Children's Pro

20 g / Code FE1821

Children's Pro is an advanced and highly concentrated formula of 12 selected bacterial strains, **F.O.S**. (chicory) and **A.O.S**. (larch-tree) to help balance the **intestinal flora** in children. It contains a minimum of 10 billion viable bacteria for early colonisation per use. An easy administration powdered formula to add to foods without modifying the flavour or texture.

Vegan. Ovo-lactovegetarian. Gluten free. Dairy free.

FORMAT: 20 g

FORMULA

Ingredients: Binding agent (potato starch), bacterial culture (10 billion live active healthy cells per serving; see nutritional information), antioxidant (L-ascorbic acid), inulin (from chicory root, *Cichorium intybus*), arabinogalactan (from *Larix laricina*), anticaking agent (magnesium salts of fatty acids).

Nutritional information:	**2 rounded spoons**
Human strains	
Lactobacillus rhamnosus UB5115	6.629 billion CFU
Lactobacillus casei UB1499	1.284 million CFU
Bifidobacterium longum ssp. *infantis* UB9214	1.040 billion CFU
Lactobacillus rhamnosus GG	1.000 billion CFU
Bifidobacterium breve UB8674	214 million CFU
Bifidobacterium longum ssp. *longum* UB7691	214 million CFU
Lactobacillus acidophilus UB5997	18 million CFU
Plant strain	
Lactobacillus plantarum UB2783	50 million CFU
Dairy strains	
Lactobacillus reuteri UB2419	351 million CFU
Lactobacillus helveticus UB7229	43 million CFU
Lactobacillus paracasei UB1978	36 million CFU
Lactobacillus johnsonii UB3394	9 million CFU
Inulin	5 mg
Arabinogalactan (AOS)	5 mg

CFU: Colony-Forming Unit Cells

Cautions:

Consult a health-care practitioner before using if you have fever, vomiting, bloody diarrhoea, or severe abdominal pain. Discontinue use if symptoms of digestive upset (diarrhoea) persist or worsen beyond 3 days. Consult a health-care practitioner if you have an immune-compromised condition (e.g. lymphoma or AIDS).

Recommended daily dose:

2 rounded scoops (approx. 0,3 g) daily with cold, high-fat food (like yogurt or ice-cream). If you are taking antibiotics, take this product at least 2–3 hours before or after. Do not exceed the stated recommended daily dose.
Store preferably refrigerated.

Indications and uses:

Digestive alterations (acute gastroenteritis, dysbiosis, antibiotic associated diarrhoea, inflammatory intestinal disease, irritable bowel syndrome (IBS), colic in babies, constipation, and celiac disease).
Digestive support (improving nutrient absorption and assimilation).
Allergies (dermatitis/atopic eczema, lactose intolerance, allergic rhinitis, asthma).
Reinforcement of the immune system (respiratory and urinary tract infections).

DETAILS:

CHILDREN'S PRO is an exclusive formula based on 12 probiotic strains aimed at maintaining gastrointestinal health in children from the first stages of life. Each dose contains 10 billion viable microorganisms with a significant presence of species that colonize children's intestinal tracts early on, and have shown the most positive contribution to children's health, favouring balanced digestive health and supporting the immune system in its protective function against pathogenic microorganisms.

INGREDIENTS:

PROBIOTICS: Probiotics are non-pathogenic microorganisms which when administered in determined amounts produce beneficial effects on human health, balancing intestinal microbiota and strengthening the immune system (they increase the number of beneficial anaerobic bacteria and decrease the population of potentially pathogenic microorganisms through antagonism/competition). In recent years, numerous studies have highlighted their importance for children. The intestinal mucosa makes up the largest surface of the human body exposed to the outside, and its immune cells must face infinite pathogens entering through the mouth. Intestinal colonization with certain bacteria strongly influences the immune response from an early age and can have a significant role in the development of chronic diseases. Not all probiotic microorganisms induce the same type of effect on host immune response: the most common species that have been shown to contribute positively to health include *Bifidobacterium* and *Lactobacillus*[1-5].

