De Simone Formulation® Literature

All studies listed here were done with the original
De Simone Formulation contained in CDS22-*formula*® and Visbiome ®

LIVER

Clinical studies

Chong P, Laight D, Aspinall R, Higginson A, Cummings M. **A randomised placebo controlled trial of VSL#3 ® probiotic on biomarkers of cardiovascular risk and liver injury in non-alcoholic fatty liver disease.** BMC Gastroenterol. 2021 Apr 1;21(1):144. doi: 10.1186/s12876-021-01660-5.

Duseja A, Acharya SK, Mehta M, Chhabra S, Shalimar, Rana S, Das A, Gupta S, Dhiman RK, Chawla Y. **High potency multistrain probiotic improves liver histology in nonalcoholic fatty liver disease (NAFLD) – A randomized, double-blind, proof of concept study.** *BMJ Open Gastroenterology* 2019 Aug 7;6(1):e000315. doi: 10.1136/bmjgast-2019-000315

Román E, Nieto J, Gely C, Vidal S, Pozuelo M, Poca M, Juárez C, Guarner C, Manichanh C, Soriano G. **Effect of a Multistrain Probiotic on Cognitive Function and Risk of Falls in Patients With Cirrhosis: A Randomized Trial.** *Hepatol Commun*. 2019 Mar 12;3(5):632-645. doi: 10.1002/hep4.1325

Marlicz W, Wunsch E, Mydlowska M, Milkiewicz M, Serwin K, Mularczyk M, Milkiewicz P, Raszeja-Wyszomirska J. **The effect of short term treatment with probiotic VSL#3 on various clinical and biochemical parameters in patients with liver cirrhosis.** *J Physiol Pharmacol.* 2016 Dec;67(6):867-877.

Miccheli A., Capuani G., Marini F., Tomassini A., Praticò G., Ceccarelli S., Gnani D., Baviera G., Alisi A. Putignani L., Nobili V. **Urinary H-NMR-based metabolic profiling of children with NAFLD undergoing VSL#3 treatment**. *International Journal of Obesity*, 2015 Jul; 39(7):1118-25

Mouli P., Benjamin J., Singh B., Mani K., Garg SK., Saraya A., Joshi YK. **Effect of probiotic VSL#3 in the treatment of minimal hepatic encephalopathy a non-inferiority randomized controlled trial.** *Hepatol Res.* 2015 Aug; 45(8):880-9.

Dhiman R., Rana B., Agrawal S., Garg A., Chopra M., Thumburu K., Khattri A., Malhotra S., Duseja A., Chawla Y. **Probiotic VSL#3 reduces liver disease severity and hospitalization in patients with cirrhosis: a randomized, controlled trial.** *Gastroenterology* 2014 Dec; 147:1327–1337.

Alisi A., Bedogni G., Baviera G., Giorgio V., Porro E., Paris C., Giammaria P., Reali L., Anania F., Nobili V. **Randomised clinical trial: the beneficial effects of VSL#3 in obese children with non-alcoholic steatohepatitis.** *Alimentary Pharmacology & Therapeutics* 2014 Jun;39(11):1276-85.

Rincón D., Vaquero J., Hernando A., Galindo E., Ripoll C., Puerto M., Salcedo M., Francés R., Matilla A., Catalina M., Clemente G., Such J., Bañares R. **Oral Probiotic VSL#3 attenuates the circulatory disturbances of patients with cirrhosis and ascites.** *Liver International* Nov; 2014 34(10):1504-12.

Lunia K., Sharma B., Sharma P., Sachdeva S., Srivastava S. **Probiotics Prevent Hepatic Encephalopathy in Patients with Cirrhosis: a Randomized Controlled Trial**. *Clinical Gastroenterology and Hepatology* 2014 Jun;12(6):1003-8.e1.

Rajkumar H., Mahmood N., Kumar M., Varikuti S., Challa H., Myakala S**. Effect of Probiotic (VSL#3) and Omega-3 on Lipid Profile, Insulin Sensitivity, Inflammatory Markers, and Gut Colonization in Overweight Adults: A Randomized, Controlled Trial.** *Mediators of Inflammation* 2014;2014:348959

Gupta N., Kumar A., Sharma P., Garg V., Sharma B., Sarin S. **Effects of the adjunctive probiotic VSL#3 on portal haemodynamics in patients with cirrhosis and large varices: a randomized trial.** *Liver International* Sep;33(8):1148–57. (2013)

Jayakumar S., Carbonneau M., Hotte N., Befus A., St. Laurent C., Owen R., McCarthy M., Madsen K., Bailey R., Ma M., Bain V., Rioux K., Tandon P. **VSL#3 probiotic therapy does not reduce portal pressures in patients with decompensated cirrhosis.** *Liver International,* 2013 Nov;33(10):1470-7.

Agrawal A., Sharma BC., Sharma P., Sarin SK. **Secondary Prophylaxis of Hepatic Encephalopathy in Cirrhosis: An Open-Label, Randomized Controlled Trial of Lactulose, Probiotics, and No Therapy**. *American Journal of Gastroenterology* 2012 Jul;107(7):1043-50.

Mittal Vibhu Vibhas, Sharma Barjesh Chander, Sharma Praveen, Sarin Shiv Kumar. **A randomized controlled trial comparing lactulose, probiotics and L-ornithine L-aspartate in treatment of minimal hepatic encephalopathy.** *Eur J Gastroenterol Hepatol.* 2011 Aug;23(8):725-32.

Tandon P., Moncrief K., Madsen K., Arrieta M.C., Owen RJ., Bain VG., Wong WW., Ma MM. **Effects of probiotic therapy on portal pressure in patients with cirrhosis: a pilot study.** *Liver Int.* 2009 Aug;29(7):1110-5.

Loguercio C, Federico A, Tuccillo C, Terracciano F, D'Auria M V, De Simone C, Del Vecchio Blanco C. **Beneficial effects of a probiotic VSL#3 on Parameters of liver dysfunction in chronic liver disease.** *J Clin Gastroenterol.* 2005 Jul;39(6):540-3.

<u>Experimental studies</u>

Rackayová V, Flatt E, Braissant O, Grosse J, Capobianco D, Mastromarino P, McMillin M, DeMorrow S, A. McLin V, Cudalbu C. **Probiotics improve the neurometabolic profile of rats with chronic cholestatic liver disease**. Sci Rep.2021 Jan 26;11(1):2269. doi:10.1038/s41598-021-81871-8.

Selwyn F., Cheng S., Klaassen C., Cui J. **Regulation of Hepatic Drug-Metabolizing Enzymes in Germ-Free Mice by Conventionalization and Probiotics**. *Drug Metab Dispos* 2016 Feb; 44:262–274.

Sánchez E., Nieto JC., Boullosa A., Vidal S., Sancho FJ., Rossi G., Sancho-Bru P., Oms R., Mirelis B., Juárez C., Guarner C., Soriano G. **VSL#3 Probiotic treatment decreases bacterial translocation in rats with carbon tetrachloride-induced cirrhosis**. *Liver Int*. 2015 Mar;35(3):735-4

De Girolamo C. Rainaldi S., Bovenga F. Murzilli S. Moschetta A. **Microbiota Modification with Probiotics Induces Hepatic Bile Acid Synthesis via Downregulation of the Fxr-Fgf15 Axis in Mice.** *Cell Reports* 2014 Apr 10;7(1):12-8.

Liang S., Webb T., Li z. **Probiotics Antigens Stimulate Hepatic NKT cells.** *Immunology* 2014 Feb;141(2):203-10.

Rashid S., Khodja N. Auger C., Alhosin M., Boehm N., Mammosser M., Schini-Kerth V. **Probiotics (VSL#3) Prevent Endothelial Dysfunction in Rats with Portal Hypertension: Role of the Angiotensin System.** *Plos One* May 2014 May 15;9(5):e97458.

Chang B., Sang L., Wang Y., Tong J., Zhang D., Wang B. **The protective effect of VSL#3 on intestinal permeability in a rat model of alcoholic intestinal injury.** *BMC Gastroenterology* 2013 Oct 20;13(1):1–1.

Zhang H., Yu L., Yang W., Tang L., Lin Y., Wu H., Zhai B., Tan Y., Shan L., Liu Q., Chen H., Dai R., Qiu, He Y.,Wang C., Zheng L., Qiong Li Y.,Quan Wu F., Li Z., Yan H., Wang H. **Profound impact of gut homeostasis on chemically-induced pro-tumorigenic inflammation and hepatocarcinogenesis in rats.** *Journal of Hepatology* 2012 Oct;57(4):803-12. (+ supplement data)

Mencarelli A., Cipriani S., Renga B., Bruno A., D'Amore C., Distrutti E., Fiorucci S. **VSL#3 resets insulin signaling and protects against NASH and atherosclerosis in a model of genetic dyslipidemia and intestinal inflammation.** *Plos one* 2012;7(9):e45425.

Esposito E., Iacono A., Bianco G., Autore G., Cuzzocrea S., Vajro P., Canini RB., Calignano A., Raso GM., Meli R. **Probiotics reduce the inflammatory response induced by a High-Fat Diet in the liver of young rats.** *J Nutr.* 2009 May;139(5):905-11.

Velayudham A., Dolganiuc A., Ellis M., Petrasek J., Kodys K., Mandrekar P., Szabo G. **VSL#3 probiotic treatment attenuates fibrosis without changes in steatohepatitis in a diet-induced nonalcoholic steatohepatitis model in mice.** *Hepatology.* 2009 Mar;49(3):989-97

Ma X., Hua J., Li Z. **Probiotics improve high fat diet-induced hepatic steatosis and insulin resistance by increasing hepatic NKT cells.** *J Hepatol.* 2008 Nov;49(5):821-30.

Ewaschuk J, Endersby R, Thiel D, Diaz H, Backer J, Mang M, Churchill T, Madsen K **Probiotic bacteria prevent hepatic damage and maintain colonic barrier function in a mouse model of sepsis** *Hepatology.* 2007 Sep;46(3):841-50.

