

**Table S1.** Skin prick test reactivity.

|               | Examination | LP                            | LF                            | LP + LF                       | Placebo Group                 | <i>p</i> -Value<br>4 Groups |
|---------------|-------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-----------------------------|
|               |             | ( <i>n</i> = 38)<br>Mean (SD) | ( <i>n</i> = 38)<br>Mean (SD) | ( <i>n</i> = 36)<br>Mean (SD) | ( <i>n</i> = 35)<br>Mean (SD) |                             |
| Mite          | Baseline    | 2.55 (0.89)                   | 2.55 (0.92)                   | 2.31 (0.98)                   | 2.34 (1.06)                   | 0.553                       |
|               | month 3     | 1.61 (0.61) *                 | 1.61 (0.84) *                 | 1.45 (0.77) *                 | 1.43 (0.70) *                 | 0.614                       |
| Cockroach     | Baseline    | 0.62 (0.87)                   | 0.73 (1.28)                   | 0.45 (0.69)                   | 0.33 (0.52)                   | 0.821                       |
|               | month 3     | 0.10 (0.32)                   | 0.00 (0.00)                   | 0.09 (0.30)                   | 0.0 (0.00)                    | 0.683                       |
| Animal dander | Baseline    | 0.46 (0.78)                   | 0.45 (0.82)                   | 0.45 (0.69)                   | 0.60 (0.89)                   | 0.985                       |
|               | month 3     | 0.10 (0.32)                   | 0.00 (0.00)                   | 0.09 (0.30)                   | 0.17 (0.41)                   | 0.701                       |
| Milk          | Baseline    | 0.54 (0.78)                   | 0.73 (0.91)                   | 0.36 (0.67)                   | 0.33 (0.52)                   | 0.650                       |
|               | month 3     | 0.10 (0.32)                   | 0.00 (0.00)                   | 0.09 (0.30)                   | 0.00 (0.00)                   | 0.683                       |
| Egg           | Baseline    | 0.54 (0.78)                   | 0.55 (0.82)                   | 0.36 (0.67)                   | 0.60 (0.89)                   | 0.920                       |
|               | month 3     | 0.10 (0.32)                   | 0.00 (0.00)                   | 0.09 (0.30)                   | 0.00 (0.00)                   | 0.683                       |
| Crab          | Baseline    | 0.46 (0.78)                   | 0.55 (0.93)                   | 0.55 (0.69)                   | 0.50 (0.55)                   | 0.992                       |
|               | month 3     | 0.10 (0.32)                   | 0.00 (0.00)                   | 0.09 (0.30)                   | 0.00 (0.00)                   | 0.683                       |

LP, *Lactobacillus paracasei*; LF, *Lactobacillus fermentum*. \**p* < 0.05 (Intragroup comparisons).

**Table S2.** Fecal bacterial colony counts.

|                                  | Examination | LP                            | LF                            | LP + LF                       | Placebo Group                 | <i>p</i> -Value<br>4 Groups |
|----------------------------------|-------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-----------------------------|
|                                  |             | ( <i>n</i> = 38)<br>Mean (SD) | ( <i>n</i> = 38)<br>Mean (SD) | ( <i>n</i> = 36)<br>Mean (SD) | ( <i>n</i> = 35)<br>Mean (SD) |                             |
| Lactobacillus<br>(log [CFU/g])   | Baseline    | 8.07 (0.87)                   | 7.90 (0.95)                   | 7.49 (1.15)                   | 7.71 (0.92)                   | 0.101                       |
|                                  | month 3     | 7.55 (0.77)                   | 7.84 (0.98)                   | 7.95 (1.01)                   | 7.51 (1.31)                   | 0.267                       |
| Bifidobacterium<br>(log [CFU/g]) | Baseline    | 8.81 (0.91)                   | 8.74 (0.85)                   | 8.75 (1.12)                   | 8.90 (0.72)                   | 0.872                       |
|                                  | month 3     | 8.49 (1.10)                   | 8.74 (1.08)                   | 8.93 (0.81)                   | 8.70 (1.35)                   | 0.518                       |
| Clostridium<br>(log [CFU/g])     | Baseline    | 7.19 (0.78)                   | 6.63 (1.09)                   | 6.84 (1.18)                   | 6.79 (1.11)                   | 0.133                       |
|                                  | month 3     | 6.65 (1.27)                   | 6.56 (0.92)                   | 6.84 (1.14)                   | 6.88 (1.30)                   | 0.632                       |

LP, *Lactobacillus paracasei*; LF, *Lactobacillus fermentum*.