LACTOBACILLUS RHAMNOSUS: This has traditionally been used in the treatment and prevention of infectious diarrhoea from rotavirus and other viral diseases in babies and children. Its barrier effect modifies antigen response, increasing the secretion of specific IgA (Immunoglobulin A) and producing hydrolytic enzymes that decrease inflammation and symptoms at little over 1 day of administration. In a study in which 124 children with acute diarrhoea were assessed, those who were treated with *L. rhamnosus* presented fewer episodes of repetition and had improved intestinal permeability. *L. rhamnosus* has been shown to obtain the best results in immune response in children with allergies and infections, and in treatment for acute gastritis. There is evidence that this microorganism prevents intestinal wall lesions provoked by enterohemolytic pathogens such as *E.Coli* which means it is a therapeutic alternative to antibiotics for reducing the risk of systemic complications associated with this pathogen. *L. rhamnosus* has also been proven effective in children with irritable bowel syndrome, easing the abdominal pain associated with this disorder. Another recent trial shows that the composition of intestinal microbiota can significantly contribute to the development of certain chronic pathologies such as type 1, or young-onset diabetes, and that the immune reactivity provoked by *L. rhamnosus* is proposed as a determining protective factor against this pathology. In children with serious malnutrition, *L. rhamnosus* reduces recovery time and favours optimal immune cell response during rehabilitation. Recently, the molecule p40 GG *L. rhamnosus* has been identified as immune-modulating and responsible for the preventive effect on eczema and atopic dermatitis among babies[6-11].

> *L. rhamnosus GG* strain: one of the most studied probiotic strains in the world. Its benefit has been described in infant diarrhoea[12], respiratory infections[13], antibiotic-associated diarrhoea[14], infectious diarrhoea associated with *Clostridium difficile*[15], inflammatory bowel diseases such as Irritable Bowel Syndrome[16], improves gastrointestinal function after pancreatic surgery[17].

LACTOBACILLUS CASEI: reduces the duration and incidence of infections such as bronchitis, pneumonia and rhinopharyngitis[18-20]. In intestinal infections, it improves immunity against bacterial infections such as *Escherichia coli* and viral infections, as in influenza vaccination[21-24].

In children, it improves symptoms of allergic rhinitis[25], together with antibiotic therapy improves eradication of *Helicobacter pylori*[26], is effective in viral diarrhoea[27] and improves the overall incidence of infections[28]. A study of 251 children shows a reduction in duration and 20% lower incidence of bronchitis, pneumonia and fatigue after 20 weeks of daily treatment[29].

BIFIDOBACTERIUM INFANTIS: This microorganism is predominant in the intestinal flora of babies, especially in those who are breastfed. It is one of the first to colonise the infant intestinal tract[30] and is critical in the adult for intestinal health and immune system function[31]. High concentrations of *B. infantis* have been shown to increase children's natural resistance to infection by *Shigella*, reducing the rate of severe diarrhoea caused by this germ; once weaned, however, levels of this bacteria decrease progressively down to very small amounts[32].

Produces acetic acid and inhibits pathogenic bacteria[33]. Produces bacteriocins with activity against *Salmonella*, *Shigella* and *E. coli*[34,35]. Relieves many symptoms of Irritable Bowel Syndrome (IBS), such as pain, bloating, normalises bowel transit habit and regulates IL-10/IL-12 ratio[36-38]. It reduces systemic pro-inflammatory biomarkers in chronic inflammatory diseases such as ulcerative colitis, chronic fatigue syndrome and psoriasis, indicating that the immunomodulatory effects of the microbiota are not limited to the mucosa, but extend to the systemic immune system[39]. It may alleviate symptoms of untreated coeliac disease[40].

BIFIDOBACTERIUM BREVE: it maintains colon homeostasis by reducing inflammation through induction of intestinal IL-10 producing Tr1 cells[41]. It protects colon function, relieves constipation, and reduces gas, bloating, and diarrhoea[41-42]. It improves ulcerative colitis symptoms[43]. In addition, it stimulates the immune system[42,44], inhibits *Escherichia coli*[45] and suppresses *the Candida fungus*[46]. It reduces fat, liver function, and systemic inflammation in people prone to obesity[47]. In neonates, it improves gastrointestinal problems by stabilising the intestinal flora[48] and reduces the incidence of necrotising

enterocolitis[49]. In children with coeliac disease, it reduces the pro-inflammatory cytokine TNF-alpha[50]. It improves adverse effects, such as fever, infections, and intestinal disorders, in chemotherapy patients[51].
BIFIDOBACTERIUM LONGUM: Diverse studies have shown its efficacy when combined with other probiotics at preventing antibiotic associated diarrhoea (AAD) by restoring a child's intestinal microflora, as well as treating IBS[2,3]. A protein factor produced *by B. longum* inhibits the adhesion of the enterotoxigenic strain of *Escherichia coli*.[52] It has anti-inflammatory properties and is indicated for gastrointestinal disorders such as ulcerative colitis[53], antibiotic-associated diarrhoea[54,55], Irritable Bowel Syndrome[56], and seasonal allergies[57,58]. It helps in the formation of lactic acid and formic acid, lowering intestinal pH and preventing the proliferation of harmful bacteria[59]. It is also a significant producer of B vitamin[60].

