

## Probiotika, Milchsäurebakterien oder Hefen, das Mikrobiom Probiotics, bacteria or yeasts and the microbiome

**Milchsäurebakterien und andere Symbiotika.** <http://de.wikipedia.org/wiki/Probiotikum>

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“Probiotics are live, nonpathogenic microorganisms (usually bacteria or yeasts) that have been used for centuries for their potential health benefits. They are currently marketed for prevention and treatment of a variety of disorders, including diarrhea, irritable bowel syndrome and inflammatory bowel disease....”

<http://secure.medicalletter.org/cannotaccess?ac=2&a=1267b&t=article&n=10401&p=tml&title=Probiotics&i=1267>

„Probiotika sind lebende, nicht-pathogene Mikroorganismen (meist Bakterien oder Hefen), die seit Jahrhunderten wegen ihres potenziellen gesundheitlichen Nutzens verwendet worden sind. Sie werden derzeit für die Prävention und die Behandlung bei einer Reihe von Krankheiten, einschließlich Durchfall, Reizdarmsyndrom und entzündlichen Darmerkrankungen vermarktet.“

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### Hefen, Yeast, Fungi

Rinaldi M. (1991) **Fungi as human pathogens: sublime and bizarre.** ASM News 57, 7  
„Given the right immunocompromised host, virtually any fungus can kill a human being”.

„Ein immungeschwächter Wirt, kann von jedem Pilz getötet werden“

Mattman LH (2001) **Cell Wall Deficient Forms. Stealth Pathogens.** CRC Press, 3<sup>rd</sup> Edition, S. 265  
“Fungi growing feebly may be stimulated to heavy growth by certain antibiotics and simultaneously produce wall-free forms. This is antibiotic-dependent growth of a fungus, rather than variant induction. This may be one reason why fungi invade antibiotic-treated patients”.

„Das üblicherweise geringe Wachstum von Pilzen kann man durch Zugabe von Antibiotika erheblich stimulieren wobei die Pilze auch zellwanddefekte Formen bilden. Dabei handelt es sich aber vor allem um ein Antibiotika-abhängiges Wachstum von Pilzen, weniger häufig wohl um die Induktion von zellwand-defekten Pilz-Varianten. Diese Tatsache könnte ein Grund dafür sein, warum Pilze in Antibiotika-behandelte Patienten auch eindringen können.“

Johnson DA (2014) **Probiotics: Help or Harm in Antibiotic-Associated Diarrhea?** [Medscape Gastroenterology > GI Common Concerns -- Computer Consult](http://www.medscape.com/viewarticle/830002?nlid=65464_763&src=wnl_edit_medp_imed&uac=165524AR&spon=18)  
[http://www.medscape.com/viewarticle/830002?nlid=65464\\_763&src=wnl\\_edit\\_medp\\_imed&uac=165524AR&spon=18](http://www.medscape.com/viewarticle/830002?nlid=65464_763&src=wnl_edit_medp_imed&uac=165524AR&spon=18)

Moller KO (1961) Pharmakologie. Als theoretische Grundlage einer rationalen Pharmakotherapie. 4. Auflage. Benno Schwabe & Co Verlag Basel/Stuttgart. **Seite 100**

McFarland LV, Surawicz CM, Greenberg RN, et al (1987) Enzyme-substitution therapy with the yeast *Saccharomyces cerevisiae* in congenital sucrase-isomaltase deficiency. N Engl J Med 316, 1306 – 9. [MedlineWeb of Science](#)

Harms HK, Bertele-Harms RM, Bruer-Kleis D (1989) Probiotics in man and animals. J Appl Bacteriol 66, 365 - 78 [Medline](#)

Willcox MD, Patrikakis M, Harty DW, Loo CY, Knox KW. (1993) Coaggregation of oral lactobacilli with streptococci from the oral cavity. Oral Microbiol Immunol. 8(5), 319–321. [PubMed](#)

Hennequin C, Kauffmann-Lacroix C, Jobert A, et al (1993) Therapeutic effects of *Saccharomyces boulardii* on mild residual symptoms in a stable phase of Crohn's disease with special respect to chronic diarrhea—a pilot study. Z Gastroenterol 31, 129 - 34. [MedlineWeb of Science](#)

