

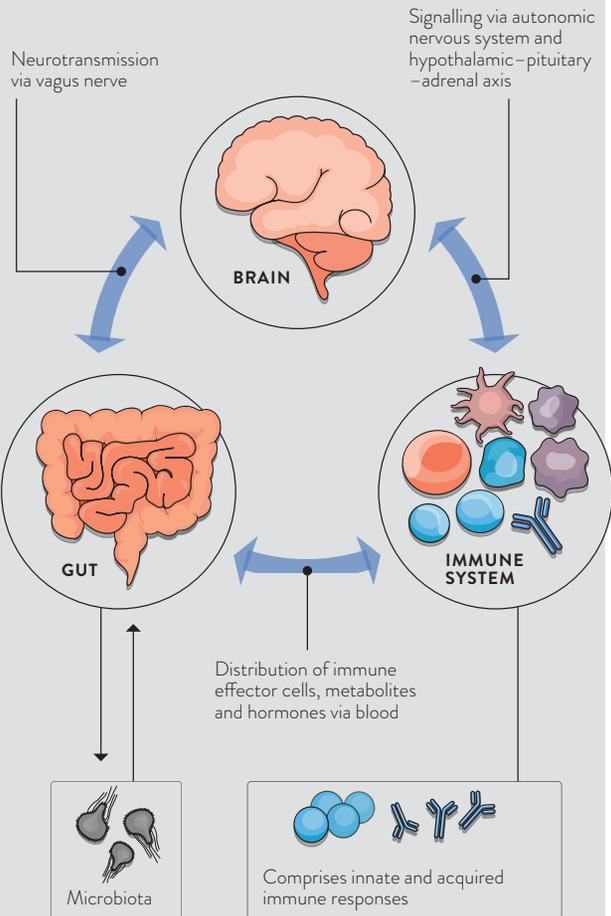


# HUMAN MILK OLIGOSACCHARIDES

UNDERSTANDING THE POTENTIAL

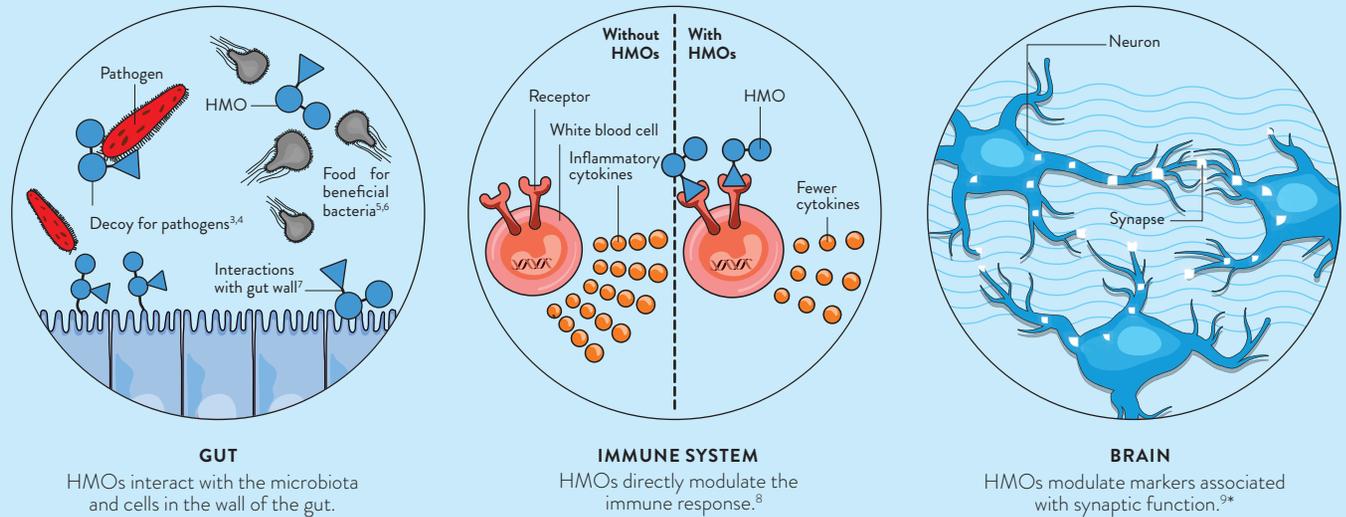
## GUT-BRAIN-IMMUNE AXIS

70% of the immune system is in the gut and there are millions of neurons.<sup>1</sup>



## SYSTEM-WIDE EFFECTS OF 2'-FL HMO

Human milk oligosaccharides (HMOs) have many postulated benefits.<sup>2</sup>



\*Preclinical results only.

## IMPORTANT OUTCOMES OF 2'-FL HMO

Clinical and preclinical research is revealing potential benefits of supplementation with 2'-fucosyllactose (2'-FL), which is the most abundant HMO in 75–85% of mothers breast milk.<sup>10,11</sup>

### GUT HEALTH

- ➔ Supports growth of populations of *Bifidobacterium* and *Bacteroides*<sup>5,6</sup>
- ➔ Intestinal adaptation after surgery<sup>12\*</sup>
- ➔ Incidence of infectious diarrhoea<sup>13</sup>
- ➔ Severity of experimental necrotising enterocolitis<sup>7\*</sup>
- ➔ Intensity of colonic motor contractions<sup>14\*</sup>

### IMMUNE SYSTEM

- ➔ In a clinical study, compared to a control formula, 2'-FL HMO was shown to:
  - lower plasma inflammatory cytokine levels to more closely resemble those of breastfed infants<sup>8</sup>
  - associate with lower incidence of eczema<sup>15†</sup>
  - associate with fewer respiratory infections<sup>15,16†</sup>
- ➔ Food-allergy symptoms<sup>17</sup>

### BRAIN HEALTH

- ➔ Improves memory and learning<sup>18\*,19\*</sup>
- ➔ Changes molecular markers associated with synaptic function<sup>9\*</sup>
- ➔ Positively affects long-term potentiation (synaptic strength)<sup>9\*,19\*</sup>

\*Preclinical results only.

†In comparison to control formula without HMOs, based on parent-reported adverse events from a posthoc analysis of a clinical study.

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