OUR PROBIOTIC STRAINS

PROBIOTICAL

OUR PROBIOTIC STRAINS

R&D center of Probiotical:

***- the most advanced** research center for probiotics throughout the world*

***- 1.200 square metres in clean room** devoted only to probiotics*

***- over 80 patent families** on probiotics*

Strains available as Raw Material **(RM)** can be provided in bulk form or as custom tailored finished products.

Strains available as Finished Product **(FP)** can be provided only as Probiotical finished products.

Bifidobacterium Strains

STRAIN ID and INTERNATIONAL COLLECTION DEPOSIT NUMBER	AVAILABLE as: RAW MATERIAL (RM) FINISHED PRODUCT (FP)	FUNCTIONALITY	SCIENTIFIC SUPPORT	DAILY DOSAGE IN CLINICAL STUDY
Bifidobacterium adolescentis **BA02 (DSM 17103)**	RM (on demand)	Rebalance of intestinal microbiota Intestinal transit Ferments prebiotic inulin	**Human clinical trial** Del Piano M. et al. The use of probiotics in the treatment of constipation in the elderly. CIBUS, 2005; 1(1):23-30. **In vitro study** Rossi M. et al. Fermentation of fructooligosaccharides and inulin by Bifidobacteria: a comparative study of pure and fecal cultures. Applied and Environmental Microbiology, 2005; 71(10): 6150-6158.	10 billion CFU
Bifidobacterium animalis **subsp. *lactis* BA05 (DSM 18352)**	FP	Production of folic acid Rebalance of intestinal microbiota	**Human pilot clinical trial** Strozzi GP. and Mogna L. Quantification of folic acid in human faeces after administration of *Bifidobacterium* probiotic strains. Journal of Clinical Gastroenterology, 2008; 42:S179-S184. **Animal model study** Pompei A. et al. Administration of Folate-Producing Bifidobacteria Enhances Folate Status in Wistar Rats. Journal of Nutrition, 2007; 137:2742-2746. **In vitro study** Pompei A. et al. Folate production by Bifidobacteria as a potential probiotic property. Applied and Environmental Microbiology, 2007; 73(1):179-185	5 billion CFU
Bifidobacterium catenulatum/ pseudocatenulatum **BA03 (DSM 18350)**	FP	Production of folic acid Rebalance of intestinal microbiota	**Human pilot clinical trial** Strozzi GP. and Mogna L. Quantification of folic acid in human faeces after administration of *Bifidobacterium* probiotic strains. Journal of Clinical Gastroenterology, 2008; 42:S179-S184. **Animal model study** Pompei A. et al. Administration of Folate-Producing Bifidobacteria Enhances Folate Status in Wistar Rats. Journal of Nutrition, 2007; 137:2742-2746. **In vitro study** Pompei A. et al. Folate production by Bifidobacteria as a potential probiotic property. Applied and Environmental Microbiology, 2007; 73(1):179-185	5 billion CFU

Bifidobacterium Strains

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Bifidobacterium breve **BR03 (DSM 16604)** new study	RM	Rebalance of intestinal microbiota Intestinal transit Reduction of gastro-intestinal discomfort Inhibition of *E. coli*, including toxinogenic O157:H7 Immunomodulatory activity in asthmatic subjects	**Human clinical trials** 1) Del Piano M. et al. The use of probiotics in the treatment of constipation in the elderly CIBUS, 2005; 1(1):23-30. 2) Del Piano M. et al. Evaluation of the intestinal colonization by microencapsulated probiotic bacteria in comparison with the same uncoated strains. J Clin Gastroenterol. 2010; 44 Suppl 1:S42-6. 3) Del Piano M. et al. Is microencapsulation the future of probiotic preparations? The increased efficacy of gastro-protected probiotics. Gut Microbes. 2011; 2(2):120-3 **In vitro studies** a) Nicola S. et al. Interaction between probiotics and human immune cells: the prospective anti-inflammatory activity of *Bifidobacterium breve* BR03. AgroFOOD, 2010; 21(2):S44-47. b) Mogna L. et al. Assessment of the in vitro inhibitory activity of specific probiotic bacteria against different *Escherichia coli* strains. J Clin Gastroenterol. 2012; 46 Suppl:S29-32. c) Drago L. et al. Immunomodulatory effects of *Lactobacillus salivarius* LS01 and *Bifidobacterium breve* BR03, alone and in combination, on peripheral blood mononuclear cells of allergic asthmatics. Allergy Asthma Immunol Res. 2015 July; 7(4):409-413	1) 10 billion CFU (uncoated) 2,3) 5 billion CFU (uncoated) 1 billion cells (microencapsu-lated)
Bifidobacterium catenulatum/ pseudocatenulatum **BC01 (DSM 18353)**	RM (on demand)	Production of folic acid Rebalance of intestinal microbiota	**Human pilot clinical trial** Strozzi GP. and Mogna L. Quantification of folic acid in human faeces after administration of *Bifidobacterium* probiotic strains. Journal of Clinical Gastroenterology, 2008; 42:S179-S184. **Animal model study** Pompei A. et al. Administration of Folate-Producing Bifidobacteria Enhances Folate Status in Wistar Rats. Journal of Nutrition, 2007; 137:2742-2746. **In vitro study** Pompei A. et al. Folate production by Bifidobacteria as a potential probiotic property. Applied and Environmental Microbiology, 2007; 73(1):179-185	5 billion CFU

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***Bifidobacterium animalis* subsp. *lactis* BS01 (LMG P-21384)**	RM	Rebalance of intestinal microbiota Intestinal transit Reduction of gastrointestinal discomfort	**Human clinical trials** 1) Del Piano M. et al. The use of probiotics in the treatment of constipation in the elderly. CIBUS, 2005; 1(1):23-30. 2) Del Piano M. et al. The use of probiotics in healthy volunteers with evacuation disorders and hard stools. A double blind, randomized, placebo-controlled study. Journal of Clinical Gastroenterology, 2010; 44(8):S30-34. 3) Del Piano M. et al. Comparison of the kinetics of intestinal colonization by associating 5 probiotic bacteria assumed either in a microencapsulated or in a traditional, uncoated form. J Clin Gastroenterol. 2012; 46 Suppl:S85-92.	1) 10 billion CFU 2) 5 billion CFU 3) 5 billion CFU (uncoated) 1 billion cells (microencapsulated)
new study ***Bifidobacterium breve* B632 (DSM 24706)**	FP	Inhibition of *Klebsiella pneumoniae* and of other coliforms isolated from colicky infants Rebalance of intestinal microbiota Reduction of gastro-intestinal discomfort Inhibition of *E. coli*	**In vitro studies** 1) Aloisio I. et al. Characterization of *Bifidobacterium* spp. strains for the treatment of enteric disorders in newborns. Appl Microbiol Biotechnol. 2012; 96(6):1561-76. 2) Mogna L. et al. Assessment of the in vitro inhibitory activity of specific probiotic bacteria against different *Escherichia coli* strains. J Clin Gastroenterol. 2012; 46 Suppl:S29-32. 3) Simone M. et al. The probiotic *Bifidobacterium breve* B632 Inhibited the Growth of *Enterobacteriaceae* within Colicky Infant Microbiota Cultures. Biomed Res Int. 2014; 2014:301053.	
***Bifidobacterium bifidum* BB01 (DSM 19818)**	RM	Rebalance of intestinal microbiota		