Surawicz CM, McFarland LV, Greenberg RN, et al (1994) A randomized placebo-controlled trial of *Saccharomyces boulardii* in combination with standard antibiotics for *Clostridium difficile* disease. JAMA 271, 1913 - 8. [Abstract / FREE Full Text](#)

- Fuller R (1996) Biotherapeutic agents: a neglected modality for the treatment and prevention of selected intestinal and vaginal infections. *JAMA* 275, 870 - 6. [Abstract / FREE Full Text](#)
- Plein K, Hotz J (1996) *Saccharomyces boulardii* protease inhibits *Clostridium difficile* toxin A effects in the rat ileum. *Infect Immun* 64, 5225 - 32. [Abstract / FREE Full Text](#)
- Mitterdorfer G, Mayer HK, Kneifel W, Viernstein H (1996) *Saccharomyces boulardii* is not *Saccharomyces cerevisiae*. *Clin Infect Dis* 22, 200 - 1. [FREE Full Text](#)
- Castagliuolo I**, LaMont JT, Nikulasson ST, Pothoulakis C (1996) *Saccharomyces boulardii* protease inhibits *Clostridium difficile* toxin A effects in the rat ileum. *Infect. Immun.* 64, 5225–5232 <http://www.ncbi.nlm.nih.gov/pubmed/8945570>
- Munoz P, Bouza E, Cuenca-Estrella M, et al (1998) Species identification and **virulence attributes** of *Saccharomyces boulardii* (nom. inval.). *J Clin Microbiol* 36, 2613 - 7. [Abstract / FREE Full Text](#)
- Castagliuolo I**, Riegler MF, Valenick L, LaMont JT, Pothoulakis C (1999) *Saccharomyces boulardii* protease inhibits the effects of *Clostridium difficile* toxins A and B in human colonic mucosa. *Infect Immun* 67, 302 - 7. [Abstract / FREE Full Text](#)
- Mack RD, Michail S, Wei S, McDougall L, Hollingsworth MA (1999) Probiotics inhibit enteropathogenic *E. coli* adherence in vitro by inducing intestinal mucin gene expression. *Am J Physiol Gastrointest Liver Physiol.* 276, G941-G950.
- Caplan MS, Jilling T (2000) Neonatal necrotizing enterocolitis: Possible role of probiotic supplementation. *Journal of Paediatric Gastroenterology*, 30 (2) S18-S22
- D'Souza AL, Rajkumar C, Cooke J, Bulpitt CJ (2001) Protection from gastrointestinal diseases with the use of probiotics. *Am J Clin Nutr* 73, 430S - 6S . [Abstract / FREE Full Text](#)
- Elmer GW, Surawicz CM, McFarland LV (2002) Probiotics in prevention of antibiotic associated diarrhoea: meta-analysis. *BMJ* 324, 1361 [Abstract / FREE Full Text](#)
- McFarland LV (2002) Seven cases of **fungemia with *Saccharomyces boulardii*** in critically ill patients . *Intensive Care Med* 28, 797 - 801 . [CrossRefMedlineWeb of Science](#)
- Cremonini F, Caro SD, Nista E et al. (2002) Meta-analysis: the effect of probiotic administration on antibiotic-associated diarrhoea. In: *Aliment Pharmacol Ther* 16(8), 1461–1467.
- Isolauri E, Kirjavainen PV, Salminen S (2002) Probiotics: a role in the treatment of intestinal infection and inflammation? *Gut*, 50 (iii) 54-59.
- Servin AL, Coconnier MH (2003) Adhesion of probiotic strains to the intestinal mucosa and interaction with pathogens. *Best Practice and Research Clinical Gastroenterology*, 17 (5) 741-754
- Balfour Sartor R (2004) [Therapeutic manipulation of the enteric microflora in inflammatory bowel diseases: antibiotics, probiotics, and prebiotics](#) Original Research Article *Gastroenterology*, Volume 126, Issue 6, May 2004, Pages 1620-1633
- [Fietto JL](#), [Araújo RS](#), [Valadão FN](#) et al. (2004) Molecular and physiological comparisons between *Saccharomyces cerevisiae* and *Saccharomyces boulardii*. *Can J Microbiol.* 50(8), 615-21
- [Todorov SD](#), [van Reenen CA](#), [Dicks LM](#). (2004) Optimization of **bacteriocin** production by *Lactobacillus plantarum* ST13BR, a strain isolated from barley beer. *J Gen Appl Microbiol.* 50(3), 149-57. <http://www.ncbi.nlm.nih.gov/pubmed/15486824>
- Floch MH, Montrose DC (2005) Use of probiotics in humans: an analysis of the literature. *Gastroenterol Clin North Am.* 34(3), 547-70, x. <http://www.ncbi.nlm.nih.gov/pubmed/16084313>