Li Z, Yang S, Lin H, Huang J, Watkins PA, Moser AB, De Simone C, Song X, Diehl AM. **Probiotics and antibodies to TNF inhibit inflammatory activity and improve nonalcoholic fatty liver disease.** *Hepatology.* 2003 Feb;37(2):343-50.

Irritable Bowel Syndrome

Clinical studies

Rossi M, Aggio R, Staudacher H, Lomer MC, Lindsay JO, Irving P, Probert C, Whelan K. **Volatile Organic Compounds in Feces Associate With Response to Dietary Intervention in Patients With Irritable Bowel Syndrome.** *Clin Gastroenterol Hepatol.* 2018 Mar;16(3):385-391.e1.

Baldassarre ME, Di Mauro A, Tafuri S, Rizzo V, Gallone MS, Mastromarino P, Capobianco D, Laghi L, Zhu C, Capozza M, Laforgia N. **Effectiveness and Safety of a Probiotic-Mixture for the Treatment of Infantile Colic: A Double-Blind, Randomized, Placebo-Controlled Clinical Trial with Fecal Real-Time PCR and NMR-Based Metabolomics Analysis.** *Nutrients.* 2018 Feb 10;10(2).

Vicari E, Salemi M, Sidoti G, Malaguarnera M, Castiglione R. **Symptom Severity Following Rifaximin and the Probiotic VSL#3 in Patients with Chronic Pelvic Pain Syndrome (Due to Inflammatory Prostatitis) Plus Irritable Bowel Syndrome**. *Nutrients.* 2017 Nov 3;9(11).

Staudacher HM, Lomer MCE, Farquharson FM, Louis P3, Fava F4, Franciosi E4, Scholz M, Tuohy KM, Lindsay JO, Irving PM, Whelan K. **Diet Low in FODMAPs Reduces Symptoms in Patients with Irritable Bowel Syndrome and Probiotic Restores Bifidobacterium Species: a Randomized Controlled Trial.** *Gastroenterology.* 2017;153:936–947

Kim S., Choi S., Park K., Park M., Shin J., Lee T., Jung K., Koo H., Myung S., and Constipation Research group of Korean Society of Neurogastroenterology and Motility. **Change of Fecal Flora and Effectiveness of the Short-term VSL#3 Probiotic Treatment in Patients With Functional Constipation.** *J Neurogastroenterol Motil*, 2015 Jan 1;21(1):111-20.

Wong R., Yang C., Song C., Wong J., Ho K. **Melatonin Regulation as a Possible Mechanism for Probiotic (VSL#3) in Irritable Bowel Syndrome: A Randomized Double-Blinded Placebo Study**. *Dig Dis Sci.* 2015 Jan; 60(1):186-94.

Vicari E., La Vignera S., Castiglione R., Condorelli R., Vicari L., Aldo E Calogero. **Chronic bacterial prostatitis and irritable bowel syndrome: effectiveness of treatment with rifaximin followed by the probiotic VSL#3.** *Asian J Androl* 2014 Sep-Oct;16(5):735-9.

Ng S., Lam E., Lam T., Chan Y., Law W., Tse P., Kamm M., Sung J., Chan F., Wu J. **Effect of probiotic bacteria on the intestinal microbiota in irritable bowel syndrome.** *Journal of Gastroenterology and Hepatology* 2013 Oct;28(10):1624-31.

Michail S. and Kenche H. **Gut Microbiota is Not Modified by Randomized, Double-Blind, Placebo-Controlled Trial of VSL#3 in Diarrhea-Predominant Irritable Bowel Syndrome.** *Probiotics Antimicrob Proteins.* 2011 Mar;3(1):1-7.

Guandalini S., Magazzù G., Chiaro A., La Balestra V., Di Nardo G., Gopalan S., Sibal A., Romano C., Canani RB., Lionetti P., Setty M. **VSL#3 Improves Symptoms in Children With Irritable Bowel Syndrome: A Multicenter, Randomized, Placebo-Controlled, Double-Blind, Crossover Study**. J Pediatr Gastroenterol Nutr. 2010 Jul;51(1):24-30

Kim HJ, Vazquez Roque MI, Camilleri M, Stephens D, Burton DD, Baxter K, Thomforde G & Zinsmeister AR. **A randomized controlled trial of probiotic combination VSL#3 and placebo in irritable bowel syndrome with bloating**. *Neurogastroenterol Motil.* 2005 Oct;17(5):687-96.

Kim HJ, Camilleri M, Mc Kinzie S, Lempke MB, Burton DD, Thomforde GM, Zinsmeister AR. **A randomized controlled trial of a probiotic, VSL#3, on gut transit and symptoms in diarrhoea-predominant irritable bowel syndrome.** *Aliment Pharmacol Ther.* 2003 Apr 1;17(7):895-904.

Brigidi P, Vitali B, Swennen E, Bazzocchi G, Matteuzzi D. **Effects of probiotic administration upon the composition and enzymatic activity of human fecal microbiota in patients with irritable bowel syndrome or functional diarrhea.** *Res Microbiol.* 2001 Oct;152(8):735-41.

Experimental Studies:

Distrutti E., Cipriani S., Mencarelli A., Renga B., Fiorucci S. **Probiotics VSL#3 protect against development of visceral pain in murine model of irritable bowel syndrome**. *Plos One* 2013 May 15;8(5):e63893.

Dai C., Guandalini S., Zhao D.-H., Jiang M. **Antinociceptive effect of VSL#3 on visceral hypersensivity in a rat model of irritable bowel syndrome: a possible action through nitric oxide pathway and enhance barrier function.** *Molecular and cellular Biochemistry* 2012 Mar;362(1-2):43-53.

POUCHITIS

Clinical studies

Friederich P., Verschuur J., van Heumen B.W.H., Roelofs H.M.J., Berkhout M., Nagtegaal I.D., van Oijen M.G.H.,. van Krieken Johannes, Peters W.H.M. and Nagengast F.M. **Effects of intervention with sulindac and inulin/VSL#3 on mucosal and luminal factors in the pouch of patients with familial adenomatous polyposis** *Int J Colorectal Dis.* 2011 May;26(5):575-82

Turroni S., Vitali B., Candela M., Gionchetti P., Rizzello F., Campieri M., Brigidi P. **Antibiotics and probiotics in chronic pouchitis: A comparative proteomic approach**. *World J Gastroenterol.* 2010 Jan 7;16(1):30-41.

Pronio A, Montesani C, Butteroni C, Vecchione S, Mumolo G, Vestri A, Vitolo D, Boirivant M **Probiotic administration in patients with ileal pouch-anal anastomosis for ulcerative colitis is associated with expansion of mucosal regulatory cells.** *Inflamm Bowel Dis.* 2008 May;14(5):662-8.

Gionchetti P, Rizzello F, Morselli C, Poggioli G, Tambasco R, Calabrese C, Brigidi P, Vitali B, Straforini G, Campieri M **High-dose probiotics for the treatment of active pouchitis** *Dis Colon Rectum.* 2007 Dec;50(12):2075-82

Mc Nally A., BS, LTC George H. Cummings, Peter R. Mc Nally, DO, FACG, FACP **A case of recurrent pouchitis successfully managed with a Probiotic, VSL#3** *Visible Human Journal of Endoscopy* Vol. 6 Issue 1 (2007)

Kuehbacher T, Ott SJ, Helwig U, Mimura T, Rizzello F, Kleessen B, Gionchetti P, Blaut M, Campieri M, Folsch UR, Kamm MA, Shreiber S. **Bacterial and fungal microbiota in relation to probiotic therapy (VSL#3) in pouchitis.** *Gut.* 2006 Jun;55(6):833-41.

Mimura T, Rizzello F, Helwig U, Poggioli G, Schreiber S, Talbot IC, Nicholls RJ, Gionchetti P, Campieri M, Kamm MA. **Once Daily High Dose Probiotic Therapy (VSL#3) for Maintaining Remission in Recurrent or Refractory Pouchitis.** *Gut.* 2004 Jan;53(1):108-14.

Gionchetti P, Rizzello F, Helwig U, Venturi A, Lammers KM, Brigidi P, Vitali B, Poggioli G, Miglioli M, Campieri M. **Prophylaxis of pouchitis onset with probiotic therapy: a double-blind, placebo-controlled trial.** *Gastroenterology.* 2003 May;124(5):1202-9.

Gionchetti P, Rizzello F, Venturi A, Brigidi P, Matteuzzi D, Bazzocchi G, Poggioli G, Miglioli M, Campieri M. **Oral bacteriotherapy as maintenance treatment in patients with chronic pouchitis: a double-blind, placebo-controlled trial.** *Gastroenterology.* 2000 Aug;119(2):305-9.

Experimental studies

Ulisse S, Gionchetti P, D'Alo` S, Russo FP, Pesce I, Ricci G, Rizzello F, Helwig U, Cifone MG, Campieri M, De Simone C. **Expression of cytokines, inducible nitric oxide synthase, and matrix metalloproteinases in pouchitis: effects of probiotic treatment.** *Am J Gastroenterol.* 2001 Sep;96(9):2691-9.

ULCERATIVE COLITIS

Clinical studies

Mariman R., Tielen F., Koning F., Nagelkerken L. **The Probiotic mixture VSL#3 dampens LPS-Induced Chemokine Expression in Human Dendritic Cells by Inhibition of STAT-1Phosphorylation**. *Plos One* Dec 2014; 29;9(12):e115676

Lee J., Moon G., Kwon H., Jung W., Seo P., Baec T., Kim H. **Effect of a probiotic preparation (VSL#3) in patients with mild to moderate ulcerative colitis.** *Korean J Gastroeterol* 2012 Aug;60(2):94-101.