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Bifidobacterium bifidum **MB109 (DSM 23731)**	FP	Cardiovascular health Cholesterol lowering	**Human clinical trial** Guardamagna O. et al. Bifidobacteria supplementation: effects on plasma lipid profile in dyslipidemic children. Nutrition (2014), doi: 10.1016/j.nut.2014.01.014. **In vitro and animal model studies** Bordoni A. et al. Cholesterol-lowering probiotics: in vitro selection and in vivo testing of bifidobacteria. Appl Microbiol Biotechnol 2013; 97:8273-81.	1 billion CFU
Bifidobacterium breve **MB113 (DSM 23732)**	FP			1 billion CFU
Bifidobacterium lactis **MB2409 (DSM 23733)**	FP	Cardiovascular health Cholesterol lowering	**In vitro and animal model studies** Bordoni A. et al. Cholesterol-lowering probiotics: in vitro selection and in vivo testing of bifidobacteria. Appl Microbiol Biotechnol 2013; 97:8273-81. (BB06 and BS07 mentioned rispectively as MB107 as MB243)	
Bifidobacterium bifidum **BB06 (DSM 24688)**	FP			
Bifidobacterium lactis **BS07 (DSM 24690)**	FP			
Bifidobacterium infantis **BI02 (DSM 24687)**	RM	Cardiovascular health Cholesterol lowering	**In vitro study**	

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Bifidobacterium longum **BL03 (DSM 16603)**	RM	Rebalance of intestinal microbiota Intestinal transit	**Human clinical trial** Del Piano M. et al. The use of probiotics in the treatment of constipation in the elderly. CIBUS, 2005; 1(1):23-30.	10 billion CFU
Bifidobacterium longum **BL04 (DSM 23233)**	FP	Restoration of a better dietary ω-6/ω-3 balance Conjugated linoleic acids (CLA) production Prospective use in the treatment of obesity	**Human clinical trial** Guardamagna O. et al. Bifidobacteria supplementation: effects on plasma lipid profile in dyslipidemic children. Nutrition (2014), doi: 10.1016/j.nut.2014.01.014.	1 billion CFU
Bifidobacterium breve **BR03 (DSM 16604)** ***Bifidobacterium breve*** **BR04 (DSM 16596)** ***Bifidobacterium longum*** **BL05 (DSM 23234)**	RM FP FP	Restoration of a better dietary ω-6/ω-3 balance Conjugated linoleic acids (CLA) production Prospective use in the treatment of obesity	**In vitro study** Patent Application WO/2011/073769. Conjugated linoleic acid-producing strains of probiotic bacteria and use thereof for the preparation of a food, dietetic or pharmaceutical composition.	
Bifidobacterium lactis **BS05 (DSM 23032)** new study	FP	Antioxidant activity Reduced glutathione (GSH) and superoxide dismutase (SOD) production	**In vitro and animal model studies** Amaretti A. et al. Antioxidant properties of potentially probiotic bacteria: in vitro and in vivo activities. Appl Microbiol Biotechnol. 2013; 97(2):809-17. **Human clinical trial** under publication	

Bifidobacterium Strains

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***Bifidobacterium animalis* subsp. *lactis* Bb1 (DSM 17850)** (under worldwide exclusive license from BIOMAN for nutraceutical and pharma applications)	RM	Organic zinc from probiotic strain allergen free with High Bioavailability: - Normal function of the immune system - Normal DNA synthesis and cell division - Protection of DNA, proteins and lipids from oxidative damage - Maintenance of normal bone - Normal cognitive function	**In vitro study** Mogna L. et al. Selenium and zinc internalized by *Lactobacillus buchneri* Lb26 (DSM 16341) and *Bifidobacterium lactis* Bb1 (DSM 17850): improved bioavailability using a new biological approach. J Clin Gastroenterol. 2012; 46 Suppl:S41-5.	
new study ***Bifidobacterium longum* W11**	RM	Reduction of gastro-intestinal discomfort related to IBS Rebalance of intestinal microbiota Non-transmissible ryfamycins resistance	**Human clinical trials** 1) Amenta M. et al. Diet and chronic constipation. Benefits of oral supplementation with symbiotic zir fos (*Bifidobacterium longum* W11 + FOS Actilight). Acta Biomed 2006; 77(3):157-62 2) Colecchia A. et al. Symbiotic Study Group. Effect of a symbiotic preparation on the clinical manifestations of irritable bowel syndrome, constipation-variant. Results of an open, uncontrolled multicenter study. Minerva Gastroenterol Dietol 2006; 52(4):349-58 3) Fanigliulo L. et al. Role of gut microflora and probiotic effects in the irritable bowel syndrome. Acta Biomed 2006; 77(2):85-9 4) Sarnelli G. et al. Effects of oral supplementation with the symbiotic (*Bifidobacterium longum* W11 + FOS Actilight) on IBS with constipation: a randomized, dose finding trial, versus fibers. Digestive and Liver Disease 2008; 40(1):S141. 5) Malaguarnera M. et al. *Bifidobacterium longum* with fructo-oligosaccharides (FOS) treatment in minimal hepatic encephalopathy: a randomized, double-blind, placebo-controlled study. Dig Dis Sci 2007; 52:3259-3265 6) Dughera L. et al. Effects of symbiotic preparation on constipated irritable bowel syndrome symptoms. Acta Biomed 2007; 78:111-116 **In vitro study** Graziano T. et al. The possible innovative use of *Bifidobacterium longum* W11 in association with rifaximin: a new horizon for combined approach? Publication in progress in a Supplement to the Journal of Clinical Gastroenterology.	1,2,3,4,5,6) 5 billion CFU + FOS

Lactobacillus Strains

STRAIN ID and INTERNATIONAL COLLECTION DEPOSIT NUMBER	AVAILABLE as: RAW MATERIAL (RM) FINISHED PRODUCT (FP)	FUNCTIONALITY	SCIENTIFIC SUPPORT	DAILY DOSAGE IN CLINICAL STUDY
Lactobacillus acidophilus **LA02 (DSM 21717)**	RM	Rebalance of intestinal microbiota Reduction of gastrointestinal discomfort	**Human clinical trial** Del Piano M. et al. Comparison of the kinetics of intestinal colonization by associating 5 probiotic bacteria assumed either in a microencapsulated or in a traditional, uncoated form. J Clin Gastroenterol. 2012; 46 Suppl:S85-92.	5 billion CFU (uncoated) 1 billion cells (microencapsu-lated)
Lactobacillus buchneri **Lb26 (DSM 16341)** (under worldwide exclusive license from BIOMAN for nutraceutical and pharma applications)	RM	Carrier of selenium with high bioavailability Organic selenium from probiotic strain allergen free with High Bioavailability: - Protection of DNA, proteins and lipids from oxidative damage - Normal function of the immune system - Normal thyroid function - Normal spermatogenesis - Maintenance of normal hair and nails	**In vitro study** Mogna L. et al. Selenium and zinc internalized by *Lactobacillus buchneri* Lb26 (DSM 16341) and *Bifidobacterium lactis* Bb1 (DSM 17850): improved bioavailability using a new biological approach. J Clin Gastroenterol. 2012; 46 Suppl:S41-5.	