- Buddenborg C (2005) Orale Immunisierung mit rekombinanten **Escherichia coli NISSLE 1917**: Charakterisierung der humoralen Immunantwort gegen oberflächenexprimierte heterologe Antigene aus **Borrelia burgdorferi** und *Listeria monocytogenes*. Inaugural-Dissertation. [http://miami.uni-muenster.de/servlets/DerivateServlet/Derivate-2191/diss\\_buddenborg.pdf](http://miami.uni-muenster.de/servlets/DerivateServlet/Derivate-2191/diss_buddenborg.pdf)
- Duncker S (2005) Auswirkung von oral verabreichtem *Escherichia coli* Nissle 1917 auf das Darm-assoziierte Immunsystem des Schweins. INAUGURAL DISSERTATION Zur Erlangung des Grades einer Doktorin der Veterinärmedizin (Dr. med. vet.) durch die Tierärztliche Hochschule Hannover. [http://elib.tiho-hannover.de/dissertations/dunckers\\_ss05.pdf](http://elib.tiho-hannover.de/dissertations/dunckers_ss05.pdf)
- Bischoff SC. M. P. M. (2005) Probiotika, Präbiotika und Synbiotika: Stellenwert in Klinik und Praxis. In: Dtsch Arztebl. S. 102(11), A-752/B-630/C-588.
- Muñoz P, Bouza E, Cuenca-Estrella M (2005) **Saccharomyces cerevisiae fungemia**: an emerging infectious disease. Clin Infect Dis 40, 1625 - 34. [Abstract / FREE Full Text](#)
- McFarland LV (2006) Meta-analysis of probiotics for the prevention of antibiotic associated diarrhea and the treatment of *Clostridium difficile* disease. In: Am J Gastroenterol 101(4), 812-822.
- Doron S, Gorbach SL. (2006) Probiotics: their role in the treatment and prevention of disease. Expert Rev Anti Infect Ther 4(2). 261-75.
- Snydman DR (2008) **The Safety of Probiotics**. Oxford Journals Medicine Clinical Infectious Diseases 46, (2), 104-111 [http://cid.oxfordjournals.org/content/46/Supplement\\_2/S104.full](http://cid.oxfordjournals.org/content/46/Supplement_2/S104.full)
- Zuccotti GV, Meneghin F, Raimondi C, Dilillo D, Agostini C, Riva E, Iovanini M (2008) Probiotics in clinical practice: An overview. The Journal of International Medical Research, 36 (1) 1A-53A.
- Lebeer S, Vanderleyden J, Keersmaecker SCJ (2008) Genes and molecules of Lactobacilli supporting probiotic action. Microbiology and Molecular Biology Reviews, 72 (4) 728-764.
- [Badet C](#), [Thebaud NB](#) (2008) **Ecology of Lactobacilli in the Oral Cavity: A Review of Literature**. Open Microbiol J. 2, 38-48. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2593047/>  
<http://www.docstoc.com/docs/85915905/Ecology-of-Lactobacilli-in-the-Oral-Cavity-Review-of-Literature>
- Bauer MP, van Dissel JT (2009) Alternative strategies for *Clostridium difficile* infection. International Journal of Antimicrobial Agents, 33 (S1) S51-S56.
- Hart AL, Kamm MJ, Stagg AJ, Knight SC (2009) Mechanisms of action of probiotics: Recent advances. Inflammatory Bowel Disease, 15 (2) 300-308
- Rhee SH, Pothoulakis C, Mayer EA (2009) Principles and clinical implications of the brain-gut-enteric microbiota axis Nat Rev Gastroenterol Hepatol. 6(5), 306-14 doi: 10.1038/nrgastro.2009.35
- Ianitti T, Palmieri B (2010) Therapeutical use of probiotic formulations in clinical practice. Clinical Nutrition, 29, 701-725
- Savino F, Cordisco L, Tarasco V et al. (2010) *Lactobacillus reuteri* DSM 17938 in infantile colic: a randomized, double-blind, placebo-controlled trial. In: Pediatrics 126 Nr. 3, e526-e533.
- Venugopalan V, Shriner KA, Wong-Beringer A (2010) Regulatory oversight and safety of probiotic use. Emerging Infectious Diseases, 16 (11) DOI: 10.3201/eid1611.100574.
- Salminen S, Nyborn S, Merilouto J, Collado CM, Vesterlund S, El-Nezami H (2010) Interaction of probiotics and pathogens – Benefits to human health? Current Opinion in Biotechnology, 21, 157-167
- Korhonen JM, van Hoek AM, Saarela M, Huys G, Tosi L, Mayerhofer S, Von Wright A (2010) Antimicrobial susceptibility of *Lactobacillus rhamnosus*. Beneficial Microbes, 1 (1) 75-80.
- Allen SJ, Martinez EG, Gregorio GV, Dans LF (2010) Probiotics for treating acute infectious diarrhoea. Cochrane Database Syst Rev. (11), CD003048. <http://www.ncbi.nlm.nih.gov/pubmed/21069673>

