

## VYBRANÁ LITERATURA

### 1. PRAMEN MLÁDÍ JE PLNÝ... MIKROBŮ?

- BIAGI, E. – CANDELA, M. – FRANCESCHI, C. – BRIGIDI, P. (2011): The aging gut microbiota: new perspectives. – *Ageing research reviews*, 10(4): 428–429. doi:10.1016/j.arr.2011.03.004.
- BIAGI, E. – NYLUND, L. – CANDELA, M. – OSTAN, R. – BUCCI, L., PINI, E.,... – De Vos, W. (2010): Through ageing, and beyond: gut microbiota and inflammatory status in seniors and centenarians. – *PloS One*, 5(5): e10667. doi:10.1371/journal.pone.0010667.
- BRÜSSOW, H. (2013): Microbiota and healthy ageing: observational and nutritional intervention studies. – *Microbial biotechnology*, 6(4): 326–334. doi:10.1111/1751-7915.12048.
- Claesson, M. J. – Jeffery, I. B. – Conde, S. – Power, S. E. – O'Connor, E. M. – Cusack, S.,... – O'Toole, P. W. (2012): Gut microbiota composition correlates with diet and health in the elderly. – *Nature*, 488(7410): 178–184. doi:10.1038/nature11319.
- GILBERT, J. A. – BLASER, M. J. – CAPORASO, J. G. – JANSSON, J. K. – LYNCH, S. V. – KNIGHT, R. (2018): Current understanding of the human microbiome. – *Nature Medicine*, 24(4): 392–400. doi:10.1038/nm.4517.
- HEINTZ, C. – MAIR, W. (2014): You are what you host: microbiome modulation of the aging process. – *Cell*, 156(3): 408–411. doi:10.1016/j.cell.2014.01.025.
- JACKSON, M. A. – JEFFERY, I. B. – BEAUMONT, M. – BELL, J. T. – CLARK, A. G. – LEY, R. E.,... – STEVES, C. J. (2016): Signatures of early frailty in the gut microbiota. – *Genome Medicine*, 8(1): 8. doi:10.1186/s13073-016-0262-7.
- KONG, F. – HUA, Y. – ZENG, B. – NING, R. – LI, Y. – ZHAO, J. (2016): Gut microbiota signatures of longevity. – *Current Biology: CB*, 26(18): R832–R833. doi:10.1016/j.cub.2016.08.015.

- LYNCH, D. B. – JEFFERY, I. B. – O'TOOLE, P. W. (2015): The role of the microbiota in ageing: current state and perspectives. – *Wiley interdisciplinary reviews: Systems Biology and Medicine*, 7(3): 131–138. doi:10.1002/wsbm.1293.
- RONDANELLI, M. – GIACOSA, A. – FALIVA, M. A. – PERNA, S. – ALLIERI, F. – CASTELLAZZI, A. M. (2015): Review on microbiota and effectiveness of probiotics use in older. – *World Journal of Clinical Cases*, 3(2): 156–162. doi:10.12998/wjcc.v3.i2.156.
- SARASWATI, S. – SITARAMAN, R. (2014). Aging and the human gut microbiota from correlation to causality. – *Frontiers in Microbiology*, 5(764). doi:10.3389/fmicb.2014.00764.
- SMITS, S. A. – LEACH, J. – SONNENBURG, E. D. – GONZALEZ, C. G. – LICHTMAN, J. S. – REID, G.,... – SONNENBURG, J. L. (2017): Seasonal cycling in the gut microbiome of the Hadza hunter-gatherers of Tanzania. – *Science*, 357(6353): 802–806. doi:10.1126/science.aan4834.
- THEVARANJAN, N. – PUCHTA, A. – SCHULZ, C. – NAIDOO, A. – SZAMOSI, J. C. – VERSCHOOR, C. P.,... – BOWDISHOVÁ, D. M. E. (2017): Age-associated microbial dysbiosis promotes intestinal permeability, systemic inflammation, and macrophage dysfunction. – *Cell Host & Microbe*, 21(4): 455–466 e454. doi:10.1016/j.chom.2017.03.002.
- TIIHONEN, K. – OUWEHAND, A. C. – RAUTONEN, N. (2010): Human intestinal microbiota and healthy ageing. – *Ageing Research Reviews*, 9(2): 107–116. doi:10.1016/j.arr.2009.10.004.
- ZAPATA, H. J. – QUAGLIARELLO, V. J. (2015). The microbiota and microbiome in aging: potential implications in health and age-related diseases. *Journal of the American Geriatrics Society*, 63(4), 776–81. doi:10.1111/jgs.13310.

## 2. VAŠI MIKROBI ZÁŘÍ: KOŽNÍ MIKROBIOM

- GRICE, E. A. – SEGRE, J. A. (2011): The skin microbiome. – *Nature Reviews: Microbiology*, 9(4): 244–253. doi:10.1038/nrmicro2537.
- LAX, S. – HAMPTON-MARCELL, J. T. – GIBBONS, S. M. – COLARES, G. B. – SMITH, D. – EISEN, J. A. – GILBERT, J. A. (2015): Forensic analysis of the microbiome of phones and shoes. – *Microbiome*, 3(21). doi:10.1186/s40168-015-0082-9.