Lactobacillus Strains

STRAIN ID and INTERNATIONAL COLLECTION DEPOSIT NUMBER	AVAILABLE as: RAW MATERIAL (RM) FINISHED PRODUCT (FP)	FUNCTIONALITY	SCIENTIFIC SUPPORT	DAILY DOSAGE IN CLINICAL STUDY
***Lactobacillus fermentum* ME-3** (under license from the University of Tartu for food applications)	RM	Immune health Cardiovascular health Antioxidant	**Many human clinical trials are available**	
***Lactobacillus kefiri* LKF01 (DSM 32079)** new	RM	Rebalance of intestinal microbiota High adhesive capacity	**In vitro data**	
***Lactobacillus salivarius* subsp. *salivarius* CRL 1328** (under worldwide exclusive license from the CEntro de REferencia para LActobacilos, Argentina)	RM	Vaginal health Prevention of urogenital infections Aggregation with Candida	**In vitro studies** 1) Ocana V. and Nader-Macias ME. Adhesion of *Lactobacillus* vaginal strains with probiotic properties to vaginal epithelial cells. Biocell, 2001; 25(3):265-273; 2) Zàrate G. and Nader-Macias ME. Influence of probiotic vaginal lactobacilli on in vitro adhesion of urogenital pathogens to vaginal epithelial cells. Letters in Applied Microbiology ISSN 0266-8254; 3) Ocana V. and Nader-Macias ME. Vaginal lactobacilli: self- and co-aggregating ability. British Journal of Biomedical Science, 2002; 59(4); 4) Ocana V. et al. Characterization of a bacteriocin-like substance produced by a vaginal *Lactobacillus salivarius* strain. Applied and Environmental Microbiology, 1999; 65(12):5631-5635; 5) Ocana V. et al. Surface characteristics of lactobacilli isolated from human vagina. J. Gen. Appl. Microbiol., 1999; 45:203-212; 6) Tomas MSJ. et al. Influence of pH, temperature and culture media on the growth and bacteriocin production by vaginal *Lactobacillus salivarius* CRL 1328. Journal of Applied Microbiology, 2002; 93: 714-724; 7) Tomas MSJ. et al. Characterization of potentially probiotic vaginal lactobacilli isolated from Argentinean women. British Journal of Biomedical Science, 2005; 62(4).	

Lactobacillus Strains

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Lactobacillus crispatus **CRL 1266** (under worldwide exclusive license from the CERELA)	FP	Vaginal health Production of hydrogen peroxide	**In vitro studies** 1) Ocana V. and Nader-Macias ME. Adhesion of *Lactobacillus* vaginal strains with probiotic properties to vaginal epithelial cells. Biocell, 2001; 25(3):265-273; 2) Zàrate G. and Nader-Macias ME. Influence of probiotic vaginal lactobacilli on in vitro adhesion of urogenital pathogens to vaginal epithelial cells. Letters in Applied Microbiology ISSN 0266-8254; 3) Tomas MSJ. et al. Comparison of the growth and hydrogen peroxide production by vaginal probiotic lactobacilli under different culture conditions. Am J Obstet Gynecol, 2003; 188(1): 35-44; 4) Ocana VS. et al. Selection of vaginal H2O2-generating *Lactobacillus* species for probiotic use. Current Microbiology, 1999; 38: 279-84.	
Lactobacillus paracasei **subsp. *paracasei* CRL 1289** (under worldwide exclusive license from the CERELA)	FP	Vaginal health Inhibition of *Staphyloccocus aureus*	**Animal model study** Zarate G. et al. Protective Effect of Vaginal *Lactobacillus paracasei* CRL 1289 against Urogenital Infection Produced by *Staphylococcus aureus* in a Mouse Animal Model. Infect Dis Obstet Gynecol. 2009;2009:48358. **In vitro studies** 1) Ocana VS. et al. Selection of vaginal H2O2-generating *Lactobacillus* species for probiotic use. Current Microbiology, 1999; 38: 279-84; 2) Zàrate G. and Nader-Macias ME. Influence of probiotic vaginal lactobacilli on in vitro adhesion of urogenital pathogens to vaginal epithelial cells. Letters in Applied Microbiology ISSN 0266-8254; 3) Ocana VS. et al. Growth inhibition of *Staphylococcus aureus* by H2O2-producing *Lactobacillus paracasei* subsp. *paracasei* isolated from the human vagina. FEMS Immunology and Medical Microbiology, 1999; 23:87-92.	

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Lactobacillus gasseri **CRL 1259** (under worldwide exclusive license from the CERELA)	FP	Vaginal health Production of lactic acid	**In vitro studies** 1) Tomas MSJ. et al. Growth and lactic acid production by vaginal *Lactobacillus acidophilus* CRL 1259, and inhibition of uropathogenic *Escherichia coli*. Journal of Medical Microbiology, 2003; 52:1-8; 2) Ocana V. and Nader-Macias ME. Adhesion of *Lactobacillus* vaginal strains with probiotic properties to vaginal epithelial cells. Biocell, 2001; 25(3): 265-273; 3) Tomas MSJ. et al. Characterization of potentially probiotic vaginal lactobacilli isolated from Argentinean women. British Journal of Biomedical Science, 2005; 62(4); 4) Zàrate G. and Nader-Macias ME. Influence of probiotic vaginal lactobacilli on in vitro adhesion of urogenital pathogens to vaginal epithelial cells. Letters in Applied Microbiology ISSN 0266-8254.	
Lactobacillus plantarum **LP02 (LMG P-21020)**	RM	Intestinal transit Inhibition of *E. coli*	**In vitro study** Mogna L. et al. Assessment of the in vitro inhibitory activity of specific probiotic bacteria against different *Escherichia coli* strains. J Clin Gastroenterol. 2012; 46 Suppl:S29-32.	
Lactobacillus delbrueckii **subsp. *bulgaricus*** **LDB01 (DSM 16606)**	RM (on demand)	Rebalance of intestinal microbiota		
Lactobacillus rhamnosus **LR04 (DSM 16605)**	RM	Rebalance of intestinal microbiota Intestinal transit	**Human clinical trials** 1) Dezi A. et al. Probiotics and chronic diarrhea in the elderly. CIBUS, 2004; 8(2):58-64. 2) Del Piano M. et al. Comparison of the kinetics of intestinal colonization by associating 5 probiotic bacteria assumed either in a microencapsulated or in a traditional, uncoated form. J Clin Gastroenterol. 2012; 46 Suppl:S85-92.	1) 10 billion CFU 2) 5 billion CFU (uncoated) 1 billion cells (microencapsu-lated)

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Lactobacillus pentosus **LPS01 (DSM 21980)**	RM	Inhibition of *E. coli*, including toxinogenic O157:H7 Strengthening of natural defences and natural immunity	**In vitro studies presented in 2009 and in 2010** (Probiotic Congress, Rome, Italy) 1) Nicola S. et al. Interaction between probiotics and human immune system: two strains with reverse immunomodulatory activities. (IPA World Congress, Miami, USA) 2) Nicola S. et al. *Bifidobacterium breve* BR03 and *Lactobacillus pentosus* LPS01 differentially regulate cytokines release in human peripheral blood mononuclear cells. **In vitro study** Mogna L. et al. Assessment of the in vitro inhibitory activity of specific probiotic bacteria against different *Escherichia coli* strains. J Clin Gastroenterol. 2012; 46 Suppl:S29-32.	
Lactobacillus brevis new study **LBR01 (DSM 23034)** ***Lactobacillus acidophilus*** new study **LA06 (DSM 23033)**	RM (on demand) FP	Antioxidant activity Reduced glutathione (GSH) and superoxide dismutase (SOD) production	**In vitro and animal model studies** Amaretti A. et al. Antioxidant properties of potentially probiotic bacteria: in vitro and in vivo activities. Appl Microbiol Biotechnol. 2013; 97(2):809-17. **Human clinical trial** under publication	
Lactobacillus crispatus **LCR01 (DSM 24619)**	RM (on demand)	Vaginal health Rebalance of a healthy vaginal microbiota		
Lactobacillus plantarum **LP03 (LMG P-21022)** ***Lactobacillus plantarum*** **LP04 (LMG P-21023)**	RM (on demand) RM (on demand)	Activity against *Listeria monocytogenes* ATCC 19112 and *Escherichia coli* ATCC 35218	**In vitro study**	