- Begovic J, Fira D, terzic-Vidojevic A, Topisirovic L (2010) Influence of carbohydrates of cell properties of *Lactobacillus rhamnosus*. *Central European Journal of Biology*, 5 (1) 103-110.
- Im E, Pothoulakis C. (2010) Recent advances in *Saccharomyces boulardii* research. *Gastroenterol Clin Biol*. 34 Suppl 1, 62-70. <http://www.ncbi.nlm.nih.gov/pubmed/20889007>
- Jones K (2010) Probiotics: Preventing antibiotic-associated diarrhoea. *JSPN*, 15 (2) 160-162
- Wolvers D, Antonine J, Myllyluma E, Schrezenmeir J, Szajewska H, Rijkers GT (2011) Guidance for substantiating the evidence for beneficial effects of probiotics: Prevention and management of infections by probiotics. *The Journal of Nutrition*, 140, 698S-712S
- Hao Q, Lu Z, Dong BR, et.al. (2011) Probiotics for preventing acute upper respiratory tract infections. *Cochrane Database of Systematic Reviews*. Issue 9. Art. No.: CD006895. DOI: 10.1002/14651858.CD006895.pub2 <http://www2.cochrane.org/reviews/en/ab006895.html>
- Johnston BC, Goldenberg JZ, Vandvik PO, Sun X, Guyatt GH (2011) Probiotics for the prevention of pediatric antibiotic-associated diarrhea. *Cochrane Database Syst Rev*. (11), CD004827. <http://www.ncbi.nlm.nih.gov/pubmed/22071814>
- Bailey JR, Probert CSJ, Cogan TA. (2011) Identification and Characterisation of an Iron-Responsive Candidate Probiotic. *PLoS ONE*, 6 (10), e26507 DOI: [10.1371/journal.pone.0026507](http://dx.doi.org/10.1371/journal.pone.0026507)
- McNulty et al., (2011) The Impact of a Consortium of Fermented Milk Strains on the Gut Microbiome of Gnotobiotic Mice and Monozygotic Twins, *Science Translational Medicine*, DOI: 10.1126/scitranslmed.3002701, <http://stm.sciencemag.org/content/3/106/106ra106>
- Takata K, Kinoshita M, Okuno T et al. (2011) The Lactic Acid Bacterium *Pediococcus acidilactici* Suppresses Autoimmune Encephalomyelitis by Inducing IL-10-Producing Regulatory T Cells. [PLoS One](http://www.ncbi.nlm.nih.gov/pubmed/22110705). 6(11), e27644. Epub <http://www.ncbi.nlm.nih.gov/pubmed/22110705>
- Cunningham-Rundles S, Ahrné S, Johann-Liang R, et al. (2011) Effect of probiotic bacteria on microbial host defense, growth, and immune function in human immunodeficiency virus type-1 infection. *Nutrients* 3(12), 1042-70. [Abstract](#)
- Bravo JA Forsythe P, Chew MV et al. (2011) Ingestion of *Lactobacillus* strain regulates emotional behavior and central GABA receptor expression in a mouse via the vagus nerve. *PNAS* 108(38), 16050-16055 <http://www.pnas.org/content/108/38/16050>
- Bercik P, Park AJ, Sinclair D, Khoshdel A, Lu J, Huang X et al. (2011) The anxiolytic effect of *Bifidobacterium longum* NCC3001 involves vagal pathways for gut-brain communication *Neurogastroenterol Motil*. 23(12), 1132-9 doi: 10.1111/j.1365-2982.2011.01796.x
- Hempel S, Newberry SJ, Maher AR, et al. (2012) Probiotics for the prevention and treatment of antibiotic-associated diarrhea: a systematic review and meta-analysis. *JAMA* 307(18), 1959-69. [Abstract](#)
- Reid G (2012) Probiotic and prebiotic applications for vaginal health. *J AOAC Int* 95(1), 31-4. [Abstract](#)
- Brooks S, Kalmokoff M (2012) Prebiotics and probiotics: methodology, efficacy, and potential health considerations. *J AOAC Int* 95(1), 1. [Full Citation](#)
- Zacharof MP, Lovitt RW (2012) Investigation of Shelf Life of Potency and Activity of the *Lactobacilli* Produced Bacteriocins Through Their Exposure to Various Physicochemical Stress Factors. [Probiotics and Antimicrobial Proteins](http://link.springer.com/article/10.1007/s12602-012-9102-2) 4(3), 187-197 <http://link.springer.com/article/10.1007/s12602-012-9102-2>
- Zacharof M-P, Lovitt RW (2012) Low molecular weight liquid media development for *Lactobacilli* producing bacteriocins. *Journal of Chemical Technology and Biotechnology* <http://onlinelibrary.wiley.com/doi/10.1002/jctb.3892/abstract>