- LEE, D. E. – HUH, C. S. – RA, J. – CHOI, I. D. – JEONG, J. W. – KIM, S. H.,... – AHN, Y. T. (2015): Clinical evidence of effects of *Lactobacillus plantarum* HY7714 on skin aging: a randomized, double blind, placebo-controlled study. – *Journal of Microbiology and Biotechnology*, 25(12): 2160–2168. doi:10.4014/jmb.1509.09021.
- LEVKOVICH, T. – POUTAHIDIS, T. – SMILLIE, C. – VARIAN, B. J. – IBRAHIM, Y. M. – LAKRITZ, J. R.,... – ERDMAN, S. E. (2013). Probiotic bacteria induce a „glow of health“. – *PloS One*, 8(1): e53867. doi:10.1371/journal.pone.0053867.
- NODAKE, Y. – MATSUMOTO, S. – MIURA, R. – HONDA, H. – ISHIBASHI, G. – DEKIO, I. – SAKAKIBARA, R. (2015): Pilot study on novel skin care method by augmentation with *Staphylococcus epidermidis*, an autologous skin microbe: a blinded randomized clinical trial. – *Journal of Dermatological Science*, 79(2): 119–126. doi:10.1016/j.jdermsci.2015.05.001.
- OH, J. – BYRD, A. L. – PARK, M. – KONG, H. H. – SEGRE, J. A. (2016). Temporal Stability of the Human SkinMicrobiome. *Cell*, 165(4), 854–866. doi:10.1016/j.cell.2016.04.008.
- SHIN, H. – PRICE, K. – ALBERT, L. – DODICK, J. – PARK, L. – DOMINGUEZOVÁ-BELLOVÁ, M. G. (2016). Changes in the eye microbiota associated with contact lens wearing. – *mBio*, 7(2): e00198. doi:10.1128/mBio.00198-16.

### **3. MYSLETÉ NA SVOJE MIKROBY: MIKROBI A MOZEK**

- FOSTER, J. A. – McVEY NEUFELD, K. A. (2013): Gut-brain axis: how the microbiome influences anxiety and depression. – *Trends in Neurosciences*, 36(5): 305–312. doi:10.1016/j.tins.2013.01.005.
- HSIAO, E. Y. – McBRIDE, S. W. – HSIEN, S. – SHARON, G. – HYDE, E. R. – McCUE, T.,... MAZMANIAN, S. K. (2013): Microbiota modulate behavioral and physiological abnormalities associated with neurodevelopmental disorders. – *Cell*, 155(7): 1451–1463. doi:10.1016/j.cell.2013.11.024.
- LEONE, V. – GIBBONS, S. M. – MARTINEZ, K. – HUTCHISON, A. L. – HUANG, E. Y. – CHAM, C. M.,... – CHANG, E. B. (2015): Effects of diurnal variation of gut microbes and high-fat feeding on host circadian clock

- function and metabolism. – *Cell Host & Microbe*, 17(5): 681–689. doi:10.1016/j.chom.2015.03.006.
- LURIE, I. – YANG, Y. X. – HAYNES, K. – MAMTANI, R. – BOURSI, B. (2015): Antibiotic exposure and the risk for depression, anxiety, or psychosis: a nested case-control study. – *The Journal of Clinical Psychiatry*, 76(11): 1522–1528. doi:10.4088/JCP.15m09961.
- MESSAOUDI, M. – LALONDE, R. – VIOLE, N. – JAVELOT, H. – DESOR, D. – NEJDI, A.,... – CAZAUBIEL, J. M. (2011): Assessment of psychotropic-like properties of a probiotic formulation (*Lactobacillus helveticus* R0052 and *Bifidobacterium longum* R0175) in rats and human subjects. – *The British Journal of Nutrition*, 105(5): 755–764. doi:10.1017/S0007114510004319.
- MORRIS, M. C. – TANGNEY, C. C. – WANG, Y. – SACKS, F. M. – BENNETT, D. A. – AGGARWAL, N. T. (2015): MIND diet associated with reduced incidence of Alzheimer's disease. – *Alzheimer's & Dementia: the Journal of the Alzheimer's Association*, 11(9): 1007–1014. doi:10.1016/j.jalz.2014.11.009.
- SAMPSON, T. R. – DEBELIUS, J. W. – THRON, T. – JANSSEN, S. – SHASTRI, G. G. – ILHAN, Z. E.,... – MAZMANIAN, S. K. (2016): Gut microbiota regulate motor deficits and neuroinflammation in a model of Parkinson's disease. – *Cell*, 167(6): 1469–1480. e1412. doi:10.1016/j.cell.2016.11.018.
- SAMPSON, T. R. – MAZMANIAN, S. K. (2015): Control of brain development, function, and behavior by the microbiome. – *Cell Host & Microbe*, 17(5): 565–576. doi:10.1016/j.chom.2015.04.011.
- SVENSSON, E. – HORVATH-PUHO, E. – THOMSEN, R. W. – DJURHUUS, J. C. – PEDERSEN, L. – BORGHAMMER, P. – SORENSEN, H. T. (2015): Vagotomy and subsequent risk of Parkinson's disease. – *Annals of Neurology*, 78(4): 522–529. doi:10.1002/ana.24448.
- THAISS, C. A. – ZEEVI, D. – LEVY, M. – ZILBERMAN-SCHAPIRA, G. – SUEZ, J. – TENGELER, A. C.,... – ELINAV, E. (2014): Transkingdom control of microbiota diurnal oscillations promotes metabolic homeostasis. – *Cell*, 159(3): 514–529. doi:10.1016/j.cell.2014.09.048.
- VOGT, N. M. – KERBY, R. L. – DILL-MCFARLAND, K. A. – HARDING, S. J. – MERLUZZI, A. P. – JOHNSON, S. C.,... – REY, F. E. (2017): Gut