Tursi A., Brandimarte G., Papa A., Giglio A., Elisei W., Giorgetti GM, Forti G., Morini S., Hassan C., Pistoia MA., Modeo ME, Rodino S., D ' Amico T., Sebkova L., Sacca N., Di Giulio E., Luzza F., Imeneo M., Larussa T., Di Rosa S., Annese V., Danese S. and Gasbarrini A. **Treatment of Relapsing Mild-to-Moderate Ulcerative Colitis With the Probiotic *VSL # 3* as Adjunctive to a Standard Pharmaceutical Treatment: A Double-Blind, Randomized, Placebo-Controlled Study.** *Am J Gastroenterol.* 2010 Oct;105(10):2218-27.

Sood A., Midha V., Makharia GK., Ahuja V., Singal D., Goswami P. and Tandon RK.
The probiotic preparation, VSL#3 induces remission in patients with mild-to-moderately active ulcerative colitis. *Clin Gastroenterol Hepatol.* 2009 Nov;7(11):1202-9, 1209.e1.

Huynh HQ., deBruyn J., Guan L., Diaz H., Li M., Girgis S., Turner J., Fedorak R., Madsen K. **Probiotic preparation VSL#3 induces remission in children with mild to moderate acute ulcerative colitis: a pilot study.** *Inflamm Bowel Dis.* 2009 May;15(5):760-8.

Miele E., Pascarella F., Giannetti E., Quaglietta L., Baldassano R., Staiano A. **Effect of a probiotic preparation (VSL#3) on induction and maintenance of remission in children with ulcerative colitis.** *Am J Gastroenterol.* 2009 Feb;104(2):437-43.

Pronio A, Montesani C, Butteroni C, Vecchione S, Mumolo G, Vestri A, Vitolo D, Boirivant M **Probiotic administration in patients with ileal pouch-anal anastomosis for ulcerative colitis is associated with expansion of mucosal regulatory cells.** *Inflamm Bowel Dis.* 2008 May;14(5):662-8.

Tursi A, Brandimarte G, Giorgetti GM, Elisei W, Aiello F **Balsalazide and/or high-potency probiotic mixture (VSL#3) in maintaining remission after attack of acute, uncomplicated diverticulitis of the colon.** *Int J Colorectal Dis.* 2007 Sep;22(9):1103-8.

Karimi O, Pena AS, van Bodegraven AA. **Probiotics (VSL#3) in arthralgia in patients with ulcerative colitis and Crohn's disease: A pilot study.** *Drugs Today (Barc).* 2005 Jul;41(7):453-9.

Tursi A., Brandimante G, Giorgetti GM, Elisei M. **Beclometasone Diproprionate Plus VSL#3 for the Treatment of Mild to Moderate Diverticular Colitis: An Open Pilot Study.** *J Clin Gastroenterol.* 2005 Aug;39(7):644-5.

Bibiloni R., Fedorak RN, Tannock GW, Madsen KL, Gionchetti P, Campieri M, DeSimone C, Sartor RB. **VSL#3 Probiotic-Mixture Induces Remission in Patients with Active Ulcerative Colitis.** *Am J Gastroenterol.* 2005 Jul;100(7):1539-46.

Tursi A., Brandimarte G, Giorgetti GM, Forti G, Mondeo ME, Gigliobianco A. **Low dose balsalazide plus a high potency probiotic preparation is more effective than balsalazide alone**

or mesalazine in the treatment of acute mild to moderate ulcerative colitis. *Med Sci Monit.* 2004 Nov;10(11):PI126-31.

Venturi A, Gionchetti P, Rizzello F, Johansson R, Zucconi E, Brigidi P, Matteuzzi D, Campieri M, **Impact on the composition of the faecal flora by a new probiotic preparation: preliminary data on maintenance treatment of patients with ulcerative colitis.** *Aliment Pharmacol Ther.* 1999 Aug;13(8):1103-8.

Experimental studies

Chen X, Fu Y, Wang L, Qian W, Zheng F, Hou X. **Bifidobacterium longum and VSL#3® amelioration of TNBS-induced colitis associated with reduced HMGB1 and epithelial barrier impairment**. *Dev Comp Immunol*. 2018 Sep 15. pii: S0145-305X(18)30315-X.

Isidro RA, Lopez A, Cruz ML, Gonzalez Torres MI, Chompre G, Isidro AA, Appleyard CB1. **The Probiotic VSL#3 Modulates Colonic Macrophages, Inflammation, and Microflora in Acute Trinitrobenzene Sulfonic Acid Colitis.** *J Histochem Cytochem.* 2017 Jul 1:22155417718542.

White R, Atherly T, Guard B, Rossi G, Wang C, Mosher C, Webb C, Hill S, Ackermann M, Sciabarra P, Allenspach K, Suchodolski J, Jergens AE. **Randomized, controlled trial evaluating the effect of multi-strain probiotic on the mucosal microbiota in canine idiopathic inflammatory bowel disease.** *Gut Microbes.* 2017 Sep 3;8(5):451-466.

Lorén V, Manyé J, Fuentes MC, Cabré E, Ojanguren I, Espadaler J. **Comparative Effect of the I3.1 Probiotic Formula in Two Animal Models of Colitis**. *Probiotics Antimicrob Proteins*. 2016 Nov 10

Sang LX., Chang B., Wang BY., Liu WX., Jiang M. **Live and heat-killed probiotic: effects on chronic experimental colitis induced by dextran sulfate sodium (DSS) in rats.** *Int J Clin Exp Med.* 2015 Nov 15; 8(11):20072-8.

Do EJ, Hwang SW, Kim SY, Ryu YM, Cho EA, Chung EJ, Park S, Lee HJ, Byeon JS, Ye BD, Yang DH, Park SH, Yang SK, Kim JH, Myung SJ. **Suppression of colitis-associated carcinogenesis through modulation of IL-6/STAT3 pathway by Balsalazide and VSL#3.** *J Gastroenterol Hepatol.* 2016 Aug;31(8):1453-61.

Souza D., Senchenkova E., Russell J., Granger D. **MyD88 Mediates the Protective Effects of Probiotics Against the Arteriolar Thrombosis and Leukocyte Recruitment Associated with Experimental Colitis.** *Inflamm Bowel Dis.* 2015 Apr;21(4):888-900

Rossi G, Pengo G, Caldin M, Palumbo Piccionello A, Steiner JM, Cohen ND, Jergens AE, Suchodolski JS. **Comparison of microbiological, histological, and immunomodulatory parameters in response to treatment with either combination therapy with prednisone and metronidazole or probiotic VSL#3 strains in dogs with idiopathic inflammatory bowel disease.** *PLoS One.* 2014 Apr 10;9(4):e94699

Morampudi V., Dalwadi U., Bhinder G., Sham HP., Gill SK., Chan J., Bergstrom KS., Huang T., Ma C., Jacobson K., Gibson DL., Vallance BA. **The goblet cell-derived mediator RELM-β drives spontaneous colitis in Muc2-deficient mice by promoting commensal microbial dysbiosis.** *Mucosal Immunol***.** 2016 Jan 27. doi: 10.1038/mi.2015.140

Talero E. , Bolivar S., Román J. Alcaide A. Fiorucci S. Motilva V. **Inhibition of Chronic Ulcerative Colitis-associated Adenocarcinoma Development in Mice by VSL#3.** *Inflamm Bowel Dis* 0:1–11 (2015).

Mariman R., Tielen F., Koning F., Nagelkerken L. **The Probiotic mixture VSL#3 dampens LPS-Induced Chemokine Expression in Human Dendritic Cells by Inhibition of STAT-1Phosphorylation**. *Plos One* Dec 2014; 29;9(12):e115676

Mar J, Nagalingam N, Song Y, Onizawa M, Lee JW, Lynch S. **Amelioration of DSS-induced murine colitis by VSL#3 supplementation is primarily associated with changes in ileal microbiota composition.** *Gut Microbes.* 5(4) 1-10 Aug. (2014)

Sang L., Chang B., Dai C, Gao N., Liu W.,Jiang M. **Heat-killed VSL#3 Ameliorates Dextran Sulfate Sodium (DSS)-Induced Acute Experimental Colitis in Rats**. *Int. J. Mol. Sci*. 2014, 15, 15-28.

Bassaganya-Riera J., Viladomiu M., Pedragosa M., De Simone C., Carbo A., Shayhutdinov R., Jobin C., Arthur J., Corl B., Vogel H., Storr M., Hontecillas R. **Probiotic Bacteria produce conjugated linoleic acid locally in the gut that targets macrophage PPAR γ to suppress colitis.** *Plos One February* Vol.7, Issue 2 (2012)

Ng S.C., Plamondon S., Kamm M.A., Hart A.L., Al-Hassi H.O., Guenther T., Stagg A.J. Knight S.C.**Immunosuppressive Effects via Human Intestinal Dendritic Cells of Probiotic Bacteria and Steroids in the Treatment of Acute Ulcerative Colitis** *Inflamm Bowel Dis*. 16:1286-98 (2010)

Reiff, C., Delday M., Rucklidge G., Reid M., Duncan G., Wohlgemuth S. ,Ho¨rmannsperger G., Loh G., Blaut M. Collie-Duguid E., Haller D.and Kelly D. **Balancing Inflammatory, Lipid, and Xenobiotic Signaling Pathways by VSL#3, a Biotherapeutic Agent, in the Treatment of Inflammatory Bowel Disease** *Inflamm Bowel Dis* **11**:1721-36 (2009)

Mennigen R, Nolte K, Rijcken E, Utech M, Loeffler B, Senninger N, Bruewer M. **Probiotic mixture VSL#3 protects the epithelial barrier by maintaining tight junction protein expression and preventing apoptosis in a murine model of colitis.** *Am J Physiol Gastrointest Liver Physiol* **296**:G1140-G1149 (2009).

CROHN'S DISEASE

Clinical studies

Fedorak RN, Feagan BG, Hotte N, Leddin D, Dieleman LA, Petrunia DM,Enns R, Bitton A, Chiba N, Paré P, Rostom A, Marshall J, Depew W, Bernstein CN, Panaccione R,Aumais G, Steinhart AH, Cockeram A, Bailey RJ, Gionchetti P, Wong C, Madsen K. **The Probiotic VSL#3 has Anti-**

inflammatory Effects and Could Reduce Endoscopic Recurrence Following Surgery for Crohn's Disease. *Clin Gastroenterol Hepatol.* 2015 May; 13(5):928-35.e2.