Johnston BC, Ma SS, Goldenberg JZ (2012) Probiotics for the Prevention of Clostridium difficile–Associated Diarrhea: A Systematic Review and Meta-analysis. *Ann Intern Med.* 157, 878  
<http://annals.org/article.aspx?articleid=1390418>

Cabrera-Rubio R, et al. (2012) The human milk microbiome changes over lactation and is shaped by maternal weight and mode of delivery. *American Journal of Clinical Nutrition* 96(3), 544-551.  
<http://medicalxpress.com/news/2013-01-breast-bacteria-microbes-infant.html#iCp>

Lundell AC, Björnsson V, Ljung A, Ceder M, Johansen S, Lindhagen G, Törnåge CJ, Adlerberth I, Wold AE, Rudin A (2012). **Infant B cell memory differentiation and early gut bacterial colonization.** *J Immunol* 188:4315-22. <http://www.ncbi.nlm.nih.gov/pubmed/22490441>

(2013) "**Probiotics Revisited**" *The Medical Letter.* Vol 55 - Issue 1407  
<http://secure.medicalletter.org/cannotaccess?ac=2&a=1267b&t=article&n=10401&p=tml&title=Probiotics&i=1267>

Kleger A, Schnell J, Essig A et al. (2013) Case report: Fecal transplant in refractory clostridium difficile colitis. *Dtsch Arztebl Int* 110(7), 108-115 <http://www.aerzteblatt.de/int/archive/article/134468>

Meyer R (2013) Ein „Ökosystem“ mit Potenzial. *Deutsches Ärzteblatt* 110(8), A320-A321

Dinan TG, Stanton C, Cyran JF (2013) **Psychobiotics: A Novel Class of Psychotropic.** *Biological Psychiatry.* <http://www.biologicalpsychiatryjournal.com/article/S0006-3223%2813%2900408-3/abstract>

[Iyapparaj P](#), [Maruthiah T](#), [Ramasubburayan R](#), et al. (2013) Optimization of **bacteriocin** production by *Lactobacillus* sp. MSU3IR against shrimp bacterial pathogens. *Aquat Biosyst.* 9(1), 12. doi: 10.1186/2046-9063-9-12. <http://www.ncbi.nlm.nih.gov/pubmed/23725298>

[Daneman N](#) (2013) A probiotic trial: tipping the balance of evidence? *The Lancet, Early Online Publication.* <http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2813%2961571-8/fulltext>

