

*Infection treatment and prevention (pre / probiotic)*

## Microbiota-derived retinoid boosts immunity

### Brief Description of Technology

Probiotic bacteria strains increase infection resistance.

#### TECHNOLOGY ID

2021-0903

#### BUSINESS OPPORTUNITY

Exclusive License or Sponsored  
Research

#### TECHNOLOGY TYPE

Biologic Therapy

#### PATENT INFORMATION

PCT Filed

#### LEARN MORE

Innovation Ventures

partnering@cchmc.org

1.513.636.4285

innovation.cincinnatichildrens.org

### Technology Overview

Intestinal epithelial and immune cells have been found to play an important role in protecting the gut from pathogenic infection. Cincinnati Children's innovators identified microbiome bacterial strains that colonize the gut and produce a beneficial metabolite. This metabolite effectively enhances host intestinal defense responses and epithelial recovery. These newly identified bacteria can be incorporated into a supplement, which can be administered individually, in combination, or alongside specific nutrients. This dietary supplementation may improve microbial metabolite release in the intestine, enhancing the immune system.

### Applications

This can be formulated as a probiotic gut health supplement that delivers therapeutic benefit to the gut microbiome interface.

### Advantages

Recently discovered strains of probiotic bacteria interact with the diet and gut microbiome in a unique way producing metabolite release that delivers immunity boost to the host.

### Market Overview

The global probiotics market is estimated to have a value of approximately 73 billion US\$ in 2023. (Reports, 2023) The incidence of pediatric gastroenteritis (ages 0-4) is approximately 13.5% according to the CAGE Study (Community Acute Gastroenteritis Study ).

### Investigator Overview

Theresa Alenghat, V.M.D., Ph.D. Associate Professor, Division of Immunobiology