Karimi O, Pena AS, van Bodegraven AA. **Probiotics (VSL#3) in arthralgia in patients with ulcerative colitis and Crohn's disease: A pilot study.** *Drugs Today (Barc).* 2005 Jul;41(7):453-9.

Visekruna A, Joeris T, Seidel D, Kroesen A, Loddenkemper C, Zeitz M, Kaufmann SHE, Schmidt-Ullrich R, Steinhoff U. **Proteasome-mediated degradation of IκBα and processing of p105 in Crohn's disease and ulcerative colitis.** *J Clin Invest.* 2006 Dec;116(12):3195-203.

Radio/Chemotherapy

Clinical studies

Padilla A, Martín G, Quintero G, Salgado J, Rada-Morgades R, Ruiz-Frutos C. **Diversion Colitis: Macro and Microscopic Findings after Probiotics Stimulation**. Biology 2021, 10(4), 303; https://doi.org/10.3390/biology10040303

Castelli V, Palumbo P, d'Angelo M, Moorthy NK, Antonosante A, Catanesi M, Lombardi F, Iannotta D, Cinque B, Benedetti E, Ippoliti R, Cifone MG, Cimini A. **Probiotic DSF counteracts chemotherapy induced neuropathic pain.** *Oncotarget.* 2018 Jun 15;9(46):27998-28008. doi: 10.18632/oncotarget.25524.

El-Atti S. Abd, Wasicek K., Mark S., Hegazi R. **Use of probiotics in the management of chemotherapy-induced diarrhea: a case study.** *JPEN J Parenter Enteral Nutr.* 2009 Sep-Oct;33(5):569-70.

Delia P, Sansotta G, Donato V, Frosina P, Messina G, De Renzis C, Famularo **Use of probiotics for prevention of radiation-induced diarrhea** *World J Gastroenterol* 2007 Feb; 13(6):912-915

Delia P, Sansotta G, Donato V, Messina G, Frosina P, Pergolizzi S, De Renzis C. **Prophylaxis of diarrhoea in patients submitted to radiotherapeutic treatment on pelvic district: personal experience.** *Dig Liver Dis.* 2002 Sep;34 Suppl 2:S84-6.

Delia P, Sansotta G, Donato V, Messina G, Frosina P, Pergolizzi S, De Renzis C. **Prevention of radiation-induced diarrhea with the use of VSL#3, a new high-potency probiotic preparation.** *Am J Gastroenterol.* Aug;97(8):2150-2.

Experimental studies

Bowen JM, Stringer AM, Gibson RJ, Yeoh ASJ, Hannam S, Keefe DMK **VSL#3 probiotic treatment reduces chemotherapy-induced diarrhea and weight loss.** *Cancer Biol Ther.* 2007 Sep;6(9):1449-54.

DIVERTICULOSIS

Clinical studies

Laghi L, Mastromarino P, Elisei W, Capobianco D, Zhu CL, Picchio M, Giorgetti G, Brandimarte G, Tursi A. **Impact of treatments on fecal microbiota and fecal metabolome in symptomatic uncomplicated diverticular disease of the colon: a pilot study.** *J Biol Regul Homeost Agents*. 2018 Nov-Dec;32(5):1421-1432

Tursi A., Elisei W., Brandimarte G., Giorgetti GM., Inchingolo C., Nenna R., Ierardi E. **Tumour necrosis factor-alpha expression in segmental colitis associated with diverticulosis down-regulates after treatment.** *J Gastrointestin Liver Dis.* 2011 Dec;20(4):365-70.

Tursi A, Brandimarte G, Giorgetti GM, Elisei W, Aiello F **Balsalazide and/or high-potency probiotic mixture (VSL#3) in maintaining remission after attack of acute, uncomplicated diverticulitis of the colon.** *Int J Colorectal Dis.* 2007 Sep;22(9):1103-8.

Tursi A., Brandimante G, Giorgetti GM, Elisei M. **Beclometasone Diproprionate Plus VSL#3 for the Treatment of Mild to Moderate Diverticular Colitis: An Open Pilot Study.** *J Clin Gastroenterol.* 2005 Aug;39(7):644-5.

DIABETES

Clinical studies

Kumar S, Kumar R, Rohilla L, Jacob N, Yadav J, Sachdeva N. **A high potency multi-strain probiotic improves glycemic control in children with new- onset Type 1 diabetes mellitus: a randomized, double-blind, placebo-controlled pilot study**. Pediatric Diabetes 2021 https://doi.org/10.1111/pedi.13244

Stefanaki C, Michos A, Mastorakos G, Mantzou A, Landis G, Zosi P, Bacopoulou F. **Probiotics in Adolescent Prediabetes: A Pilot RCT on Glycemic Control and Intestinal Bacteriome.** *J Clin Med.* 2019 Oct 21;8(10). pii: E1743. doi: 10.3390/jcm8101743.

Jafarnejad S, Saremi S, Jafarnejad F, Arab A. **Effects of a Multispecies Probiotic Mixture on Glycemic Control and Inflammatory Status in Women with Gestational Diabetes: A Randomized Controlled Clinical Trial**. J Nutr Metab. 2016;2016:5190846.

Experimental studies

Brown K., Godovannyi A., Ma C., Zhang Y., Ahmadi-Vand Z., Dai C., Gorzelak MA., Chan Y., Chan JM., Lochner A., Dutz JP., Vallance BA., Gibson DL. **Prolonged antibiotic treatment induces a diabetogenic intestinal microbiome that accelerates diabetes in NOD mice.** The ISME Journal 2016 Feb; 10(2):321-32

Dolpady J., Sorini C., Di Pietro C., Caputo A., Ferrarese R., Saita D., De Simone C., Clementi M., Canducci F., Falcone M..**Oral probiotic VSL#3 prevents T1D by modulating microbiota and inducing a Indoleamine 2,3-dioxygenase (IDO)-enriched tolerogenic intestinal environment.** *Journal of Diabetes Research* Volume 2016 (2016), Article ID 7569431, 12 pages.

Yadav H, Lee JH, Lloyd J, Walter P, Rane SG. **Beneficial Metabolic Effects of a Probiotic via Butyrate-induced GLP-1 Hormone Secretion.** *J Biol Chem*. 2013 Aug 30;288(35):25088–97.

Aumeunier A., Grela F., Ramadan A., Pham Van L., Bardel E., Alcala A., Jeannin P., Akira S., Bach J-F., Thieblemont N. **Systemic Toll-like Receptor Stimulation Suppresses Experimental Allergic Asthma and Autoimmune Diabetes in NOD Mice.** *PLoS One.* 2010 Jul 7;5(7):e11484.

Calcinaro F, Dionisi S, Marinaro M, Candeloro P, Bonato V, Marzotti S, Corneli RB, Ferretti E, Gulino A, Grasso F, De Simone C, Di Mario U, Falorni A, Boirivant M, Dotta F. **Oral probiotic administration induces interleukin-10 production and prevents spontaneous autoimmune diabetes in the non-obese diabetic mouse.** *Diabetologia.* 2005 Aug;48(8):1565-75.

HYPEROXALURIA

Clinical studies

Ismail Al-Wahsh, Yan Wu, Michael Liebman. **Acute probiotics ingestion reduces gastrointestinal oxalate absorption in healthy subjects**. *Urol Res.* 2012 Jun;40(3):191-6.

Okombo J. and Liebman M. **Probiotic-induced reduction of gastrointestinal oxalate absorption in healthy subjects.** *Urol Res.* 2010 Jun;38(3):169-78.

ROTAVIRUS

Clinical studies

Dubey AP., Rajeshwari K., Chakravarty A., Famularo G. **Use of VSL#3 in the treatment of rotavirus diarrhea in children: preliminary results.** *J Clin Gastroenterol.* 2008 Sep;42 Suppl 3 Pt 1:S126-9.

WOMEN'S HEALTH

Clinical studies

Halkjær S, de Knegt V, Lo B, Nilas L, Cortes D, Pedersen A, Mirsepasi-Lauridsen H, Andersen L, Nielsen H, Stensvold C, Johannesen T, Kallemose T, Krogfelt K, Munk Petersen A. **Multistrain Probiotic Increases the Gut Microbiota Diversity in Obese Pregnant Women: Results from a Randomized, Double-Blind Placebo-Controlled Study.** *Curr Dev Nutr.* 2020 May 27;4(7):nzaa095. doi: 10.1093/cdn/nzaa095

Astolfi ML, Protano C, Schiavi E, Marconi E, Capobianco D, Massimi L, Ristorini M, Baldassarre ME, Laforgia N, Vitali M, Canepari S, Mastromarino P. **A prophylactic multi-strain probiotic treatment to reduce the absorption of toxic elements: In-vitro study and biomonitoring of breast milk and infant stools.** *Environ Int.* 2019 Sep;130:104818. doi: 10.1016/j.envint.2019.05.012.

Singh A, Sarangi AN, Goel A, Srivastava R, Bhargava R, Gaur P, Aggarwal A, Aggarwal R. **Effect of administration of a probiotic preparation on gut microbiota and immune response in healthy women in India: an open-label, single-arm pilot study.** *BMC Gastroenterol.* 2018 Jun 15;18(1):85.

Halkjaer SI, Nilas L, Carlsen EM, Cortes D, Halldórsson TI, Olsen SF, Pedersen AE, Krogfelt KA, Petersen AM. **Effects of probiotics (Vivomixx®) in obese pregnant women and their newborn: study protocol for a randomized controlled trial.** *Trials.* 2016 Oct 11;17(1):491.