[Allen SJ](#), [Wareham K](#), [Wang D](#) et al. (2013) Lactobacilli and bifidobacteria in the prevention of antibiotic-associated diarrhoea and *Clostridium difficile* diarrhoea in older inpatients (PLACIDE): a randomised, double-blind, placebo-controlled, multicentre trial. *The Lancet, Early Online Publication*, doi:10.1016/S0140-6736(13)61218-0  
<http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2813%2961218-0/abstract>  
<http://press.thelancet.com/PLACIDE.pdf>

[Goldenberg JZ](#), [Ma SS](#), [Saxton JD](#), [Martzen MR](#) et al. (2013) Probiotics for the prevention of *Clostridium difficile*-associated diarrhea in adults and children. *Cochrane Database Syst Rev.* 5, CD006095. doi: 10.1002/14651858.CD006095.pub3. <http://www.ncbi.nlm.nih.gov/pubmed/23728658>

[Herbel SR](#), [Lauzat B](#), [von Nickisch-Rosenegk M](#) et al. (2013) Species-specific quantification of probiotic lactobacilli in yoghurt by quantitative real time PCR. *J Appl Microbiol.* <http://quantitativepcr.info/qpcr/species-specific-quantification-of-probiotic-lactobacilli-in-yoghurt-by-quantitative-real-time-pcr/>  
**“The real time PCR assay developed here might become a convenient tool enabling an accurate, fast and sensitive detection of probiotic lactobacilli commercially used in food”.**

[Iyapparaj P](#), [Maruthiah T](#), [Ramasubburayan R](#) et al. (2013) Optimization of bacteriocin production by *Lactobacillus* sp. MSU3IR against shrimp bacterial pathogens. *Aquat Biosyst.* 9, 12.  
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3679972/>

[Vaghef-Mehrabany E](#), [Alipour B](#), [Homayouni-Rad A](#) et al. (2013) **Probiotic supplementation improves inflammatory status in patients with rheumatoid arthritis.** *Nutrition.* S0899-9007(13)00439-5. doi: 10.1016/j.nut.2013.09.007.  
**“L. casei 01 supplementation improved the disease activity and inflammatory status of patients with RA.”**

[Groeger D](#), [O'Mahony L](#), [Murphy EF](#) et al. (2013) *Bifidobacterium infantis* 35624 modulates host inflammatory processes beyond the gut. *Gut Microbes.* 4(4), 325-39. doi: 10.4161/gmic.25487. Epub 2013 Jun 21. <http://www.ncbi.nlm.nih.gov/pubmed/23842110>  
**„In conclusion, these data show that the immunomodulatory effects of the microbiota in humans are not limited to the mucosal immune system but extend to the systemic immune system.“**

Fujita R, Iimuro S, Shinozaki T, Sakamaki K, Uemura Y, Takeuchi A, Matsuyama Y, Ohashi Y (2013) Decreased duration of acute upper respiratory tract infections with daily intake of fermented milk: A multicenter, double-blinded, randomized comparative study in users of day care facilities for the elderly population. *Am J Infect Control* 41, 1231-5 <http://www.ncbi.nlm.nih.gov/pubmed/23890374>

Dong H, Rowland I, Thomas LV, Yaqoob P (2013) **Immunomodulatory effects of a probiotic drink containing *Lactobacillus casei* Shirota in healthy older volunteers.** *Eur J Nutr.* 52(8), 1853-63. doi: 10.1007/s00394-012-0487-1. Epub 2013 Jan 10. <http://www.ncbi.nlm.nih.gov/pubmed/23307112>

King S, Glanville J, Sanders ME, Fitzgerald A, Varley D (2014) **Effectiveness of probiotics on the duration of illness in healthy children and adults who develop common acute respiratory infectious conditions:** a systematic review and meta-analysis. *Br J Nutr* 112(1), 41-54. doi: 10.1017/S0007114514000075. Epub 2014 Apr 29. <http://www.ncbi.nlm.nih.gov/pubmed/24780623>

Tomaro-Duchesneau C, Saha S, Prakash S (2014) Modification of the gut microbiota to promote human health. *Probiotics, Prebiotics and Gut Health*, 15.