LACTOBACILLUS ACIDOPHILUS: This helps maintain an acidic environment in the intestinal tract, preventing the growth of harmful bacteria. It's been used for many years to treat and prevent oral yeast infections, urinary tract infections and diarrhoea caused by antibiotic use. Today, a study involving 89 patients has proven its efficacy[61].

It improves the general symptoms of patients with Irritable Bowel Syndrome[62]. It helps maintain an acidic environment in the intestinal tract by preventing the growth of harmful bacteria and reduces antibiotic-associated diarrhoea[63]. It helps improve digestive health by maintaining the intestinal barrier, restoring intestinal flora, improving digestion, reinforcing the immune system, and supporting beneficial bacteria that thrive in the colon[64]. It helps improve symptoms of allergic rhinitis[65], hay fever[65] and atopic dermatitis[66].

LACTOBACILLUS PLANTARUM: It acts against unwanted bacteria by improving the symptoms of Irritable Bowel Syndrome such as excessive gas, bloating and abdominal discomfort[68], as well as in ulcerative colitis[69]. It regulates immune response and is beneficial in the treatment of atopic dermatitis in children[70]. It improves gastrointestinal symptoms during antibiotic therapy[71]. It improves symptoms of lactose intolerance, such as diarrhoea and flatulence[72].

LACTOBACILLUS REUTERI: This microorganism is present in mother's milk. Studies show its efficacy at reducing colic in babies by helping regulate digestion, reducing constipation and the intensity and frequency of abdominal pain[3,7]. It prevents necrotising enterocolitis in neonates[73], improves symptoms of infantile colic[74,75], increases digestive health in children by being effective in acute infantile diarrhoea[76] and antibiotic-associated diarrhoea[77], is able to reduce the adverse effects of anti-*Helicobacter pylori* treatment in children [78] and is effective in infantile constipation [79].

LACTOBACILLUS HELVETICUS: Studies have proven that this strain prevents gastrointestinal infection, improves protection against pathogens and modulates immune response. The specific enzymatic activities of the strain may improve nutrient bioavailability, the elimination of allergens and food toxins, and the production of bioactive peptides in protein digestion[80]. Fermented milk with *L. helveticus* improves cognitive function[81] In animals, it increases bone density and bone mineral content[82]. It controls unwanted intestinal micro-organisms and bacteria (*Salmonella enteritidis, Camplylobacter jejuni, Escherichia coli, Candida albicans*, etc.), regulates immune response and reduces lactose intolerance[83].

LACTOBACILLUS PARACASEI: improves digestive function[84], improves symptoms (especially ocular) in patients with allergic rhinitis treated with oral antihistamines[85]. It is also useful in combating *Staphylococcus aureus*, *Escherichia coli* and *Salmonella* infections[86-88]. It relieves symptoms such as frequency and duration of acute diarrhoea in children[89].

LACTOBACILLUS JOHNSONII: has several benefits such as in *Helicobacter pylori* gastritis [90], regulates immune response[91], may help in the control of diabetes[92] and improves allergic rhinitis in children [93].