**Table S3.** Oral steroid use frequency at baseline and during follow-up visits.

| Frequency<br>(Mean times/month) | LP<br>( <i>n</i> = 38) | LF<br>( <i>n</i> = 38) | LP + LF<br>( <i>n</i> = 36) | Placebo Group<br>( <i>n</i> = 35) | <i>p</i> -Value<br>4 Groups |
|---------------------------------|------------------------|------------------------|-----------------------------|-----------------------------------|-----------------------------|
| Baseline                        | 2.05                   | 3.03                   | 1.81                        | 2.31                              | 0.811                       |
| Month 1                         | 0.32                   | 0.29                   | 0.08                        | 0.57                              | 0.297                       |
| Month 2                         | 0.32                   | 0.22                   | 0.62                        | 0.53                              | 0.752                       |
| Month 3                         | 0.09                   | 0.53                   | 0.18                        | 0.63                              | 0.242                       |
| Month 4                         | 0.26                   | 0.42                   | 0.21                        | 0.33                              | 0.874                       |

**Table S4.** Oral bronchodilator use frequency at baseline and during follow-up visits.

| Frequency<br>(Mean times/month) | LP<br>( <i>n</i> = 38) | LF<br>( <i>n</i> = 38) | LP + LF<br>( <i>n</i> = 36) | Placebo Group<br>( <i>n</i> = 35) | <i>p</i> -Value<br>4 Groups |
|---------------------------------|------------------------|------------------------|-----------------------------|-----------------------------------|-----------------------------|
| Baseline                        | 2.97                   | 3.13                   | 2.17                        | 4.43                              | 0.677                       |
| Month 1                         | 0.95                   | 1.82                   | 1.25                        | 1.34                              | 0.574                       |
| Month 2                         | 1.11                   | 1.05                   | 1.74                        | 1.47                              | 0.777                       |
| Month 3                         | 0.49                   | 0.67                   | 1.18                        | 1.63                              | 0.273                       |
| Month 4                         | 0.64                   | 0.56                   | 0.50                        | 0.18                              | 0.753                       |

**Table S5.** Oral anti-histamine use frequency at baseline examination and on follow-up visits.

| <b>Frequency<br/>(Mean times/month)</b> | <b>LP<br/>(n = 38)</b> | <b>LF<br/>(n = 38)</b> | <b>LP + LF<br/>(n = 36)</b> | <b>Placebo Group<br/>(n = 35)</b> | <b>p-Value<br/>4 Groups</b> |
|---|------------------------|------------------------|-----------------------------|-----------------------------------|-----------------------------|
| Baseline                                | 3.08                   | 3.00                   | 4.67                        | 1.67                              | 0.878                       |
| Month 1                                 | 1.08                   | 0.00                   | 0.67                        | 0.33                              | 0.464                       |
| Month 2                                 | 1.69                   | 1.70                   | 0.55                        | 1.40                              | 0.705                       |
| Month 3                                 | 0.00                   | 0.50                   | 0.18                        | 0.00                              | 0.303                       |
| Month 4                                 | 0.00                   | 0.00                   | 0.00                        | 1.80                              | 0.079                       |

**Table S6.** Probiotics capsules mean taken days monthly record.

| <b>Mean Taken Days</b> | <b>LP<br/>(n = 38)</b> | <b>LF<br/>(n = 38)</b> | <b>LP + LF<br/>(n = 36)</b> | <b>Placebo Group<br/>(n = 35)</b> | <b>p-Value<br/>4 Groups</b> |
|------------------------|------------------------|------------------------|-----------------------------|-----------------------------------|-----------------------------|
| Month 1                | 28.6                   | 28.7                   | 28.1                        | 28.6                              | 0.286                       |
| Month 2                | 28.7                   | 28.7                   | 28.7                        | 28.6                              | 0.992                       |
| Month 3                | 29.1                   | 28.4                   | 28.4                        | 28.8                              | 0.756                       |