Lactobacillus Strains

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new study ***Lactobacillus delbrueckii*** **subsp. *delbrueckii* LDD01 (DSM 22106)**	FP	Rebalance of intestinal microbiota Reduction of gastro-intestinal discomfort Inhibition of *E. coli*, including toxinogenic O157:H7 Inhibition of *Klebsiella pneumoniae* and of different coliforms isolated from colicky infants	**In vitro studies** 1) Mogna L. et al. Assessment of the in vitro inhibitory activity of specific probiotic bacteria against different *Escherichia coli* strains. J Clin Gastroenterol. 2012; 46 Suppl:S29-32. 2) Savino F. et al. Antagonistic effect of *Lactobacillus* strains against gas-producing coliforms isolated from colicky infants. BMC Microbiol. 2011; 11:157. 3) Mogna L. et al. In vitro inhibition of *Klebsiella pneumoniae* by *Lactobacillus delbrueckii* subsp. *delbrueckii* LDD01 (DSM 22106): an innovative strategy to possibly counteract such infections in humans? Publication in progress in a Supplement to the Journal of Clinical Gastroenterology.	
new study ***Lactobacillus salivarius*** **subsp. *salivarius* LS01 (DSM 22775)**	FP	Rebalance of intestinal microbiota Skin health Improvement of the Quality of Life in subjects with Atopic Dermatitis Immunomodulatory activity in asthmatic subjects	**Human clinical trials** 1) Drago L. et al. Effects of *Lactobacillus salivarius* LS01 (DSM 22775) treatment on adult atopic dermatitis: a randomized placebo-controlled study. Int J Immunopathol Pharmacol. 2011; 24(4):1037-48. 2) Drago L. et al. Changing of fecal flora and clinical effect of *L. salivarius* LS01 in adults with atopic dermatitis. J Clin Gastroenterol. 2012; 46 Suppl:S56-63. 3) Niccoli A. et al. Preliminary results on clinical effects of probiotic *Lactobacillus salivarius* LS01 in children affected by atopic dermatitis. J Clin Gastroenterol. 2014; 48 Suppl:S34-36 4) Drago L. et al. Treatment of atopic dermatitis eczema with a high concentration of *Lactobacillus salivarius* LS01 associated with an innovative gelling complex. J Clin Gastroenterol. 2014; 48 Suppl:S47-51 **In vitro studies** a) Drago L. et al. Strain-dependent release of cytokines modulated by *Lactobacillus salivarius* human isolates in an in vitro model. BMC Res Notes. 2010; 3:44. b) Drago L. et al. Immunomodulatory effects of *Lactobacillus salivarius* LS01 and *Bifidobacterium breve* BR03, alone and in combination, on peripheral blood mononuclear cells of allergic asthmatics. Allergy Asthma Immunol Res. 2015 July; 7(4):409-413	1,2,3) 2 billion CFU 4) 5 billion CFU + 2 billion CFU of *Streptococcus thermophilus* ST10 + Tara gum

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Lactobacillus paracasei **LPC09 (DSM 24243)** new study	FP	Oxalate degradation Reduction of intestinal inflammation Potential reduction of kidney stones incidence Reduction of gastrointestinal discomfort	**In vitro study** Mogna L. et al. Screening of different probiotic strains for their in vitro ability to metabolise oxalates: any prospective use in humans? J Clin Gastroenterol. 2014; 48 Suppl:S91-95	
Lactobacillus gasseri **LGS01 (DSM 18299)** new study	FP			
Lactobacillus gasseri **LGS02 (DSM 18300)** new study	FP			
Lactobacillus acidophilus **LA07 (DSM 24303)** new study	FP			
Lactobacillus acidophilus **LA02 (DSM 21717)** new study	RM			
Lactobacillus rhamnosus **LR05 (DSM 19739)**	RM	Rebalance of intestinal microbiota	**In vitro study** Nicola S. In vitro evaluation of the immunomodulating properties of the strain *Lactobacillus rhamnosus* LR05 (DSM 19739)	

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Lactobacillus rhamnosus **LR06 (DSM 21981)**	RM	Rebalance of intestinal microbiota Inhibition of *E. coli,* including toxinogenic O157:H7	**Human clinical trial** Del Piano M. et al. Comparison of the kinetics of intestinal colonization by associating 5 probiotic bacteria assumed either in a microencapsulated or in a traditional, uncoated form. J Clin Gastroenterol. 2012; 46 Suppl:S85-92. **In vitro study** Mogna L. et al. Assessment of the in vitro inhibitory activity of specific probiotic bacteria against different *Escherichia coli* strains. J Clin Gastroenterol. 2012; 46 Suppl:S29-32.	5 billion CFU (uncoated) 1 billion cells (microencapsu-lated)
Lactobacillus fermentum **LF10 (DSM 19187)** new study	FP	Vaginal health Inhibition of Candida strains Counteraction of vulvovaginal candidiasis (VVC)	**Human clinical trials** 1)Vicariotto F. et al. Effectiveness of the association of 2 probiotic strains formulated in a slow release vaginal product, in women affected by vulvovaginal candidiasis: a pilot study. J Clin Gastroenterol. 2012; 46 Suppl:S73-80 2) Murina F. et al. Can *Lactobacillus fermentum* LF10 and *Lactobacillus acidophilus* LA02 in a Slow-release Vaginal Product be Useful for Prevention of Recurrent Vulvovaginal Candidiasis? J Clin Gastroenterol. 2014; 48 Suppl:S102-105 **In vitro study** Deidda F. et al. In vitro effectiveness of *Lactobacillus fermentum* against different *Candida* species compared with broadly used azoles. Publication in progress in a Supplement to the Journal of Clinical Gastroenterology.	1,2) 400 million CFU
Lactobacillus fermentum **LF11 (DSM 19188)** new study	FP	Vaginal health Inhibition of Candida strains Counteraction of vulvovaginal candidiasis (VVC)	**In vitro study** Deidda F. et al. In vitro effectiveness of *Lactobacillus fermentum* against different *Candida* species compared with broadly used azoles. Publication in progress in a Supplement to the Journal of Clinical Gastroenterology. **In vitro data** Vicariotto F. et al. Effectiveness of the association of 2 probiotic strains formulated in a slow release vaginal product, in women affected by vulvovaginal candidiasis: a pilot study. J Clin Gastroenterol. 2012; 46 Suppl:S73-80	800 million CFU

Lactobacillus Strains

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Lactobacillus fermentum **LF5 (CNCM I-789) (API)** new study	FP	Vaginal health Inhibition of Candida strains Treatment of vulvovaginal candidiasis (VVC)	**Human clinical trials** 1) Gigliotti B., Dose range finding study in patients suffering from *Candida albicans* ("A. Segni" Hospital, Italy, 1992) 2) Donini G., Clinical study compared with a placebo in patients suffering from *Candida albicans* ("S. Salvatore" Hospital, Italy, 1992) 3) Iannino A., Clinical study compared with a miconazole treatment in patients suffering from *Candida albicans* ("Civitanova Marche" Hospital, Italy, 1992) 4) Rovere F., Local tolerability and activity study in patients suffering from *Candida albicans* ("Delmati2 Hospital, Italy, 1992) **In vitro study** under publication	1,2,3,4) 1 billion CFU
Lactobacillus fermentum **LF8 (DSM 18297)** new	RM (on demand)	Inhibition of Candida strains	**In vitro data**	
Lactobacillus fermentum **LF9 (DSM 18298)**	FP	Restoration of a physiological gut barrier Inhibition of Candida growth Strain from brushing of the gut mucosa	**In vitro data**	