References:
1) Talja, Ija, et al. "Antibodies to Lactobacilli and Bifidobacteria in young children with different propensity to develop islet autoimmunity." Journal of immunology research 2014 (2014).
2) Szajewska, Hania, et al. "Use of probiotics for management of acute gastroenteritis: a position paper by the ESPGHAN Working Group for Probiotics and Prebiotics." Journal of pediatric gastroenterology and nutrition 58.4 (2014): 531-539.
3) Guandalini, Stefano. "Probiotics for children with diarrhea: an update." Journal of clinical gastroenterology 42 (2008): S53-S57.
4) Johnston, B., et al. "Probióticos para la prevención de la diarrea asociada con antibióticos en niños." Cochrane Database of Systematic Reviews 11 (2011).
5) Kianifar, Hamidreza, et al. "Synbiotic in the management of infantile colic: a randomised controlled trial." Journal of paediatrics and child health 50.10 (2014): 801-805.
6) Sevilla Paz Soldan, Ricardo, et al. "Efecto del *Lactobacillus rhamnosus* GG en la recuperación inmunonutricional de niños desnutridos graves." Gaceta Médica Boliviana 34.2 (2011): 71-75.
7) Gawrońska, A., et al. "A randomized double-blind placebo-controlled trial of *Lactobacillus* GG for abdominal pain disorders in children." Alimentary pharmacology & therapeutics 25.2 (2007): 177-184.
8) Johnson-Henry, K. C., et al. "*Lactobacillus rhamnosus* strain GG prevents enterohemorrhagic *Escherichia coli* O157: H7-induced changes in epithelial barrier function." Infection and immunity 76.4 (2008): 1340-1348.
9) Sindhu, Kulandaipalayam NC, et al. "Immune response and intestinal permeability in children with acute gastroenteritis treated with *Lactobacillus rhamnosus* GG: a randomized, double-blind, placebo-controlled trial." Clinical infectious diseases 58.8 (2014): 1107-1115.
10) Vong, Linda, et al. "Probiotic *Lactobacillus rhamnosus* inhibits the formation of neutrophil extracellular traps." The Journal of Immunology 192.4 (2014): 1870-1877.
11) Foolad, N., and A. W. Armstrong. "Prebiotics and probiotics: the prevention and reduction in severity of atopic dermatitis in children." Beneficial microbes 5.2 (2014): 151-160.
12) Li, Ya-Ting, et al. "Efficacy of *Lactobacillus rhamnosus* GG in treatment of acute pediatric diarrhea: A systematic review with meta-analysis." World journal of gastroenterology 25.33 (2019): 4999.
13) Liu, Shan, et al. "*Lactobacillus rhamnosus* GG supplementation for preventing respiratory infections in children: a meta-analysis of randomized, placebo-controlled trials." Indian paediatrics 50.4 (2013): 377-381.
14) Mantegazza, Cecilia, et al. "Probiotics and antibiotic-associated diarrhea in children: A review and new evidence on *Lactobacillus rhamnosus* GG during and after antibiotic treatment." Pharmacological Research 128 (2018): 63-72.
15) Segarra-Newnham, Marisel. "Probiotics for *Clostridium difficile*–associated diarrhea: focus on *Lactobacillus rhamnosus* GG and *Saccharomyces boulardii*." Annals of Pharmacotherapy 41.7-8 (2007): 1212-1221.
16) Pedersen, Natalia, et al. "Ehealth: low FODMAP diet vs *Lactobacillus rhamnosus* GG in irritable bowel syndrome." World Journal of Gastroenterology: WJG 20.43 (2014): 16215.
17) Folwarski, M., et al. "Effects of *Lactobacillus rhamnosus* GG on early postoperative outcome after pylorus-preserving pancreatoduodenectomy: a randomized trial." European Review for Medical and Pharmacological Sciences 25.1 (2021): 397-405.
18) Guillemard, E., et al. "Consumption of a fermented dairy product containing the probiotic *Lactobacillus casei* DN-114 001 reduces the duration of respiratory infections in the elderly in a randomised controlled trial." British journal of nutrition 103.1 (2010): 58-68.
19) Cobo Sanz, JMa, J. A. Mateos, and A. Muñoz Conejo. "Efecto de *Lactobacillus casei* sobre la incidencia de procesos infecciosos en niños/as." Nutrición Hospitalaria 21.4 (2006): 547-551.
