



## WHO WE ARE

### About Us

Evolve Biosystems is a spin-out company from the Foods For Health Institute at the University of California, Davis.

The company builds on more than a decade of research into the infant microbiome and its intimate interaction with breastmilk components.

All products are made using Good Manufacturing Practice and tested for quality and safety.



*NEXT GENERATION PROBIOTICS*

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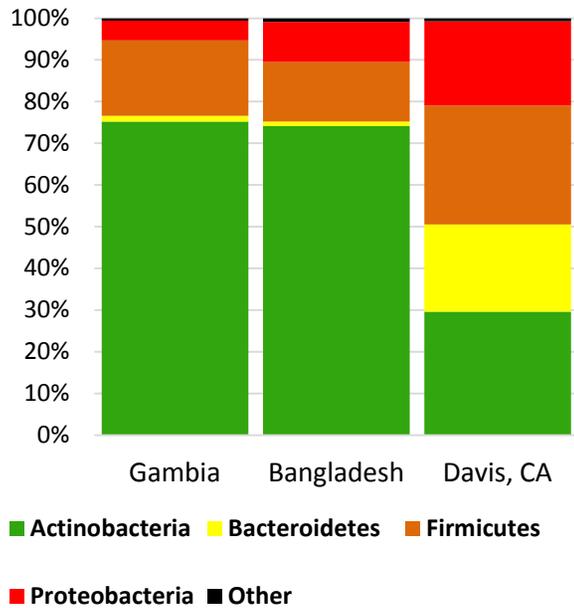
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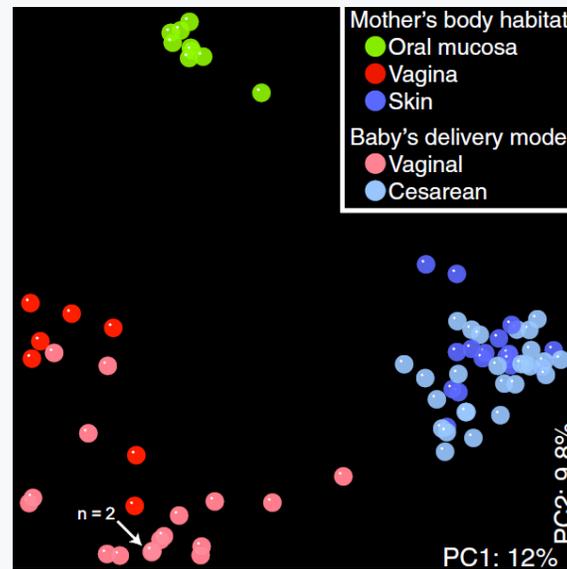
## IMPRINT

*BRINGING TO MARKET THE NEXT GENERATION OF PROBIOTIC-BASED BIOTHERAPEUTICS TO ESTABLISH, RESTORE, AND MAINTAIN A HEALTHY HUMAN MICROBIOME ACROSS A RANGE OF UNMET CLINICAL NEEDS*



### WHAT IS THE MICROBIOME OF INFANTS?

Infants are born with no bacteria in their gut. When babies are vaginally delivered and breastfed they have a “healthy microbiome” that is typically dominated by one genus – *Bifidobacterium* and a subspecies of *Bifidobacterium*--*B. infantis* – in the first 6 months of life. The level of *B. infantis* is **low** in C-section babies and not reflective of a “healthy microbiome”. The microbiome of C-section delivered infants resembles the microbiome of mother’s skin and not vaginally-derived bacteria.



Dominguez-Bello, et al., 2010

### HOW DOES BREAST MILK SHAPE INFANTS’ GUT MICROBIOME?

Complex human milk oligosaccharides (HMOs) represent 10% of nutrients in breast milk, but are indigestible by the infant. *B. infantis* is able to metabolize the HMOs and the HMOs provide a selective growth environment for *B. infantis*—leading to a healthy microbiome. Breastfed babies have a different “healthy” microbiome and far fewer diseases (e.g. otitis media, lower respiratory tract, and GI illnesses) than babies fed infant formula.

A “Healthy microbiome” for babies requires **both** the *B. infantis* and a supply of oligosaccharides that provide a selectable growth medium for the *B. infantis*.

### WHAT IS IMPRINT?

**IMPRINT** is our NEXT GENERATION PROBIOTIC that contains an activated strain of *B. infantis*. The proprietary process of activating *B. infantis* prior to freeze-drying stimulates *B. infantis* to selectively consume and perform protective functions in the breastfed infant’s gut. The IMPRINT product is currently being tested in C-section delivered infants enrolled in the IMPRINT (Infant Microbiome and Probiotic Intake) Study at UC Davis.

The US is last in healthy baby microbiomes with lower levels of *B. infantis* and higher levels of pro-inflammatory bacteria than infants born in developing countries. Potential reasons for the US baby microbiome include: use of infant formula, over-use of antibiotics, increased hygiene, use of anti-microbial agents in skin care products, sterile obstetric suites and the high rate of C-section deliveries.