Baldassarre ME, Di Mauro A, Mastromarino P, Fanelli M, Martinelli D, Urbano F, Capobianco D, Laforgia N. **Administration of a Multi-Strain Probiotic Product to Women in the Perinatal Period Differentially Affects the Breast Milk Cytokine Profile and May Have Beneficial Effects on Neonatal Gastrointestinal Functional Symptoms. A Randomized Clinical Trial.** *Nutrients* 2016, 8(11), 677; doi:10.3390/nu8110677.

Jafarnejad S, Saremi S, Jafarnejad F, Arab A. **Effects of a Multispecies Probiotic Mixture on Glycemic Control and Inflammatory Status in Women with Gestational Diabetes: A Randomized Controlled Clinical Trial.** *J Nutr Metab.* 2016;2016:5190846.

Li JY, Chassaing B, Tyagi AM, Vaccaro C, Luo T, Adams J, Darby TM, Weitzmann MN, Mulle JG, Gewirtz AT, Jones RM, Pacifici R. **Sex steroid deficiency-associated bone loss is microbiota dependent and prevented by probiotics.** *J Clin Invest*. 2016 Jun 1;126(6):2049-63.

Mastromarino P., Capobianco D. Miccheli A., Praticò G., Campagna G., Laforgia N., Capursi T., Baldassarre E. **Administration of a multistrain probiotic product (VSL#3) to women in the perinatal period differentially affects breast milk beneficial microbiota in relation to mode of delivery.** *Pharmacol Res.* 2015 May-Jun;95-96:63-70

Facchinetti F., Dante G., Pedretti I., Resasco P., Annessi E., Dodero D. **The role of oral probiotic for bacterial vaginosis in pregnant women. A pilot study**. *Minerva Ginecologica*. 2013 Apr;65(2):215-21.

Vitali B., Cruciani F., Baldassarre M.E., Capursi T., Spisni E., Valerii M.C., Candela M., Turroni S., Brigidi P. **Dietary supplementation with probiotics during late pregnancy: outcome on vaginal microbiota and cytokine secretion**. *BMC Microbiology* 2012 Oct 18;12:236.

Halkjær SI, de Knegt VE, Kallemose T, Jensen JB, Cortes D, Gluud LL, Wewer Albrechtsen NJ, Petersen AM. **No effect of multi-strain probiotic supplementation on metabolic and inflammatory markers and newborn body composition in pregnant women with obesity: Results from a randomized, double-blind placebo-controlled study.** Nutr Metab Cardiovasc Dis. 2023 Dec;33(12):2444-2454. doi: 10.1016/j.numecd.2023.07.030.

HIV

Clinical studies

Landi C, Santinelli L, Bianchi L, Shaba E, Ceccarelli G, Cavallari EN, Borrazzo C, Pinacchio C, Scagnolari C, Vullo V, Bini L, d'Ettorre G. **Cognitive impairment and CSF proteome modification after oral bacteriotherapy in HIV patients.** *J Neurovirol*. 2019 Nov 1. doi: 10.1007/s13365-019-00801-7

Falasca F, Cavallari EN, Innocenti GP, Scagnolari C, Mezzaroma I, Santinelli L, Ceccarelli G, Vullo V, Turriziani O, d'Ettorre G. **Antiviral Activity of Faecal Water Samples from HIV-1 Infected Subjects Treated With a Specific Probiotic Formulation.** *Curr HIV Res*. 2019 Sep 3. doi: 10.2174/1570162X17666190903230622.

Ceccarelli G, Nelson Cavallari E, Savinelli S, Bianchi L, Pierangeli A, Vullo F, Ciardi A, D'ettorre G. **Clearance of human papillomavirus related anal condylomas after oral and endorectal multistrain probiotic supplementation in an HIV positive male. A case report.** *Medicine* 2018 http://dx.doi.org/10.1097/MD.0000000000010329

Ceccarelli G, Brenchley JM, Cavallari EN, Scheri GC, Fratino M, Pinacchio C, Schietroma I, Fard SN, Scagnolari C, Mezzaroma I, Vullo V, d'Ettorre G. **Impact of High-Dose Multi-Strain Probiotic Supplementation on Neurocognitive Performance and Central Nervous System Immune Activation of HIV-1 Infected Individuals.** *Nutrients*. 2017 Nov 21;9(11).

Ceccarelli G, Fratino M, Selvaggi C, Giustini N, Serafino S, Schietroma I, Corano Scheri G, Pavone P, Passavanti G, Alunni Fegatelli D, Mezzaroma I, Antonelli G, Vullo V, Scagnolari C, d'Ettorre G. **A pilot study on the effects of probiotic supplementation on neuropsychological performance and microRNA-29a-c levels in antiretroviral-treated HIV-1-infected patients.** *Brain and Behavior*. 2017;e00756 DOI: 10.1002/brb3.756

Scheri GC, Fard SN, Schietroma I, Mastrangelo A, Pinacchio C, Giustini N, Serafino S, De Girolamo G, Cavallari EN, Statzu M, Laghi L, Vullo A, Ceccarelli G, Vullo V, d'Ettorre G. **Modulation of Tryptophan/Serotonin Pathway by Probiotic Supplementation in Human Immunodeficiency Virus-Positive Patients: Preliminary Results of a New Study Approach.** Int J Tryptophan Res. 2017 May 30;10:1178646917710668.

D'Ettorre G, Rossi G, Scagnolari C, Andreotti M, Giustini N, Serafino S, Schietroma I, Corano Scheri G, Fard SN, Trinchieri V, Mastromarino P, Selvaggi C, Scarpona S, Fanello G, Fiocca F, Ceccarelli G, Antonelli G, Brenchley J, Vullo V. **Probiotic supplementation promotes a reduction in T-cell activation, an increase in Th17 frequencies, and a recovery of intestinal epithelium integrity and mitochondrial morphology in ART-treated HIV-1-positive patients.** *Immunity, Inflammation and Disease* doi: 10.1002/iid3.160 (2017)

Manuzak JA., Hensley-McBain T., Zevin AS., Miller C., Cubas R., Agricola B., Gile J., Richert-Spuhler L., Patilea G., Estes JD., Langevin S., Reeves RK., Haddad EK., Klatt NR. **Enhancement of Microbiota in Healthy Macaques Results in Beneficial Modulation of Mucosal and Systemic Immune Function.** *J Immunol.* 2016 Mar 1;196(5):2401-9.

Scagnolari C, Corano Scheri G, Selvaggi C, Schietroma I, Fard N, Mastrangelo A, Giustini N, Serafino S, Pinacchio C, Pavone P, Fanello G, Ceccarelli G, Vullo V, d'Ettorre G. **Probiotics Differently Affect Gut-Associated Lymphoid Tissue Indolamine-2,3-Dioxygenase mRNA and Cerebrospinal Fluid Neopterin Levels in Antiretroviral-Treated HIV-1 Infected Patients: A Pilot Study.** *Int. J. Mol. Sci.* 2016, 17(10), 1639.

Cavallari EN, Ceccarelli G, Santinelli L, Innocenti GP, De Girolamo G, Borrazzo C, Spagnolello O, Scagnolari C, Arcieri S, Ciardi A, Pierangeli A, Mastroianni CM, d'Ettorre G. **Clinical Effects of Oral Bacteriotherapy on Anal HPV Infection and Related Dysplasia in HIV-Positive MSM: Results from the "HPVinHIV" Trial.** Biomedicines. 2021 Nov 22;9(11):1738. doi: 10.3390/biomedicines9111738.

Presti RM, Yeh E, Williams B, Landay A, Jacobson JM, Wilson C, Fichtenbaum CJ, Utay NS, Dube MP, Klingman KL, Estes JD, Flynn JK, Loftin A, Brenchley JM, Andrade A, Kitch DW, Overton ET. **A Randomized, Placebo-Controlled Trial Assessing the Effect of VISBIOME ES Probiotic in People With HIV on Antiretroviral Therapy**. Open Forum Infect Dis. 2021 Dec 7;8(12):ofab550. doi: 10.1093/ofid/ofab550.

Reale M, Ucciferri C, Costantini E, Di Nicola M, Porreca A, Di Giovanni P, Pontolillo M, Auricchio A, Vecchiet J, Falasca K. **Effects of Probiotic Mixture Supplementation on the Immune Response to the 13-Valent Pneumococcal Conjugate Vaccine in People Living with HIV**. Nutrients. 2021 Dec 9;13(12):4412. doi: 10.3390/nu13124412.

Rousseau RK, Walmsley SL, Lee T, Rosenes R, Reinhard RJ, Malazogu F, Benko E, Huibner S, Kovacs CM, Singer J, Kim CJ, Kaul R. **Randomized, Blinded, Placebo-Controlled Trial of De Simone Formulation Probiotic During HIV-Associated Suboptimal CD4+ T Cell Recovery**. J Acquir Immune Defic Syndr. 2022 Feb 1;89(2):199-207. doi: 10.1097/QAI.0000000000002840.

Experimental studies

Ortiz AM., Klase ZA., Di Napoli SR., Vujkovic-Cvijin I., Carmack K., Perkins MR., Calantone N, Vinton CL, Riddick NE, Gallagher J, Klatt NR, McCune JM, Estes JD, Paiardini M, Brenchley JM. **L-21 and probiotic therapy improve Th17 frequencies, microbial translocation, and microbiome in ARV-treated, SIV-infected macaques.** *Mucosal Immunol.* 2016 Mar;9(2):458-67.

Klatt N,. Canary L., et Al. **Probiotic/prebiotic supplementation of antiretrovirals improves gastrointestinal immunity in SIV-infected macaques**. *J Clin. Investigation*. 2013 Feb;123(2):903-7.

STOMACH

Clinical studies

Rosania R., Minenna M., Giorgio F., Faciorusso A., De Francesco V., Hassan C., Panella C., Ierardi E. **Probiotic multistrain treatment may eradicate *Helicobacter pylori* from the stomach of dyspeptics : a placebo - controlled study**. *Inflammation & Allergy – Drug Targets* 2012 Jun;11(3):244-9.