Lactobacillus Strains

STRAIN ID and INTERNATIONAL COLLECTION DEPOSIT NUMBER	AVAILABLE as: RAW MATERIAL (RM) FINISHED PRODUCT (FP)	FUNCTIONALITY	SCIENTIFIC SUPPORT	DAILY DOSAGE IN CLINICAL STUDY
Lactobacillus fermentum **LF15 (DSM 26955)** new study	FP	Vaginal health Inhibition of *Gardnerella vaginalis* Counteraction of Bacterial Vaginosis (BV)	**Human clinical trial** Vicariotto F. et al. Effectiveness of the two microorganisms *L. fermentum* LF15 and *L. plantarum* LP01, formulated in slow release vaginal tablets, in women affected by Bacterial Vaginosis: a pilot study. J Clin Gastroenterol. 2014; 48 Suppl:S106-112. **In vitro study** Deidda F. et al. In vitro effectiveness of *Lactobacillus fermentum* against different *Candida* species compared with broadly used azoles. Publication in progress in a Supplement to the Journal of Clinical Gastroenterology.	400 million CFU
Lactobacillus fermentum **LF16 (DSM 26856)**	FP	Vaginal health Inhibition of Candida growth	**In vitro data**	
Lactobacillus rhamnosus **GG (ATCC 53103)** (Valio authorised producer)	RM	One of the most recognized probiotic strains in the world. **Many human clinical trials are available** Del Piano M. et al. Comparison of the kinetics of intestinal colonization by associating 5 probiotic bacteria assumed either in a microencapsulated or in a traditional, uncoated form. J Clin Gastroenterol. 2012; 46 Suppl:S85-92.	5 billion CFU (uncoated) 1 billion cells (microencapsu-lated)
Lactobacillus rhamnosus **GG (ATCC 53103) Active Pharmaceutical Ingredient** (under license from VALIO)	RM		

Lactobacillus Strains

STRAIN ID and INTERNATIONAL COLLECTION DEPOSIT NUMBER	AVAILABLE as: RAW MATERIAL (RM) FINISHED PRODUCT (FP)	FUNCTIONALITY	SCIENTIFIC SUPPORT	DAILY DOSAGE IN CLINICAL STUDY
Lactobacillus plantarum **LP01 (LMG P-21021)**	RM	Reduction of gastro-intestinal discomfort Rebalance of intestinal microbiota Intestinal transit Inhibition of *E. coli* Activity against *Listeria monocytogenes* ATCC 19112, *Enterococcus* sp. (newborn faeces), *Klebsiella* sp. (newborn faeces)	**Human clinical trials** 1) Del Piano M. et al., The use of probiotics in the treatment of constipation in the elderly. CIBUS, 2005; 1(1):23-30. 2) Del Piano M. et al. Evaluation of the intestinal colonization by microencapsulated probiotic bacteria in comparison with the same uncoated strains. J Clin Gastroenterol. 2010; 44 Suppl 1:S42-6. 3) Del Piano M. et al. Is microencapsulation the future of probiotic preparations? The increased efficacy of gastro-protected probiotics. Gut Microbes. 2011; 2(2):120-3 **In vitro study presented in 2009** (Probiotic Congress, Rome, Italy) Nicola S. et al. Interaction between probiotics and human immune system: two strains with reverse immunomodulatory activities. **In vitro study** Mogna L. et al. Assessment of the in vitro inhibitory activity of specific probiotic bacteria against different *Escherichia coli* strains. J Clin Gastroenterol. 2012; 46 Suppl:S29-32.	1) 10 billion CFU 2,3) 5 billion CFU (uncoated) 1 billion cells (microencapsulated)
Lactobacillus plantarum **LP09 (DSM 25710)**	RM	Inhibition of *Listeria monocytogenes* Possible use as starter culture in the production of cheese and other milk derivatives	**In vitro data**	
Lactobacillus casei **LC03 (DSM 27537)**	RM	Rebalance of intestinal microbiota		

Lactobacillus Strains

STRAIN ID and INTERNATIONAL COLLECTION DEPOSIT NUMBER	AVAILABLE as: RAW MATERIAL (RM) FINISHED PRODUCT (FP)	FUNCTIONALITY	SCIENTIFIC SUPPORT	DAILY DOSAGE IN CLINICAL STUDY
Lactobacillus paracasei **subsp. *paracasei* LPC00 (LMG P-21380)**	RM	Rebalance of intestinal microbiota Production of riboflavin	**In vitro study** Prof. Francesco Addeo, University of Naples "Federico II", Department of Food Science	
Lactobacillus salivarius **sub. *salivarius* LS03 (DSM 22776)**	RM (on demand)	Strong adhesion to the intestinal mucosa Immunomodulation	**In vitro study**	
Lactobacillus reuteri **LRE02 (DSM 23878)**	RM	Production of riboflavin	**In vitro study**	
Lactobacillus reuteri **LRE01 (DSM 23877)** ***Lactobacillus reuteri*** **LRE04 (DSM 23880)**	RM (on demand) RM (on demand)	Rebalance of intestinal microbiota		
Lactobacillus reuteri **LRE03 (DSM 23879)**	FP	Rebalance of intestinal microbiota Strengthening of natural defences and natural immunity	**In vitro study**	

Streptococcus Thermophilus

STRAIN ID and INTERNATIONAL COLLECTION DEPOSIT NUMBER	AVAILABLE as: RAW MATERIAL (RM) FINISHED PRODUCT (FP)	FUNCTIONALITY	SCIENTIFIC SUPPORT	DAILY DOSAGE IN CLINICAL STUDY
***Streptococcus thermophilus* ST10 (DSM 25246)** new study	FP	Production of exopolysaccharides (EPS) in the gut Restoration of a physiological intestinal barrier	**Human clinical trial** Del Piano M. et al. Assessment of the capability of a gelling complex made of tara gum and the exopolysaccharides (EPS) produced by the microorganisms *Streptococcus thermophilus* ST10 (DSM 25246) to prospectively restore the gut physiological barrier: a pilot study. J Clin Gastroenterol. 2014; 48 Suppl:S56-61.	1 billion CFU
***Streptococcus thermophilus* YO8 (DSM 17843)**	RM	Reduction of the bean flavour in a fermented soy milk	**In vitro study** Patent Application WO/2009/106536. Fermented soymilk and method for improving the organoleptic properties of fermented soymilk.	
***Streptococcus thermophilus* YO5 (DSM 16593)**	RM			
***Streptococcus thermophilus* YO3 (DSM 16591)**	RM			
***Streptococcus thermophilus* YO4 (DSM 16592)**	RM	Use in cow's milk as yogurt starter culture		
***Streptococcus thermophilus* FP4 (DSM 18616)**	RM	Potential reduction of the incidence of allergies		