Teotia UVS, Kumar R, Mishra AK, Verma D (2014) Role of Probiotics and probiotic beverages on human health. *Int. J. Pharm. Med. Res.* 2(3), 78-84

Shanahan F, Quigley EM (2014). Manipulation of the Microbiota for Treatment of IBS and IBD—Challenges and Controversies. *Gastroenterology*, 146(6), 1554-1563.

Lorenzo-Zúñiga V, Llop E, Suárez C, Álvarez B, Abreu L, Espadaler J, Serra J (2014) I. 31, a new combination of probiotics, improves irritable bowel syndrome-related quality of life. *World journal of gastroenterology: WJG*, 20(26), 8709

Wright K, Wright H, Murray M (2014) Probiotic treatment for the prevention of antibiotic-associated diarrhoea in geriatric patients: A multicentre randomised controlled pilot study. *Australasian journal on ageing*. DOI: 10.1111/ajag.12116

Didari T, Solki S, Mozaffari S, Nikfar S, Abdollahi M (2014) A systematic review of the safety of probiotics. *Expert opinion on drug safety*, 13(2), 227-239

van Wyk J, Haddadin R, Saleh S, Collier PJ (2014) Probiotics versus Antibiotics: Is this the only option? *The International Arabic Journal of Antimicrobial Agents* 4(1) <http://imedpub.com/ojs/index.php/IAJAA/article/view/925>

**“This short review looks at the current literature in this area and attempts to identify if there is a scientific basis to inform the cautious clinical use of probiotics either alone or in combination with antibiotics. Whilst the evidence base is to date rather thin, there is sufficient to allow for a cautious support for such ideas. This review also identifies those areas in which further study is required before the general use of probiotics in the treatment of infection may be fully supported.”**

Pickard J et al. (2014) Rapid fucosylation of intestinal epithelium sustains host–commensal symbiosis in sickness. *Nature*, doi:10.1038/nature13823 <http://www.readcube.com/articles/10.1038/nature13823>

[Vaghef-Mehrabany E](#), [Alipour B](#), [Homayouni-Rad A](#) (2014) **Probiotic supplementation improves inflammatory status in patients with rheumatoid arthritis.** *Nutrition*.30(4), 430-5. doi: 10.1016/j.nut.2013.09.007. Epub 2013 Dec 17. <http://www.ncbi.nlm.nih.gov/pubmed/24355439/>

[Koleva Z](#), [Dedov I](#), [Kizheva J](#) et al. (2014) **Lactic acid microflora of the gut of snail *Cornu aspersum*.** *Biotechnol Biotechnol Equip.* 28(4), 627–634. Published online 2014 Oct 21. doi: [10.1080/13102818.2014.947071](https://doi.org/10.1080/13102818.2014.947071) PMID: PMC4433887 <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4433887/>

Mayer EA, Knight R, Mazmanian S3, Cryan JF, Tillisch K (2014) Gut microbes and the brain: paradigm shift in neuroscience *J Neurosci.* 34(46), 15490-6

PubMed Probiotics <http://www.ncbi.nlm.nih.gov/pubmed?term=Probiotics>

s.a. <http://www.gesundheitsfundament.de/blog/2014/01/01/probiotika-in-der-ernaehrung-staerken-der-darmflora/>

D'Mello C, Ronaghan N, Zaheer R et al. (2015) **Probiotics Improve Inflammation-Associated Sickness Behavior by Altering Communication between the Peripheral Immune System and the Brain.** *J Neurosci.* 35(30), 10821-30. doi: 10.1523/JNEUROSCI.0575-15.2015.  
<http://www.ncbi.nlm.nih.gov/pubmed/26224864>

Dinan TG, Stilling RM, Stanton C, Cryan JF (2015) **Collective unconscious: How gut microbes shape human behaviour.** *J Psych Res* 63, 1–9. <https://www.ncbi.nlm.nih.gov/pubmed/25772005>

Sivan A et al. (2015) **Commensal Bifidobacterium promotes antitumor immunity and facilitates anti-PD-L1 efficacy.** *Science*, 350, 1084-89

Lau CSM, Chamberlain RS (2016) **Probiotics are effective at preventing Clostridium difficile-associated diarrhea: a systematic review and meta-analysis.** Dove Press. 2016 (9) 27—37  
DOI <http://dx.doi.org/10.2147/IJGM.S98280>  
<https://www.dovepress.com/probiotics-are-effective-at-preventing-clostridium-difficile-associate-peer-reviewed-article-IJGM>