NECROTIZING ENTEROCOLITIS

Bui A, Johnson E, Epshteyn M, Schumann C, Schwendeman C. **Utilization of a High Potency Probiotic Product for Prevention of Necrotizing Enterocolitis in Preterm Infants at a Level IV NICU**. J Pediatr Pharmacol Ther. 2023;28(5):473-475. doi: 10.5863/1551-6776-28.5.473.

OBESITY

Stefanaki C, Michos A, Mastorakos G, Mantzou A, Landis G, Zosi P, Bacopoulou F. **Probiotics in Adolescent Prediabetes: A Pilot RCT on Glycemic Control and Intestinal Bacteriome.** *J Clin Med.* 2019 Oct 21;8(10). pii: E1743. doi: 10.3390/jcm8101743.

Vazquez C, Galdon A, de Cos A, Chacin J, Zamarron I, Barrios D, Ramirez M, Calanas A Arrieta F. **Successful Evolution of a Patient with Obesity, Metabolic Syndrome and Severe Gastro esophageal Reflux after Probiotic Intake.** *Adv Obes Weight Manag Control* 2015, 2(1): 00009

Halkjaer SI, Nilas L, Carlsen EM, Cortes D, Halldórsson TI, Olsen SF, Pedersen AE, Krogfelt KA, Petersen AM. **Effects of probiotics (Vivomixx®) in obese pregnant women and their newborn: study protocol for a randomized controlled trial.** *Trials.* 2016 Oct 11;17(1):491.
Verma A, Nelson MT, DePaolo WR, Hampe C, Roth CL. **A randomized double-blind placebo controlled pilot study of probiotics in adolescents with severe obesity**. J Diabetes Metab Disord. 2021 Aug 8;20(2):1289-1300. doi: 10.1007/s40200-021-00855-7.

HOSPITAL SETTING / ICU

<u>Clinical studies</u>

Sinha A, Gupta S, Poluru R, Raut A. et al. **Evaluating the efficacy of a multistrain probiotic supplementation for prevention of neonatal sepsis in 0–2-month-old low birth weight infants in India the "ProSPoNS" Study protocol for a phase III, multicentric, randomized, double-blind, placebo-controlled trial.** *Trials*. 2021 Apr 1;22(1):242. doi: 10.1186/s13063-021-05193-w.

Pellicé M, Rodríguez-Núñez O, Rico V, Agüero D, Morata L, Cardozo C, Puerta-Alcalde P, Garcia-Vidal C, Rubio E, J. Fernandez-Pittol M, Vergara A, Pitart C, Marco F, Santana G, Rodríguez-Serna L, Vilella A, López E, Soriano A, Martínez JA, Del Rio A. **Factors Associated With Short-Term Eradication of Rectal Colonization by KPC-2 Producing Klebsiella pneumoniae in an Outbreak Setting.** *Frontiers in Microbiology* February 2021 | Volume 12doi: 10.3389/fmicb.2021.630826

Warrack S, Ziegler M, Duster M, Panjikar P, Safdar N**. A Pilot Randomized Trial to Determine the Tolerability of a Probiotic in Patients Colonized with Vancomycin-Resistant Enterococcus.** *J Prob Health* 2016, 4:2.

Sanaie S., Mameghani M., Hamishehkar H., Mojtahedzadeh M., Mahmoodpoor A. **Effect of a multispecies probiotic on inflammatory markers in critically ill patients: A randomized, double-blind, placebo-controlled trial.** *J Res Med Sci.* 2014 **;** 19(9): 827-833.

Pellino G., Sciaudone G., Candilio G., Camerlingo A., Marcellinaro R., De Fatico S., Rocco F., Canonico S., Riegler G., Selvaggi F. **Early postoperative administration of probiotics versus placebo in elderly patients undergoing elective colorectal surgery: a double-blind randomized controlled trial.** *BMC Surgery* 2013, 13(Suppl 2):S57

Mameghani M., Sanaie S., Mahmoodpoor A., Hamishehkar H. **Effect of a probiotic preparation (VSL#3) in critically ill patients: A randomized, double-blind, placebo-controlled trial (Pilot Study).** *Pak J Med Sci* 2013;29(2):490-494.

Sanaie S., Mameghani M., Mahmoodpoor A., Kamran S., Samad E. **Effect of a Probiotic Preparation (VSL#3) on Cardiovascular Risk Parameters in Critically-Ill Patients.** *Journal of Cardiovascular and Thoracic Research*, 2013, 5(2), 67-70.

Selinger C.P., Bell A. Cairns A., Lockett M., Sebastian S., Haslam N. **Probiotic VSL#3 prevents probiotic – associated diarrhoea in a double-blind, randomized, placebo-controlled clinical trial.** *Journal of Hospital Infection* 2013 Jun;84(2):159-65.

Zaharoni H., Rimon E., Vardi H., Friger M., Bolotin A., Shahar DR. **Probiotics improve bowel movements in hospitalized elderly patients -The PROAGE study.** *J Nutr Health Aging.* 2011 Mar;15(3):215-20.

Montalto M., Gallo A., Curigliano V., D'Onofrio F., Santoro L., Covino S., Dalvai S., Gasbarrini A. and Gasparrini G. **The effects of a probiotic mixture on NSAID enteropathy: a randomized, double-blind, cross-over, placebo-controlled study**. *Aliment Pharmacol Ther*. **32**:209-214 (2010)

Frohmader TJ., Chaboyer WP., Robertson IK., Gowardman J. **Decrease in frequency of liquid stool in enterally fed critically ill patients given the multispecies probiotic VSL#3: a pilot trial.** *Am J Crit Care.* 2010 May;19(3):e1-11.

Dubey AP., Rajeshwari K., Chakravarty A., Famularo G. **Use of VSL#3 in the treatment of rotavirus diarrhea in children: preliminary results.** *J Clin Gastroenterol.* 2008 Sep;42 Suppl 3 Pt 1:S126-9.

Alberda C, Gramlich L, Meddings J, Field C, McCargar L, Kutsogiannis D, Fedorak R, Madsen K **Effects of probiotic therapy critically ill patients: a randomized, double-blind, placebo-controlled trial.** *Am J Clin Nutr.* 2007 Mar;85(3):816-23.

Ewaschuk J, Endersby R, Thiel D, Diaz H, Backer J, Mang M, Churchill T, Madsen K **Probiotic bacteria prevent hepatic damage and maintain colonic barrier function in a mouse model of sepsis** *Hepatology.* 2007 Sep;46(3):841-50.

<u>Experimental studies</u>

Rehman A. et Al. **Effects of probiotics and antibiotics on the intestinal homeostasis in a computer controlled model of the large intestine**. *BMC Microbiology* 2012 Mar 27;12:47.

ALLERGY

Lombardi F, Fiasca F, Minelli M, Maio D, Mattei A. Vergallo I, Cifone M.G. Cinque B, Minelli M. **The Effects of Low-Nickel Diet Combined with Oral Administration of Selected Probiotics on Patients with Systemic Nickel Allergy Syndrome (SNAS) and Gut Dysbiosis.** *Nutrients* 2020, 12, 1040; doi:10.3390/nu12041040

Di Giacinto C, Marinaro M, Sanchez M, Strober W, Boirivant M. **Probiotics ameliorate recurrent Th1-mediated murine colitis by inducing IL-10 and IL-10-dependent TGF-beta-bearing regulatory cells.** *J Immunol.* 2005 Mar 15;174(6):3237-46.

De Angelis M, Rizzello CG, Fasano A, Clemente MG, De Simone C, Silano M, De Vincenzi M, Losito I, Gobbetti M. **VSL#3 probiotic preparation has the capacity to hydrolyze gliadin polypeptides responsible for celiac sprue.** *Biochim Biophys Acta.* 2006 Jan;1762(1):80-93.

De Angelis M, Rizzello CG, Scala E, De Simone C, Farris GA, Turrini F, Gobbetti M. **Probiotic preparation has the capacity to hydrolyze proteins responsible for wheat allergy.** *J Food Prot.* 2007 Jan;70(1):135-44.

Mastrangeli G., Corinti S., Butteroni C., Afferni C., Bonura A., Boirivant M., Colombo P., Di Felice G. **Effects of live and inactivated VSL#3 probiotic preparations in the modulation of *in vitro* and *in vivo* allergen-induced Th2 responses.** *Int Arch Allergy Immunol.* 2009;150(2):133-43.

Aumeunier A., Grela F., Ramadan A., Pham Van L., Bardel E., Alcala A., Jeannin P., Akira S., Bach J-F., Thieblemont N. **Systemic Toll-like Receptor Stimulation Suppresses Experimental Allergic Asthma and Autoimmune Diabetes in NOD Mice.** *PLoS One.* 2010 Jul 7;5(7):e11484.

Schiavi E., Barletta B., Butteroni C., Corinti S., Boirivant M. e Di Felice G. **Oral therapeutic administration of a probiotic mixture suppresses established Th2 responses and systemic anaphylaxis in a murine model of food allergy.** *Allergy.* 2011 Apr;66(4):499-508.

Thang CL, Boye JI, Zhao X. **Low Doses of Allergen and Probiotic Supplementation Separately or in Combination Alleviate Allergic Reactions to Cow β-Lactoglobulin in Mice.** J Nutr. 2013 Feb;143(2):136-41.

Barletta B., Rossi G.,Schiavi E., Butteroni C., Corinti Silvia, Boirivant M., Di Felice G. **Probiotic VSL#3-induced TGF-β ameliorates food allergy inflammation in a mouse model of peanut sensitization through the induction of regulatory T cells in the gut mucosa.** *Mol. Nutr. Food Res.* 2013, 00, 1–12

Harnett J, Myers SP, Rolfe M. **Probiotics and the Microbiome in Celiac Disease: A Randomised Controlled Trial.** Evid Based Complement Alternat Med. 2016;2016:9048574. doi: 10.1155/2016/9048574. Epub 2016 Jul 21.