Blends

STRAIN ID and INTERNATIONAL COLLECTION DEPOSIT NUMBER	AVAILABLE as: RAW MATERIAL (RM) FINISHED PRODUCT (FP)	FUNCTIONALITY	SCIENTIFIC SUPPORT	DAILY DOSAGE IN CLINICAL STUDY
***Bifidobacterium breve* BR03 (DSM 16604) + *Lactobacillus plantarum* LP01 (LMG P-21021)**	RM	Rebalance of intestinal microbiota Intestinal transit Reduction of gastro-intestinal discomfort Inhibition of *E. coli,* including toxinogenic O157:H7 Contributes to restore the gut physiological barrier	**Human clinical trials** 1) Saggioro A. Probiotics in the treatment of Irritable Bowel Syndrome. Journal of Clinical Gastroenterology, 2004; 38(8): S104-106. 2) Del Piano et al. Evaluation of the intestinal colonization by microencapsulated probiotic bacteria in comparison to the same uncoated strains. Journal of Clinical Gastroenterology, 2010; 44(8):S42-46. 3) Del Piano et al. The use of probiotics in healthy volunteers with evacuation disorders and hard stools. A double blind, randomized, placebo-controlled study. Journal of Clinical Gastroenterology, 2010; 44(8):S30-34. 4) Del Piano M. et al. Is microencapsulation the future of probiotic preparations? The increased efficacy of gastro-protected probiotics. Gut Microbes. 2011; 2(2):120-3. **In vitro study** Mogna L. et al. Assessment of the in vitro inhibitory activity of specific probiotic bacteria against different *Escherichia coli* strains. J Clin Gastroenterol. 2012; 46 Suppl:S29-32.	1) 5 billion CFU + 5 billion CFU 2,4) 5 billion CFU/ strain (uncoated form) vs. 1 billion cells/strain (microencapsulated form) 3) 2.5 billion CFU + 2.5 billion CFU

Blends

STRAIN ID and INTERNATIONAL COLLECTION DEPOSIT NUMBER	AVAILABLE as: RAW MATERIAL (RM) FINISHED PRODUCT (FP)	FUNCTIONALITY	SCIENTIFIC SUPPORT	DAILY DOSAGE IN CLINICAL STUDY
Lactobacillus acidophilus **LA02 (DSM 21717)** **+** ***Lactobacillus plantarum*** **LP01 (LMG P-21021)**	RM	Reduction of gastro-intestinal discomfort Rebalance of intestinal microbiota	**Human clinical trial** Saggioro A. Probiotics in the treatment of Irritable Bowel Syndrome. Journal of Clinical Gastroenterology, 2004; 38(8): S104-106. **In vitro study** Nicola S. et al. Immunomodulation properties of *Lactobacillus plantarum* LP01 (LMG P-21021) and *Lactobacillus acidophilus* LA02 (DSM 21717) blend.	5 billion CFU + 5 billion CFU
Bifidobacterium animalis **subsp.** ***lactis*** **BS01 (LMG P-21384)** **+** ***Lactobacillus rhamnosus*** **LR04 (DSM 16605)** **+** ***Lactobacillus plantarum*** **LP02 (LMG P-21020)**	RM	Reinforcement of the natural defences Reduction of the intestinal discomfort Rebalance of the intestinal microbiota Reduction of the incidence, severity and duration of Acute Respiratory Infections (ARI) during the cold season	**Human clinical trial** Pregliasco F, Anselmi G, Fonte L, Giussani F, Schieppati S, Soletti L. A New Chance of Preventing Winter Diseases by the Administration of Symbiotic Formulations. Journal of Clinical Gastroenterology, 2008; 42(2): 224-233.	10 billion CFU + 10 billion CFU + 10 billion CFU + FOS

Blends

STRAIN ID and INTERNATIONAL COLLECTION DEPOSIT NUMBER	AVAILABLE as: RAW MATERIAL (RM) FINISHED PRODUCT (FP)	FUNCTIONALITY	SCIENTIFIC SUPPORT	DAILY DOSAGE IN CLINICAL STUDY
Lactobacillus plantarum **LP01 (LMG P-21021)** **+** ***Lactobacillus plantarum*** **LP02 (LMG P-21020)** **+** ***Lactobacillus rhamnosus*** **LR04 (DSM 16605)** **+** ***Lactobacillus rhamnosus*** **LR05 (DSM 19739)** **+** ***Bifidobacterium animalis subsp. lactis*** **BS01 (LMG P-21384)**	FP	Reinforcement of the natural defences Reduction of the intestinal discomfort Rebalance of the intestinal microbiota Reduction of the incidence, severity and duration of Acute Respiratory Infections (ARI) during the cold season	**Human clinical trial** Pregliasco F, Anselmi G, Fonte L, Giussani F, Schieppati S, Soletti L. A New Chance of Preventing Winter Diseases by the Administration of Symbiotic Formulations. Journal of Clinical Gastroenterology, 2008; 42(2): 224-233.	2.5 billion CFU + 2.5 billion CFU + 2.5 billion CFU + 2.5 billion CFU + 5 billion CFU + FOS or GOS
Bifidobacterium breve new **BR03 (DSM 16604)** **+** ***Streptococcus thermophilus*** **FP4 (DSM 18616)**	RM	Immune response improving Performance enhancing	**Human clinical trial** Jäger R. et al. Probiotic supplementation attenuates performance decrements and inflammation following muscle damaging exercise. Under publication	5 billion CFU + 5 billion CFU

Blends

STRAIN ID and INTERNATIONAL COLLECTION DEPOSIT NUMBER	AVAILABLE as: RAW MATERIAL (RM) FINISHED PRODUCT (FP)	FUNCTIONALITY	SCIENTIFIC SUPPORT	DAILY DOSAGE IN CLINICAL STUDY
Bifidobacterium lactis **MB2409 (DSM 23733)** **+** ***Bifidobacterium bifidum*** **MB109 (DSM 23731)** **+** ***Bifidobacterium longum*** **BL04 (DSM 23233)**	FP	Cardiovascular health Cholesterol lowering	**Human clinical trial** Guardamagna O. et al. Bifidobacteria supplementation: effects on plasma lipid profile in dyslipidemic children. Nutrition (2014), doi: 10.1016/j.nut.2014.01.014.	1 billion CFU/ strain
Lactobacillus salivarius **subsp. *salivarius*** **LS01 (DSM 22775)** **+** ***Bifidobacterium breve*** **BR03 (DSM 16604)**	FP	Skin health Rebalance of the intestinal microbiota Improvement of the Quality of Life in subjects with Atopic Dermatitis (AD) Reduce frequency, lenght and intensity of AD sympton Helps to restore the gut barrier function	**Human clinical trial** Iemoli E. et al. Probiotics reduce gut microbial translocation and improve adult atopic dermatitis. J Clin Gastroenterol. 2012; 46 Suppl:S33-40.	2 billion CFU + 2 billion CFU

Blends

STRAIN ID and INTERNATIONAL COLLECTION DEPOSIT NUMBER	AVAILABLE as: RAW MATERIAL (RM) FINISHED PRODUCT (FP)	FUNCTIONALITY	SCIENTIFIC SUPPORT	DAILY DOSAGE IN CLINICAL STUDY
new study ***Lactobacillus rhamnosus*** **LR06 (DSM 21981)** **+** ***Lactobacillus pentosus*** **LPS01 (DSM 21980)** **+** ***Lactobacillus plantarum*** **LP01 (LMG P-21021)** **+** ***Lactobacillus delbrueckii*** **subsp. *delbrueckii* LDD01 (DSM 22106)**	FP	Restoration of a healthy oral flora Improvement of the incidence and severity of bad breath (halitosis)	**Human clinical trial** Del Piano M. et al. Correlation between specific bacterial groups in the oral cavity and the severity of halitosis: any possible beneficial role for selected Lactobacilli? J Gastroint Dig Syst, 2014; 4:197	1.5 billion CFU + 1.5 billion CFU + 1.5 billion CFU + 500 million CFU
new study ***Lactobacillus fermentum*** **LF15 (DSM 26955)** **+** ***Lactobacillus plantarum*** **LP01 (LMG P-21021)**	FP	Vaginal health Inhibition of *Gardnerella vaginalis* Counteraction of Bacterial Vaginosis (BV)	**Human clinical trial** Vicariotto F. et al. Effectiveness of the two microorganisms *L. fermentum* LF15 and *L. plantarum* LP01, formulated in slow release vaginal tablets, in women affected by Bacterial Vaginosis: a pilot study. J Clin Gastroenterol. 2014; 48 Suppl:S106-112.	400 million CFU/strain/tablet + Tara gum + FOS + Arabinogalactan