20) Turchet, P., et al. "Effect of fermented milk containing the probiotic *Lactobacillus casei* DN-114001 on winter infections in free-living elderly subjects: a randomised, controlled pilot study." The journal of nutrition, health & aging 7.2 (2003): 75-77.
21) Isolauri, Erika, et al. "Improved immunogenicity of oral D x RRV reassortant rotavirus vaccine by *Lactobacillus casei* GG." Vaccine 13.3 (1995): 310-312.
22) Matsuzaki, T., et al. "The effect of oral feeding of *Lactobacillus casei* strain Shirota on immunoglobulin E production in mice." Journal of Dairy Science 81.1 (1998): 48-53.
23) Ingrassia, Isabelle, Antony Leplingard, and Arlette Darfeuille-Michaud. "*Lactobacillus casei* DN-114 001 inhibits the ability of adherent-invasive *Escherichia coli* isolated from Crohn's disease patients to adhere to and to invade intestinal epithelial cells." Applied and environmental microbiology 71.6 (2005): 2880-2887.
24) Boge, Thierry, et al. "A probiotic fermented dairy drink improves antibody response to influenza vaccination in the elderly in two randomised controlled trials." Vaccine 27.41 (2009): 5677-5684.
25) Giovannini, Marcello, et al. "A randomized prospective double blind controlled trial on effects of long-term consumption of fermented milk containing *Lactobacillus casei* in pre-school children with allergic asthma and/or rhinitis." Pediatric research 62.2 (2007): 215-220.
26) Sýkora, Josef, et al. "Effects of a specially designed fermented milk product containing probiotic *Lactobacillus casei* DN-114 001 and the eradication of *H. pylori* in children: a prospective randomized double-blind study." Journal of clinical gastroenterology 39.8 (2005): 692-698.
27) Guarino, Alfredo, et al. "Oral bacterial therapy reduces the duration of symptoms and of viral excretion in children with mild diarrhea." Journal of pediatric gastroenterology and nutrition 25.5 (1997): 516-519.
28) Merenstein, D., et al. "Use of a fermented dairy probiotic drink containing *Lactobacillus casei* (DN-114 001) to decrease the rate of illness in kids: the DRINK study A patient-oriented, double-blind, cluster-randomized, placebo-controlled, clinical trial." European journal of clinical nutrition 64.7 (2010): 669-677.
29) Sanz, JMa Cobo, J. A. Mateos, and A. Muñoz Conejo. "Efecto de Lactobacillus casei sobre la incidencia de procesos infecciosos en niños/as." Nutrición Hospitalaria 21.4 (2006): 547-551.
30) He, Fang, et al. "Comparison of mucosal adhesion and species identification of bifidobacteria isolated from healthy and allergic infants." Pathogens and Disease 30.1 (2001): 43-47.
31) Ishibashi, N., T. Yaeshima, and H. Hayasawa. "Bifidobacteria: their significance in human intestinal health." Malaysian Journal of Nutrition 3.2 (1997): 149-159.
32) Khoshdel, Abolfazl, et al. "Effect of probiotics in the treatment of acute noninflammatory diarrhea in hospitalized children aged 2–10 years." International Journal of Pharmaceutical Investigation 8.4 (2018): 200-204.
33) Gibson, G. R., and Xin Wang. "Regulatory effects of bifidobacteria on the growth of other colonic bacteria." Journal of Applied Microbiology 77.4 (1994): 412-420.
34) Cheikhyoussef, Ahmad, et al. "Antimicrobial activity and partial characterization of bacteriocin-like inhibitory substances (BLIS) produced by *Bifidobacterium infantis* BCRC 14602." Food Control 20.6 (2009): 553-559.
35) Cheikhyoussef, Ahmad, et al. "Bifidin I–A new bacteriocin produced by *Bifidobacterium infantis* BCRC 14602: Purification and partial amino acid sequence." Food Control 21.5 (2010): 746-753.
36) Whorwell, Peter J., et al. "Efficacy of an encapsulated probiotic *Bifidobacterium infantis* 35624 in women with irritable bowel syndrome." The American journal of gastroenterology 101.7 (2006): 1581-1590.
37) Brenner, Darren M., and William D. Chey. "*Bifidobacterium infantis* 35624: a novel probiotic for the treatment of irritable bowel syndrome." Reviews in gastroenterological disorders 9.1 (2009): 7-15.