MULTIPLE SCLEROSIS

Barreiro L, Eixarch H, Ponce-Alonso M, Castillo M, Lebrón-Galán R, Mestre L, Guaza C, Clemente D, Del Campo R, Montalban X, Espejo C. **Commercial Probiotic Induces Tolerogenic and Reduces Pathogenic Responses in Experimental Autoimmune Encephalomyelitis**. *Cell* 2020 Apr 7;9(4):906. doi: 10.3390/cells9040906.

Mestre L, J. Carrillo-Salinas F, Feliú A, Mechaa M, Alonsoa G, Espejob C, Calvo-Barreirod L, Luque-Garcíaf J, Estevez H, María Villar L, Guaza C. **How oral probiotics affect the severity of an experimental model of progressive multiple sclerosis? Bringing commensal bacteria into the neurodegenerative process**. *Gut Microbes* 2020, VOL. 12, NO. 1, e1813532. Doi 10.1080/19490976.2020.1813532

Low AHL, Teng GG, Pettersson S, de Sessions PF, Ho EXP, Fan Q, Chu CW, Law AHN, Santosa A, Lim AYN, Wang YT, Haaland B, Thumboo J. **A double-blind randomized placebo-controlled trial of probiotics in systemic sclerosis associated gastrointestinal disease.** *Semin Arthritis Rheum*. 49 (2019) 411-419 https://doi.org/10.1016/j.semarthrit.2019.05.006

Tankou SK, Regev K, Healy BC, Tjon E, Laghi L, Cox LM, Kivisäkk P, Pierre IV, Lokhande H, Gandhi R, Cook S, Glanz B, Stankiewicz J, Weiner HL. **A probiotic modulates the microbiome and immunity in multiple sclerosis.** *Ann Neurol*. 2018 Apr 20. doi: 10.1002/ana.25244.

Tankou SK, Regev K, Healy BC, Cox LM, Tjon E, Kivisakk P, Vanande IP, Cook S, Gandhi R, Glanz B, Stankiewicz J, Weiner HL. **Investigation of probiotics in multiple sclerosis.** *Mult Scler.* 2018 Jan;24(1):58-63

AUTISM

Santocchi E, Guiducci L, Prosperi M, Calderoni S, Gaggini M, Apicella F, Tancredi R, Billeci L, Mastromarino P, Grossi E, Gastaldelli A, Morales M, Muratori F. **Effects of Probiotic Supplementation on Gastrointestinal, Sensory and Core Symptoms in Autism Spectrum Disorders: A Randomized Controlled Trial.** *Front. Psychiatry*, 25 September 2020 https://doi.org/10.3389/fpsyt.2020.550593

Grossi E, Melli S, Dunca D, Terruzzi V. **Unexpected improvement in core autism spectrum disorder symptoms after long-term treatment with probiotics**. *SAGE Open Med Case Rep*. 2016 Aug 26;4:2050313X16666231.

Arnold LE, Luna RA, Williams K, Chan J, Parker RA, Wu Q, Hollway JA, Jeffs A, Lu F, Coury DL, Hayes C, Savidge T. **Probiotics for Gastrointestinal Symptoms and Quality of Life in Autism: A Placebo-Controlled Pilot Trial.** *J Child Adolesc Psychopharmacol*. 2019 Aug 30. doi: 10.1089/cap.2018.0156

COGNITIVE IMPAIRMENT

Ascone L, Garcia Forlim C, Gallinat J, Kühn S. **Effects of a multi-strain probiotic on hippocampal structure and function, cognition, and emotional well-being in healthy individuals: a double-blind randomised-controlled trial.** Psychol Med. 2022 May 6:1-11. doi: 10.1017/S0033291722000988.

CYSTIC FIBROSIS

Gur M, Zuckerman-Levin N, Masarweh K, Hanna M, Laghi L, Marazzato M, Levanon S, Hakim F, Bar-Yoseph R, Wilschanski M, Bentur L. The effect of probiotic administration on metabolomics and glucose metabolism in CF patients. Pediatr Pulmonol. 2022 Oct;57(10):2335-2343. doi: 10.1002/ppul.26037.

MISCELLANEOUS EXPERIMENTAL PAPERS

Astolfi ML, Protano C, Schiavi E, Marconi E, Capobianco D, Massimi L, Ristorini M, Baldassarre ME, Laforgia N, Vitali M, Canepari S, Mastromarino P. **A prophylactic multi-strain probiotic treatment to reduce the absorption of toxic elements: In-vitro study and biomonitoring of breast milk and infant stools.** *Environ Int.* 2019 Sep;130:104818. doi: 10.1016/j.envint.2019.05.012.

Ekmekciu I, Fiebiger U, Stingl K, Bereswill S, Heimesaat MM.**Amelioration of intestinal and systemic sequelae of murine Campylobacter jejuni infection by probiotic VSL#3 treatment.** *Gut Pathog.* 2017 Apr 11;9:17

Ünsal H, Ünsal C, Üner AG, Koç Yildirim E, Ekici M, Balkaya M, Belge F. **The effects of swimming exercise and probiotic VSL#3 on zonulin and some inflammatory and oxidative parameters in rats.** Kafkas Univ Vet Fak Derg, 23, 101-107, 2017. DOI: 10.9775/kvfd.2016.15949

Beilharz JE, Kaakoush NO, Maniam J, Morris MJ. **Cafeteria diet and probiotic therapy: cross talk among memory, neuroplasticity, serotonin receptors and gut microbiota in the rat.** *Mol Psychiatry.* 2018 Feb;23(2):351-361

Kumar M, Kissoon-Singh V, Leon Coria A, Moreau F, Chadee K. **The probiotic mixture VSL#3 reduces colonic inflammation and improves intestinal barrier function in Muc2 mucin deficient mice.** *Am J Physiol Gastrointest Liver Physiol*. 2017 Jan 1;312(1):G34-G45.

Mariman R., Tielen F., Koning F., Nagelkerken L. **The Probiotic Mixture VSL#3 Has Differential Effects on Intestinal Immune Parameters in Healthy Female BALB/c and C57BL/6 Mice.** *J Nutr.* 2015 Jun; 145(6):1354-61.

Distrutti E., O'Reilly J., McDonald C.,, Cipriani S., Renga B., Lynch M, Fiorucci S. **Modulation of Intestinal Microbiota by the Probiotic VSL#3 Resets Brain Gene Expression and Ameliorates the Age-Related Deficit in LTP.** *PLoS One.* 2014 Sep 9;9(9):e106503.

Mariman R., Kremer B., Koning F., Nagelkerken L**. The probiotic mixture VSL#3 mediates both pro- and anti-inflammatory responses in bone marrow-derived dendritic cells from C57BL/6 and BALB/c mice.** *Br J Nutr.* 2014 Oct 14;112(7):1088-97.

Isidro R., Bonilla F., Pagan H., Cruz M., Lopez P., Godoy L., Hernandez S., Loucil-Alicea R., Rivera-Amill V., Yamamura Y. Isidro A., Appleyard C. **The Probiotic Mixture VSL#3 Alters the Morphology and Secretion Profile of Both Polarized and Unpolarized Human Macrophages in a Polarization-Dependent Manner.** *J Clin Cell Immunol* 2014 Jun 20;5(3):1000227

Barletta B., Rossi G.,Schiavi E., Butteroni C., Corinti Silvia, Boirivant M., Di Felice G. **Probiotic VSL#3-induced TGF-β ameliorates food allergy inflammation in a mouse model of peanut sensitization through the induction of regulatory T cells in the gut mucosa.** *Mol. Nutr. Food Res.* 2013, 00, 1–12

Dharmani P., De Simone C., Chadee K. **The probiotic mixture VSL#3 accelerates gastric ulcer healing by stimulating vascular endothelial growth factor**. *Plos One* 2013;8(3):e58671.

Hörmannsperger G., Von Schillde M.A., Haller D. **Lactocepin as a protective microbial structure in the context of IBD.** *Gut Microbes.* 2013 Mar-Apr;4(2):152-7.

Klatt N,. Canary L., et Al. **Probiotic/prebiotic supplementation of antiretrovirals improves gastrointestinal immunity in SIV-infected macaques**. *J Clin. Investigation*. 2013 Feb;123(2):903-7.

Dai C., Zheng CQ., Meng FJ., Zhou Z., Sang LX., Jiang M. **VSL#3 probiotics exerts the anti-inflammatory activity via PI3k/Akt and NF-κB pathway in rat model of DSS-induced colitis.** *Mol Cell Biochem.* 2013 Feb;374(1-2):1-11.

Arsland H., Sarpinar aksu D., Terzi G., Nisbet C., **Therapeutic effects of probiotic bacteria in parvoviral enteritis in dogs.** *Revue Méd. Vét.* 2012 163, 2, 55-59.

Zhang H., Yu L., Yang W., Tang L., Lin Y., Wu H., Zhai B., Tan Y., Shan L., Liu Q., Chen H., Dai R., Qiu, He Y.,Wang C., Zheng L., Qiong Li Y.,Quan Wu F., Li Z., Yan H., Wang H. **Profound impact of gut homeostasis on chemically-induced pro-tumorigenic inflammation and hepatocarcinogenesis in rats.** *Journal of Hepatology* 2012 Oct;57(4):803-12. (+ supplement data)

Dai C., Zhao DH., Jiang M. **VSL#3 probiotics regulate the intestinal epithelial barrier in vivo and in vitro via the p38 and ERK signaling pathways.** *International Journal of Molecular Medicine* 2012 Feb;29(2):202-8.

Thang CL, Boye JI, Zhao X. **Low Doses of Allergen and Probiotic Supplementation Separately or in Combination Alleviate Allergic Reactions to Cow β-Lactoglobulin in Mice.** J Nutr. 2013 Feb;143(2):136-41.

Campeau J.L., Salim S.Y. Albert E.J., Hotte N., Madsen K.L. **Intestinal epithelial cells modulate antigen-presenting cell responses to bacterial DNA.** *Infect. Immun*. 2012 Aug;80(8):2632-44.