Park HJ, Lee GH, Jun J et al. (2016) **Multiple-unit tablet of probiotic bacteria for improved storage stability, acid tolerability, and in vivo intestinal protective effect.** Dovepress Drug Design, Development and Therapy 2016,10, 1355-1364  
<https://www.dovepress.com/multiple-unit-tablet-of-probiotic-bacteria-for-improved-storage-stabil-peer-reviewed-article-DDDT>

Li J et al (2016) **Probiotics modulated gut microbiota suppresses hepatocellular carcinoma growth in mice.** *PNAS*, doi:10.1073/pnas.1518189113, 2016.

Pinto-Sanchez MI, Hall GB, Ghajar K et al (2017) **Probiotic Bifidobacterium longum NCC3001 Reduces Depression Scores and Alters Brain Activity: A Pilot Study in Patients With Irritable Bowel Syndrome.** *Gastroenterology.* 2017 Aug;153(2):448-459.e8. doi:10.1053/j.gastro.2017.05.003. Epub 2017 May 5.

- ➔ **Autismus** [http://www.xerlebnishaft.de/autismus\\_und\\_lyme.pdf](http://www.xerlebnishaft.de/autismus_und_lyme.pdf)
- ➔ **Neoplasma** <http://www.xerlebnishaft.de/krebsstammzelltherapie.pdf>

## Mikrobiom und Proteom

(2012) **Earth Microbiome Project: Rick Stevens at TEDxNaperville**  
<https://www.youtube.com/watch?v=avsSuKIZSuA>

(2013) **Mind-altering microbes: how the microbiome affects brain and behavior: Elaine Hsiao at TEDxCaltech** [https://www.youtube.com/watch?v=FWT\\_BLVOASI](https://www.youtube.com/watch?v=FWT_BLVOASI)

Tyler AD, Smith MI, Silverberg MS (2014) **Analyzing the Human Microbiome: A "How To" Guide for Physicians.** *Am J Gastroenterol.* 109(7), 983-993. [Disclosures](http://www.medscape.com/viewarticle/828715)  
<http://www.medscape.com/viewarticle/828715>  
[http://www.researchgate.net/publication/261769669\\_Analyzing\\_the\\_Human\\_Microbiome\\_A\\_How\\_To\\_guide\\_for\\_Physicians](http://www.researchgate.net/publication/261769669_Analyzing_the_Human_Microbiome_A_How_To_guide_for_Physicians)

Uhlén U, Fangerberg L, Hallström BM et al. (2015) **Tissue-based map of the human proteome.** *Science*, doi:10.1126/science.1260419. <http://www.sciencemag.org/content/347/6220/1260419.abstract>

Krautkramer KA, Kreznar JH, Romano KA et al. (2016) **Diet-Microbiota Interactions Mediate Global Epigenetic Programming in Multiple Host Tissues.** 64(5), 982–992, DOI:  
<http://dx.doi.org/10.1016/j.molcel.2016.10.025>  
[http://www.cell.com/molecular-cell/fulltext/S1097-2765\(16\)30670-0](http://www.cell.com/molecular-cell/fulltext/S1097-2765(16)30670-0)

- ➔ **Polypeptide und Proteine** <http://www.kabilahsystems.de/biogeneamineundpeptide.pdf>
- ➔ **Fettsäuren** <http://www.kabilahsystems.de/ungesaettfets.pdf>
- ➔ **Virulenz Inhibitoren** [http://www.kabilahsystems.de/virulenz\\_inhibitoren.pdf](http://www.kabilahsystems.de/virulenz_inhibitoren.pdf)
- ➔ **Bakterien stabilisieren und entwarfen und nur notfalls gezielt töten**

[http://www.kabilahsystems.de/bakt-stabilis\\_entwaff.pdf](http://www.kabilahsystems.de/bakt-stabilis_entwaff.pdf)

- Gushanas T. **NASA** (2017) **Microbiomics: The Living World on You.**  
<https://www.nasa.gov/feature/nasa-releases-microbiomics-the-living-world-in-and-on-you-video>

[Bernt - Dieter Huismans](#) Letzte Revision März 2017 [www.Huismans.click](http://www.Huismans.click)  
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