38) O'Mahony, Liam, et al. "*Lactobacillus* and *bifidobacterium* in irritable bowel syndrome: symptom responses and relationship to cytokine profiles." Gastroenterology 128.3 (2005): 541-551.
39) Groeger, David, et al. "*Bifidobacterium infantis* 35624 modulates host inflammatory processes beyond the gut." Gut microbes 4.4 (2013): 325-339.
40) Smecuol, Edgardo, et al. "Exploratory, randomized, double-blind, placebo-controlled study on the effects of *Bifidobacterium infantis* natren life start strain super strain in active celiac disease." Journal of clinical gastroenterology 47.2 (2013): 139-147.
41) Jeon, Seong Gyu, et al. "Probiotic *Bifidobacterium breve* induces IL-10-producing Tr1 cells in the colon." PLoS pathogens 8.5 (2012): e1002714.
42) Tabbers, M. M., et al. "Is *Bifidobacterium breve* effective in the treatment of childhood constipation? Results from a pilot study." Nutrition journal 10.1 (2011): 19.
43) Ishikawa, Hideki, et al. "Beneficial effects of probiotic bifidobacterium and galacto-oligosaccharide in patients with ulcerative colitis: a randomized controlled study." Digestion 84.2 (2011): 128-133.
44) Mullié, Catherine, et al. "Increased poliovirus-specific intestinal antibody response coincides with promotion of *Bifidobacterium longum-infantis* and *Bifidobacterium breve* in infants: a randomized, double-blind, placebo-controlled trial." Pediatric research 56.5 (2004): 791-795.
45) Sheehan, Vivien M., et al. "Improving gastric transit, gastrointestinal persistence and therapeutic efficacy of the probiotic strain *Bifidobacterium breve* UCC2003." Microbiology 153.10 (2007): 3563-3571.
46) Mendonça, Fabio Henrique Boarini Pacheco, et al. "Effects of probiotic bacteria on Candida presence and IgA anti-Candida in the oral cavity of elderly." Brazilian dental journal 23.5 (2012): 534-538.
47) Minami, Jun-ichi, et al. "Oral administration of *Bifidobacterium breve* B-3 modifies metabolic functions in adults with obese tendencies in a randomised controlled trial." Journal of nutritional science 4 (2015).
48) Kitajima, Hiroyuki, et al. "Early administration of *Bifidobacterium breve* to preterm infants: randomised controlled trial." Archives of Disease in Childhood-Fetal and Neonatal Edition 76.2 (1997): F101-F107.
49) Braga, Taciana Duque, et al. "Efficacy of *Bifidobacterium breve* and *Lactobacillus casei* oral supplementation on necrotizing enterocolitis in very-low-birth-weight preterm infants: a double-blind, randomized, controlled trial–." The American journal of clinical nutrition 93.1 (2010): 81-86.
50) Klemenak, Martina, et al. "Administration of *Bifidobacterium breve* Decreases the Production of TNF-alfa in Children with Celiac Disease." Digestive diseases and sciences 60.11 (2015): 3386-3392.
51) Wada, Mariko, et al. "Effects of the enteral administration of *Bifidobacterium breve* on patients undergoing chemotherapy for pediatric malignancies." Supportive care in cancer 18.6 (2010): 751-759.
52) Fujiwara, Shigeru, et al. "Proteinaceous factor (s) in culture supernatant fluids of bifidobacteria which prevents the binding of enterotoxigenic *Escherichia coli* to gangliotetraosylceramide." Applied and environmental microbiology 63.2 (1997): 506-512.
53) Furrie, Elizabeth, et al. "Synbiotic therapy (*Bifidobacterium longum*/Synergy 1) initiates resolution of inflammation in patients with active ulcerative colitis: a randomised controlled pilot trial." Gut 54.2 (2005): 242-249.
54) Orrhage, K., B. Brismar, and C. E. Nord. "Effect of supplements with *Bifidobacterium longum* and *Lactobacillus acidophilus* on the intestinal microbiota during administration of clindamycin." Microbial Ecology in Health and Disease 7.1 (1994): 17-25.
55) Koning, Catherina JM, et al. "The effect of a multispecies probiotic on the intestinal microbiota and bowel movements in healthy volunteers taking the antibiotic amoxycillin." The American journal of gastroenterology 103.1 (2008): 178-189.
56) Ortiz-Lucas, María, et al. "Effect of probiotic species on irritable bowel syndrome symptoms: A bring up to date meta-analysis." Rev Esp Enferm Dig 105.1 (2013): 19-36.