Blends

STRAIN ID and INTERNATIONAL COLLECTION DEPOSIT NUMBER	AVAILABLE as: RAW MATERIAL (RM) FINISHED PRODUCT (FP)	FUNCTIONALITY	SCIENTIFIC SUPPORT	DAILY DOSAGE IN CLINICAL STUDY
new study ***Bifidobacterium longum* DLBL07 (DSM 25669)** **+** ***Bifidobacterium longum* DLBL08 (DSM 25670)** **+** ***Bifidobacterium longum* DLBL09 (DSM 25671)** **+** ***Bifidobacterium longum* DLBL10 (DSM 25672)** **+** ***Bifidobacterium longum* DLBL11 (DSM 25673)**	FP	Detected and isolated uniquely in centenarians Rebalance of the intestinal microbiota	**Human clinical trial** Drago L. et al. Cultivable and pyrosequenced fecal microflora in centenarians and young subjects. J Clin Gastroenterol. 2012; 46 Suppl:S81-4. **In vitro study** Nicola S. et al. Immunomodulatory properties of *Bifidobacterium longum* DLBL strains isolated from centenarians. Publication in progress in a Supplement to the Journal of Clinical Gastroenterology.	

Blends

STRAIN ID and INTERNATIONAL COLLECTION DEPOSIT NUMBER	AVAILABLE as: RAW MATERIAL (RM) FINISHED PRODUCT (FP)	FUNCTIONALITY	SCIENTIFIC SUPPORT	DAILY DOSAGE IN CLINICAL STUDY
new study ***Lactobacillus fermentum*** **LF10 (DSM 19187)** **+** ***Lactobacillus acidophilus*** **LA02 (DSM 21717)**	FP	Vaginal health Inhibition of Candida strains Innovative effervescent slow release tablet for enhanced delivery and activity of lactobacilli Counteraction of Candida vulvovaginitis	**Human clinical trials** 1) Vicariotto F. et al. Effectiveness of the association of 2 probiotic strains formulated in a slow release vaginal product, in women affected by vulvovaginal candidiasis: a pilot study. J Clin Gastroenterol. 2012; 46 Suppl:S73-80. 2) Murina F. et al. Can *Lactobacillus fermentum* LF10 and *Lactobacillus acidophilus* LA02 in a Slow-release Vaginal Product be Useful for Prevention of Recurrent Vulvovaginal Candidiasis? J Clin Gastroenterol. 2014; 48 Suppl:S102-105	1,2) 400 million CFU/strain/tablet + Carbon dioxide + FOS + Arabinogalactan
new study ***Bifidobacterium breve*** **B632 (DSM 24706)** **+** ***Bifidobacterium breve*** **BR03 (DSM 16604)**	FP	Rebalance of the intestinal microbiota in children and in infants Inhibition of *Klebsiella pneumoniae* and of other coliforms isolated from colicky infants Reduction of gastro-intestinal discomfort Anti-inflammatory activity related to celiac disease	**Human clinical trials** 1) Mogna L. et al. Capability of the two microorganisms *Bifidobacterium breve* B632 and *Bifidobacterium breve* BR03 to colonize the intestinal microbiota of children. J Clin Gastroenterol. 2014; 48 Suppl:S37-39. 2) Klemenak M. et al. Administration of *Bifidobacterium breve* decreases the production of TNF-α in children with celiac disease. Dig Dis Sci (2015), doi: 10.1007/s10620-015-3769-7 3) Bona G. et al. The association of *Bifidobacterium breve* BR03 and B632 is effective to prevent colics in bottle-fed infants: a pilot, controlled, randomized and double blind study. Publication in progress in a Supplement to the Journal of Clinical Gastroenterology. **In vitro study** Mogna L. et al. Assessment of the in vitro inhibitory activity of specific probiotic bacteria against different *Escherichia coli* strains. J Clin Gastroenterol. 2012; 46 Suppl:S29-32.	1,3) 100 million CFU + 100 million CFU 2) 1 billion CFU + 1 billion CFU

Blends

STRAIN ID and INTERNATIONAL COLLECTION DEPOSIT NUMBER	AVAILABLE as: RAW MATERIAL (RM) FINISHED PRODUCT (FP)	FUNCTIONALITY	SCIENTIFIC SUPPORT	DAILY DOSAGE IN CLINICAL STUDY
Lactobacillus gasseri **LGS01 (DSM 18299)** **+** ***Lactobacillus crispatus*** **LCR01 (DSM 24619)** **+** ***Lactobacillus fermentum*** **LF15 (DSM 26955)** **+** ***Lactobacillus rhamnosus*** **LR06 (DSM 21981)** **+** ***Lactobacillus acidophilus*** **LA02 (DSM 21717)**	FP	Vaginal health Restoration of a healthy vaginal microbiota Rebalance of the Döderlein's complex	**In vitro data on individual strains**	
Lactobacillus plantarum **LP01 (LMG P-21021)** **+** ***Lactobacillus paracasei*** **LPC09 (DSM 24243)**	FP	Prostate health Rebalance of the intestinal microbiota	**Human clinical trials and in vitro data for single strains and ingredients**	

Blends

STRAIN ID and INTERNATIONAL COLLECTION DEPOSIT NUMBER	AVAILABLE as: RAW MATERIAL (RM) FINISHED PRODUCT (FP)	FUNCTIONALITY	SCIENTIFIC SUPPORT	DAILY DOSAGE IN CLINICAL STUDY
new study ***Lactobacillus plantarum*** **LP01 (LMG P-21021)** **+** ***Lactobacillus paracasei*** **LPC09 (DSM 24243)**	FP	Urinary tract health Rebalance of the intestinal microbiota	**Human clinical trial** Vicariotto F. Effectiveness of an association of a cranberry dry extract, D-mannose, and the two microorganisms *Lactobacillus plantarum* LP01 and *Lactobacillus paracasei* LPC09 in women affected by cystitits: a pilot study. J Clin Gastroenterol. 2014; 48 Suppl:S96-101.	2.5 billion CFU + 1 billion CFU + Cranberry + D-mannose + FOS
Lactobacillus fermentum **LF16 (DSM 26856)** **+** ***Lactobacillus acidophilus*** **LA02 (DSM 21717)**	FP	Vaginal health Inhibition of Candida strains Counteraction of Candida vulvovaginitis	**In vitro data on individual strains**	
Lactobacillus fermentum **LF15 (DSM 26955)** **+** ***Lactobacillus rhamnosus*** **LR06 (DSM 21981)**	FP	Vaginal health Restoration of a heatlhy vaginal microbiota Counteraction of Bacterial Vaginosis (BV)	**In vitro and in vivo data on individual strains**	

