidobacterium lactis* **

**Characteristics**
- First discovered in 1899 -- present in food supply for decades with no harmful activities associated with humans
- Most abundant species present in the intestines of breast-fed infants -- thought to be the primary reason for infant's greater resistance to disease
- Gram-positive, non-spore forming, anaerobic, pleomorphic bacilli
- Studies show a long history of safe human consumption with no acquired antibiotic resistance
- Dominant resident of intestinal microflora

**Gastrointestinal Performance**
- In vitro studies show to be extremely resistant to low pH (acidic) conditions, and survives the presence of bile at concentrations present in the duodenum.*
- Has demonstrated good adhesion to human epithelial cells*

**Health Benefits**
- Shown (in animal model) to support balance the intestinal mucosal immune response*
- May improve specific immune response*
- May influence immune regulation*

Strain Name: *Lactobacillus gasseri* (NEW)

**Characteristics**
- Naturally present in human breast milk

**Health Benefits**
- Supports healthy metabolism*
- Supports healthy blood sugar levels*
Strain Name: *Lactococcus lactis* (NEW)

*Characteristics*
- Lactic acid bacterium - converts milk sugar to lactic acid
- Gram positive, non-spore forming

*Health Benefits*
- Supports immune health*
- Protects from harmful bacteria*
- Synthesizes B Vitamins*

* These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.