57) Xiao, Jin-zhong, et al. "Clinical efficacy of probiotic *Bifidobacterium longum* for the treatment of symptoms of Japanese cedar pollen allergy in subjects evaluated in an environmental exposure unit." Allergology international 56.1 (2007): 67-75.
58) Takahashi, N., et al. "Immunostimulatory oligodeoxynucleotide from *Bifidobacterium longum* suppresses Th2 immune responses in a murine model." Clinical & Experimental Immunology 145.1 (2006): 130-138.
59) Makras, Lefteris, and Luc De Vuyst. "The in vitro inhibition of Gram-negative pathogenic bacteria by bifidobacteria is caused by the production of organic acids." International Dairy Journal 16.9 (2006): 1049-1057.
60) LeBlanc, J. G., et al. "B-Group vitamin production by lactic acid bacteria–current knowledge and potential applications." Journal of Applied Microbiology 111.6 (2011): 1297-1309.
61) Beausoleil, Mélanie, et al. "Effect of a fermented milk combining *Lactobacillus acidophilus* Cl1285 and *Lactobacillus casei* in the prevention of antibiotic-associated diarrhea: a randomized, double-blind, placebo-controlled trial." Canadian Journal of Gastroenterology and Hepatology 21.11 (2007): 732-736.
62) Sinn, Dong Hyun, et al. "Therapeutic effect of *Lactobacillus acidophilus*-SDC 2012, 2013 in patients with irritable bowel syndrome." Digestive diseases and sciences 53.10 (2008): 2714-2718.
63) Gao, Xing Wang, et al. "Dose–response efficacy of a proprietary probiotic formula of *Lactobacillus acidophilus* CL1285 and *Lactobacillus casei* LBC80R for antibiotic-associated diarrhea and *Clostridium difficile*-associated diarrhea prophylaxis in adult patients." The American journal of gastroenterology 105.7 (2010): 1636-1641.
64) Bader J, et al. "Processing, consumption and effects of probiotic microorganisms." Encyclopedia of Life Support Systems. (2012).
65) Ishida, Y., et al. "Clinical effects of *Lactobacillus acidophilus* strain L-92 on perennial allergic rhinitis: a double-blind, placebo-controlled study." Journal of Dairy Science 88.2 (2005): 527-533.
66) Ishida, Yu, et al. "Effect of milk fermented with *Lactobacillus acidophilus* strain L-92 on symptoms of Japanese cedar pollen allergy: a randomized placebo-controlled trial." Bioscience, biotechnology, and biochemistry 69.9 (2005): 1652-1660.
67) Torii, Shinpei, et al. "Effects of oral administration of *Lactobacillus acidophilus* L-92 on the symptoms and serum markers of atopic dermatitis in children." International archives of allergy and immunology 154.3 (2011): 236-245.
68) Ducrotté, Philippe, Prabha Sawant, and Venkataraman Jayanthi. "Clinical trial: *Lactobacillus plantarum* 299v (DSM 9843) improves symptoms of irritable bowel syndrome." World journal of gastroenterology: WJG 18.30 (2012): 4012-4018.
69) Bibiloni, Rodrigo, et al. "VSL# 3 probiotic-mixture induces remission in patients with active ulcerative colitis." The American Journal of Gastroenterology 100.7 (2005): 1539-1546.
70) Han, Youngshin, et al. "A randomized trial of *Lactobacillus plantarum* CJLP133 for the treatment of atopic dermatitis." Pediatric Allergy and Immunology 23.7 (2012): 667-673.
71) Lönnermark, Elisabet, et al. "Intake of *Lactobacillus plantarum* reduces certain gastrointestinal symptoms during treatment with antibiotics." Journal of Clinical Gastroenterology 44.2 (2010): 106-112.
72) Roškar, Irena, et al. "Effects of a probiotic product containing *Bifidobacterium animalis* subsp. *animalis* IM386 and *Lactobacillus plantarum* MP2026 in lactose intolerant individuals: Randomized, placebo-controlled clinical trial." Journal of Functional Foods 35 (2017): 1-8.
73) Hunter, Chelsea, et al. "Effect of routine probiotic, *Lactobacillus reuteri* DSM 17938, use on rates of necrotizing enterocolitis in neonates with birthweight< 1000 grams: a sequential analysis." BMC Pediatrics 12.1 (2012): 142.
74) Savino, Francesco, et al. "*Lactobacillus reuteri* DSM 17938 in infantile colic: a randomized, double-blind, placebo-controlled trial." Pediatrics 126.3 (2010): e526-e533.