Blends

STRAIN ID and INTERNATIONAL COLLECTION DEPOSIT NUMBER	AVAILABLE as: RAW MATERIAL (RM) FINISHED PRODUCT (FP)	FUNCTIONALITY	SCIENTIFIC SUPPORT	DAILY DOSAGE IN CLINICAL STUDY
Lactobacillus rhamnosus **LR06 (DSM 21981)** **+** ***Lactobacillus pentosus*** **LPS01 (DSM 21980)** **+** ***Lactobacillus plantarum*** **LP01 (LMG P-21021)** **+** ***Lactobacillus delbrueckii*** **subsp. *delbrueckii* LDD01 (DSM 22106)** new study	FP	Restoration of the gastric barrier Attenuation of the side effects induced by the "gastric barrier" impairment caused by a prolonged intake of an acid-suppressant drug such as Proton Pump Inhibitors (PPIs)	**Human clinical trials** 1) Del Piano M. et al. The innovative potential of *Lactobacillus rhamnosus* LR06, *Lactobacillus pentosus* LPS01, *Lactobacillus plantarum* LP01, and *Lactobacillus delbrueckii* subsp. *delbrueckii* LDD01 to restore the "gastric barrier effect" in patients chronically treated with PPI: a pilot study. J Clin Gastroenterol. 2012; 46 Suppl:S18-26. 2) Del Piano M. et al. Correlation between chronic treatment with Proton Pump Inhibitors (PPIs) and bacterial overgrowth in the stomach: any possible beneficial role for selected Lactobacilli? J Clin Gastroenterol. 2014; 48 Suppl:S40-46.	1) 3 billion CFU + 3 billion CFU + 3 billion CFU + 1 billion CFU + FOS 2) 3 billion CFU + 3 billion CFU + 3 billion CFU + 1 billion CFU
Bifidobacterium animalis **subsp. *lactis* BA05 (DSM 18352)** **+** ***Lactobacillus reuteri*** **LRE02 (DSM 23878)**	FP	Production of folic acid Rebalance of intestinal microbiota Production of riboflavin	**In vitro and in vivo data on individual strains**	

Blends

STRAIN ID and INTERNATIONAL COLLECTION DEPOSIT NUMBER	AVAILABLE as: RAW MATERIAL (RM) FINISHED PRODUCT (FP)	FUNCTIONALITY	SCIENTIFIC SUPPORT	DAILY DOSAGE IN CLINICAL STUDY
Bifidobacterium lactis **BS05 (DSM 23032)** **+** ***Lactobacillus acidophilus*** **LA06 (DSM 23033)** new study	FP	Antioxidant activity Reduced glutathione (GSH) and superoxide dismutase (SOD) production	**In vitro and animal model studies** Amaretti A. et al. Antioxidant properties of potentially probiotic bacteria: in vitro and in vivo activities. Appl Microbiol Biotechnol. 2013; 97(2):809-17. **Human clinical trial** under publication	1 billion CFU + 1 billion CFU + FOS + *L. buchneri* Lb26 (DSM 16341) tyndalized, naturally rich in Selenium
Bifidobacterium lactis **BS05 (DSM 23032)** **+** ***Lactobacillus acidophilus*** **LA06 (DSM 23033)** new study	FP	Beneficial effects in trichological area Hair health Antioxidant activity Reduced glutathione (GSH) and superoxide dismutase (SOD) production	**In vitro and animal model studies** Amaretti A. et al. Antioxidant properties of potentially probiotic bacteria: in vitro and in vivo activities. Appl Microbiol Biotechnol. 2013; 97(2):809-17. **Human clinical trial** under publication	1 billion CFU + 1 billion CFU + FOS + *L. buchneri* Lb26 (DSM 16341) tyndalized, naturally rich in Selenium + fermented soy by five *Bifidobacterium longum* isolated by centenarians
Bifidobacterium longum **BL04 (DSM 23233)** **+** ***Bifidobacterium breve*** **BR03 (DSM 16604)** new	FP	Prospective use in the treatment of obesity Restoration of a better dietary ω-6/ω-3 balance Conjugated linoleic acids (CLA) production	**In vitro studies** 1) Guardamagna O. et al. Bifidobacteria supplementation: effects on plasma lipid profile in dyslipidemic children. Nutrition (2014), doi: 10.1016/j.nut.2014.01.014. 2) Patent Application WO/2011/073769. Conjugated linoleic acid-producing strains of probiotic bacteria and use thereof for the preparation of a food, dietetic or pharmaceutical composition.	1 billion CFU + 1 billion CFU + FOS + IGOB 131

Blends

STRAIN ID and INTERNATIONAL COLLECTION DEPOSIT NUMBER	AVAILABLE as: RAW MATERIAL (RM) FINISHED PRODUCT (FP)	FUNCTIONALITY	SCIENTIFIC SUPPORT	DAILY DOSAGE IN CLINICAL STUDY
Bifidobacterium breve new study **B632 (DSM 24706)** + ***Bifidobacterium breve*** **BR03 (DSM 16604)** + ***Lactobacillus delbrueckii*** **subsp. *delbrueckii* LDD01 (DSM 22106)**	FP	Rebalance of the intestinal microbiota in children and in infants Inhibition of *Klebsiella pneumoniae* and of other coliforms isolated from colicky infants Intestinal transit Reduction of gastro-Intestinal discomfort	**Human clinical trials** 1) Mogna L. et al. Capability of the two microorganisms *Bifidobacterium breve* B632 and *Bifidobacterium breve* BR03 to colonize the intestinal microbiota of children. J Clin Gastroenterol. 2014; 48 Suppl:S37-39. 2) Del Piano M. et al. Can probiotics reduce diarrhoea and infant mortality in Africa? The project of a pilot study. Publication in progress in a Supplement to the Journal of Clinical Gastroenterology. 3) Bona G. et al. The association of *Bifidobacterium breve* BR03 and B632 is effective to prevent colics in bottle-fed infants: a pilot, controlled, randomized and double blind study. Publication in progress in a Supplement to the Journal of Clinical Gastroenterology. **In vitro studies** 1) Mogna L. et al. Assessment of the in vitro inhibitory activity of specific probiotic bacteria against different *Escherichia coli* strains. J Clin Gastroenterol. 2012; 46 Suppl:S29-32. 2) Mogna L. et al. In vitro inhibition of *Klebsiella pneumoniae* by *Lactobacillus delbrueckii* subsp. *delbrueckii* LDD01 (DSM 22106): an innovative strategy to possibly counteract such infections in humans? Publication in progress in a Supplement to the Journal of Clinical Gastroenterology.	1,3) 100 million CFU + 100 million CFU 2) 100 million CFU + 100 million CFU + 100 million CFU
Lactobacillus salivarius new **subsp. *salivarius* LS01 (DSM 22775)** + ***Bifidobacterium breve*** **BR03 (DSM 16604)**	FP	Immunomodulatory activity in asthmatic subjects	**In vitro study** Drago L. et al. Immunomodulatory effects of *Lactobacillus salivarius* LS01 and *Bifidobacterium breve* BR03, alone and in combination, on peripheral blood mononuclear cells of allergic asthmatics. Allergy Asthma Immunol Res. 2015 July; 7(4):409-413	

Notes

Probiotical S.p.A.
via E. Mattei, 3 28100 Novara - Italy
ph +39 0321 465933 • fax +39 0321 492693
www.probiotical.com • support@probiotical.com

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UNI EN ISO 14001:2004 Registration n. EU100080
UNI EN ISO 13485:2012 Registration n. DT0062