Corridoni D., Pastorelli L., Mattioli B., Locovei S., Ishikawa D., Arseneau K., Chieppa M., Cominelli F., Pizarro T. **Probiotic bacteria regulate intestinal epithelial permeability in experimental ileitis by TNF- dependent mechanism.** *Plos One* 2012, 7 (7): e42067.

Von Schillde M.A., Hörmannsperger G., Weiher M., Alpert C.A., Hahne H., Bäuerl C., Van Huynegem K., Steidler L., Hrncir T., Pérez-Martinez G., Kuster B., Haller D. **Lactocepin secreted by Lactobacillus exerts anti-inflammatory effects by selectively degrading proinflammatory chemokines.** *Cell Host & Microbe*, 387-396 (2012)

Gad M., Ravn P., Soborg D., Lund-Jensen K., Ouwehand A., Jensen S. **Regulation of the IL-10/IL-12 axis in human dendritic cells with probiotic bacteria.** *FEMS Immunol Med Microbiol* DOI: 10.1111/j.1574-695x.2011.00835.x (2011)

Pagnini C, Saeed R, Bamias G, Arseneau KO, Pizarro TT, Cominelli F. **Probiotics promote gut health through stimulation of epithelial innate immunity.** *PNAS* **107**:454-459 (2010)

Mastrangeli G, Corinti S, Butteroni C, Afferni C, Bonura A, Boirivant M, Colombo P, Di Felice G. **Effects of live and inactivated VSL#3 probiotic preparations in the modulation of *in vitro* and *in vivo* allergen-induced Th2 responses** *Arch of Int Allergy and Immunology* **150**:133–143 (2009)

Hörmannsperger G, Clavel T, Hoffmann M, Reiff C, Kelly D, Loh G, Blaut M, Hölzlwimmer G, Laschinger M , Haller D. **Post-translational Inhibition of IP-10 Secretion in IEC by Probiotic Bacteria: Impact on Chronic Inflammation Secretional Blockade by VSL#3** *Plos One* **4**:e4365 (2009)

Otte JM, Rudja MN, Brand S, Ilka W, Wolfgang E. Schmidt, Schmitz F. **Probiotics Regulate the Expression of COX-2 in Intestinal Epithelial Cells** *Nutrition and Cancer* 61: 103-113 (2009)

Harding S.V., Fraser K.G., Wykes L.J. **Probiotics stimulate liver and plasma protein synthesis in piglets with dextran Sulfate-Induced Colitis and macronutrient restriction.** *The Journal of Nutrition* 138:2129-2135 (2008).

Kotka M., Lieden A., Petterson S., Trinchieri V., Masci A., D'Amato M. **Solute Carriers (SLC) in inflammatory Bowel Disease. A potential target of probiotics?** *J Clin Gastroenterol* Vol 42 Supp.3 (2008)

Soo I, Madsen KL, Qassim T, Sydora BC, Sherbaniuk R, Cinque B, Di Marzio L, Cifone MG, De Simone C, Fedorak RN **VSL#3 probiotic upregulates intestinal mucosal alkaline sphingomyelinase and reduces inflammation** *Can J Gastroenterol* **22**(3):237-242 (2008)

Schlee M, Harder J, Köten B, Stange EF, Wehkamp J, Fellermann K **Probiotic lactobacilli and VSL#3 induce enterocyte β-defensin 2** *Clin Experim Immunol* **151**:528-35 (2008)

De Angelis M, Rizzello CG, Scala E, De Simone C, Farris GA, Turrini F, Gobbetti M **Probiotic preparation has the capacity to hydrolyze proteins responsible for wheat allergy** *J Food Prot* **70**:135-144 (2007)

Caballero-Franco C, Keller K, De Simone C, Chadee K **The VSL#3 probiotic formula induces mucin gene expression and secretion in colonic epithelial cells** *Am J Physiol Gastrointest Liver Physiol* **292**:G315-22 (2007)

Visekruna A, Joeris T, Seidel D, Kroesen A, Loddenkemper C, Zeitz M, Kaufmann SHE, Schmidt-Ullrich R, Steinhoff U **Proteasome-mediated degradation of IκBα and processing of p105 in Crohn's disease and ulcerative colitis** *J Clin Invest* **116**:3195-203 (2006)

Massi M, Ioan P, Budriesi R, Chiarini C, Vitali B, Lammers KM, Gionchetti P, Campieri M, Lembo A, Brigidi P **Effects of probiotic bacteria on gastrointestinal motility in Guinea-pig isolated tissue** *World J Gastroenterol* **12**:5987-94 (2006)

Helwig U, Lammers KM, Rizzello F, Brigidi P, Rohleder V, Caramelli E, Gionchetti P, Schrezenmeir J, Foelsch UR, Schreiber S, Campieri M **Lactobacilli, bifidobacteria and E. coli nissle induce pro- and anti-inflammatory cytokines in peripheral blood mononuclear cells** *World J Gastroenterol* **12**:5978-86 (2006)

Ewaschuk JB, Walker JW, Diaz H, Madsen KL **Bioproduction of conjugated linoleic Acid by probiotic bacteria occurs in vitro and in vivo in mice.** *J Nutr* **136**(6):1483-7 (2006)

Gaudier E, Michel C, Segain JP, Cherbut C, Hoebler C **The VSL# 3 probiotic mixture modifies microflora but does not heal chronic dextran-sodium sulfate-induced colitis or reinforce the mucus barrier in mice.** *J Nutr* **135:**2753-61 (2005)

Linsalata M, Russo F, Berloco P, Valentini AM, Caruso ML, De Simone C, Barone M, Polimeno L, Di Leo A **Effects of probiotic bacteria (VSL#3) on the poliamine biosynthesis and cell proliferation of normal colonic mucosa of rats.** *In Vivo* **19**:989-996 (2005)

De Angelis M, Rizzello CG, Fasano A, Clemente MG, De Simone C, Silano M, De Vincenzi M, Losito I, Gobbetti M **VSL#3 probiotic preparation has the capacity to hydrolyze gliadin polypeptides responsible for celiac sprue.** *BBA* **1762**:80-93 (2005)

Di Giacinto C, Marinaro M, Sanchez M, Strober W, Boirivant M **Probiotics Ameliorate Recurrent Th1-Mediated Murine Colitis by Inducing IL-10 and IL-10-Dependent TGF-ß-Bearing Regulatory Cells.** *J Immunol* **174**:3237-46 (2005)

Petrof EO, Kojima K, Ropeleski MJ, Musch MW, Yun Tao, De Simone C, Chang EB **Probiotics inhibit nuclear factor kB and induce heat shock proteins in colonic epithelial cells through Proteasome inhibition.** *Gastroenterology* **127**:1474-1487 (2004)

Hart AL, Lammers K, Brigidi P,Vitali B, Rizzello F, Gionchetti P, Campieri M, Kamm MA, Knight SC, Stagg AJ **Modulation of human dendritic cell phenotype and function by probiotic bacteria.** *Gut* **53**:1602-1609 (2004)

Drakes M, Blanchard T, Czinn S **Bacterial probiotic modulation of dendritic cells.** *Infect Immun* **72**:3299-309 (2004)

Jijon H, Backer J, Diaz H, Yeung H, Thiel D, Mc Kaigney C, De Simone C, Madsen K **DNA from probiotic bacteria modulates murine and human epithelial and immune function.** *Gastroenterology* **126**:1358-73 (2004)

Otte JM, Podolsky DK **Functional modulation of enterocytes by gram-positive and gram-negative microorganisms.** *Am J Physiol Gastrointest Liver Physiol* **286**: G613–G626 (2004)

Rachmilewitz D, Katakura K, Karmeli F, Hayashi T, Reinus C, Rudensky B, Akira S, Takeda K, Lee J, Takabayashi K, Raz E. **Toll-Like Receptor 9 Signaling Mediates the Anti-inflammatory Effects of Probiotics in Murine Experimental Colitis.** *Gastroenterology* **126** : 520-528 (2004)

Lammers KM, Brigidi P, Vitali B, Gionchetti P, Rizzello F, Caramelli E, Matteuzzi D, Campieri M. **Immunomodulatory effects of probiotic bacteria DNA: IL-1 and IL-10 response in human peripheral blood mononuclear cells**. *FEMS Immunol Med Microbiol* **38**:165-72 (2003)

Vitali B., Candela M., Matteuzzi D., Brigidi P., **Quantitative detection of probiotic Bifidobacterium strains in bacterial mixtures by using real-time PCR.** *Syst Appl Microbiol* **26**:269-76 (2003)

Brigidi P, Swennen E,Vitali B, Rossi M, Matteuzzi D. **PCR Detection of Bifidobacterium Strains and Streptococcus Thermophilus in Feces of Human Subjects after Oral Bacteriotherapy and Yogurt Consumption.** *Int J Food Microbiol* **81**:203-209 (2003)

Shibolet O, Karmeli F, Eliakim R, Swennen E, Brigidi P, Gionchetti P, Campieri M, Morgenstern S, Rachmilewitz D. **Variable Response to Probiotics in Two Models of Experimental Colitis in Rats.** *Inflamm Bowel Dis* **8**:399-406 (2002)

Lammers KM, Helwig U, Swennen E, Rizzello F, Venturi A, Caramelli E, Kamm M, Brigidi P, Gionchetti P, Campieri M. **Effect of Probiotic Strains on Interleukin 8 Production by HT29/19A Cells.** *Am J Gastroenterology* **97**:1182-1186 (2002)

Madsen K, Cornish A, Soper P, Mc Kaigney C, Jijon H, Yachimec C, Doyle J, Jewell L, De Simone C, **Probiotic Bacteria Enhance Murine and Human Intestinal Epithelial Barrier Function.** *Gastroenterology* **121**:580-591 (2001)

Brigidi P, Vitali B, Swennen E, Altomare L, Rossi M, Matteuzzi D, **Specific Detection of Bifidobacterium Strains in a Pharmaceutical Probiotic Product and in Human Feces by Polymerase Chain Reaction.** *Syst Appl Microbiol* **23**:391-399 (2000)

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