75) Szajewska, Hania, Ewa Gyrczuk, and Andrea Horvath. "*Lactobacillus reuteri* DSM 17938 for the management of infantile colic in breastfed infants: a randomized, double-blind, placebo-controlled trial." The Journal of Pediatrics 162.2 (2013): 257-262.
76) Francavilla, R., et al. "Randomised clinical trial: *Lactobacillus reuteri* DSM 17938 vs. placebo in children with acute diarrhoea a double-blind study." Alimentary Pharmacology & Therapeutics 36.4 (2012): 363-369.
77) Kołodziej, Maciej, and Hania Szajewska. "*Lactobacillus reuteri* DSM 17938 in the prevention of antibiotic-associated diarrhoea in children: protocol of a randomised controlled trial." BMJ open 7.1 (2017): e013928.
78) Lionetti, E., et al. "*Lactobacillus reuteri* therapy to reduce side-effects during anti-*Helicobacter pylori* treatment in children: a randomized placebo controlled trial." Alimentary Pharmacology & Therapeutics 24.10 (2006): 1461-1468.
79) Coccorullo, Paola, et al. "*Lactobacillus reuteri* (DSM 17938) in infants with functional chronic constipation: a double-blind, randomized, placebo-controlled study." The Journal of Pediatrics 157.4 (2010): 598-602.
80) Taverniti, Valentina, and Simone Guglielmetti. "Health-promoting properties of *Lactobacillus helveticus*." Frontiers in microbiology 3 (2012): 392.
81) Chung, Young-Chul, et al. "Fermented milk of *Lactobacillus helveticus* IDCC3801 improves cognitive functioning during cognitive fatigue tests in healthy older adults." Journal of Functional Foods 10 (2014): 465-474.
82) Narva, Mirkka, et al. "Effects of long-term intervention with *Lactobacillus helveticus*-fermented milk on bone mineral density and bone mineral content in growing rats." Annals of Nutrition and Metabolism 48.4 (2004): 228-234.
83) Taverniti, Valentina, and Simone Guglielmetti. "Health-promoting properties of *Lactobacillus helveticus*." Frontiers in Microbiology 3 (2012).
84) Riezzo, G., et al. "Randomised clinical trial: efficacy of *Lactobacillus paracasei*-enriched artichokes in the treatment of patients with functional constipation–a double-blind, controlled, crossover study." Alimentary Pharmacology & Therapeutics 35.4 (2012): 441-450.
85) Costa, D. J., et al. "Efficacy and safety of the probiotic *Lactobacillus paracasei* LP-33 in allergic rhinitis: a double-blind, randomized, placebo-controlled trial (GA2LEN Study)." European Journal of Clinical Nutrition 68.5 (2014): 602-607.
86) Bendali, Farida, Nassim Madi, and Djamila Sadoun. "Beneficial effects of a strain of *Lactobacillus paracasei* subsp. *paracasei* in *Staphylococcus aureus*-induced intestinal and colonic injury." International Journal of Infectious Diseases 15.11 (2011): e787-e794.
87) Tsai, Yueh-Ting, Po-Ching Cheng, and Tzu-Ming Pan. "Immunomodulating activity of *paracasei* subsp. *paracasei* NTU 101 in enterohemorrhagic *Escherichia coli* O157H7-infected mice." Journal of Agricultural and Food Chemistry 58.21 (2010): 11265-11272.
88)Jankowska, Alicja, et al. "Competition of *Lactobacillus paracasei* with *Salmonella enterica* for adhesion to Caco-2 cells." BioMed Research International 2008 (2008).
89) Passariello, A., et al. "Randomised clinical trial: efficacy of a new synbiotic formulation containing *Lactobacillus paracasei* B21060 plus arabinogalactan and xilooligosaccharides in children with acute diarrhoea." Alimentary Pharmacology & Therapeutics 35.7 (2012): 782-788.
90) Cruchet, Sylvia, et al. "Effect of the ingestion of a dietary product containing *Lactobacillus johnsonii* La1 on Helicobacter pylori colonization in children." Nutrition 19.9 (2003): 716-721.
91) Marcial, Guillermo E., et al. "*Lactobacillus johnsonii* N6. 2 modulates the host immune responses: a double-blind, randomized trial in healthy adults." Frontiers in immunology 8 (2017): 655.
92) Lau, Kenneth, et al. "Inhibition of type 1 diabetes correlated to a *Lactobacillus johnsonii* N6. 2-mediated Th17 bias." The Journal of Immunology 186.6 (2011): 3538-3546.
93) Lue, Ko-Haung, et al. "A trial of adding *Lactobacillus johnsonii* EM1 to levocetirizine for treatment of perennial allergic rhinitis in children aged 7–12 years." International journal of pediatric otorhinolaryngology 76.7 (2012): 994-1001.