microbiome alterations in Alzheimer's disease. – *Scientific Reports*, 7(1), 13537. doi:10.1038/s41598-017-13601-y.

#### 4. ZDRAVÝ ÚSMĚV, ZDRAVÉ JÁ: ORÁLNÍ MIKROBIOM

CURTIS, M. A. – ZENOBIA, C. – DARVEAU, R. P. (2011): The relationship of the oral microbiota to periodontal health and disease. – *Cell Host & Microbe*, 10(4): 302–306. doi:10.1016/j.chom.2011.09.008.

SHOEMARK, D. K. – ALLEN, S. J. (2015): The microbiome and disease: reviewing the links between the oral microbiome, aging, and Alzheimer's disease. – *Journal of Alzheimer's Disease: JAD*, 43(3): 725–738. doi:10.3233/JAD-141170.

WADE, W. G. (2013): The oral microbiome in health and disease. – *Pharmacological Research*, 69(1): 137–143. doi:10.1016/j.phrs.2012.11.006.

WEYRICH, L. S. – DOBNEY, K. – COOPER, A. (2015): Ancient DNA analysis of dental calculus. – *Journal of Human Evolution*, 79: 119–124. doi:10.1016/j.jhevol.2014.06.018.

ZARCO, M. F. – VESS, T. J. – GINSBURG, G. S. (2012): The oral microbiome in health and disease and the potential impact on personalized dental medicine. – *Oral Diseases*, 18(2): 109–120. doi:10.1111/j.1601-0825.2011.01851.

#### 5. ZHLUBOKA SE NADECHNĚTE: PLICNÍ MIKROBIOM

DICKSON, R. P. – MARTINEZ, F. J. – HUFFNAGLE, G. B. (2014): The role of the microbiome in exacerbations of chronic lung diseases. – *Lancet*, 384(9944): 691–702. doi:10.1016/S0140-6736(14)61136-3.

FANER, R. – SIBILA, O. – AGUSTI, A. – BERNASCONI, E. – CHALMERS, J. D. – HUFFNAGLE, G. B.,... – MONSO, E. (2017): The microbiome in respiratory medicine: current challenges and future perspectives. – *The European Respiratory Journal*, 49(4): doi:10.1183/13993003.02086-2016.

SEGAL, L. N. – BLASER, M. J. (2014): A brave new world: the lung microbiota in an era of change. – *Annals of the American Thoracic Society*, 11, Suppl 1, S21–27. doi:10.1513/AnnalsATS.201306-189MG.

SZE, M. A. – DIMITRIU, P. A. – SUZUKI, M. – McDONOUGH, J. E. – CAMPBELL, J. D. – BROTHERS, J. F.,... – HOGG, J. C. (2015): Host response to

the lung microbiome in chronic obstructive pulmonary disease. – *American Journal of Respiratory and Critical Care Medicine*, 192(4): 438–445. doi:10.1164/rccm.201502-0223OC.

## 6. BŘIŠNÍ BAKTERIE: ŽALUDEČNÍ MIKROBIOM

HOMAN, M. – OREL, R. (2015): Are probiotics useful in *Helicobacter pylori* eradication? – *World Journal of Gastroenterology*, 21(37): 10644–10653. doi:10.3748/wjg.v21.i37.10644.

JACKSON, M. A. – GOODRICH, J. K. – MAXAN, M. E. – FREEDBERG, D. E. – ABRAMS, J. A. – POOLE, A. C.,... – STEVES, C. J. (2016): Proton pump inhibitors alter the composition of the gut microbiota. *Gut*, 65(5): 749–756. doi:10.1136/gutjnl-2015-310861.

KIENESBERGER, S. – COX, L. M. – LIVANOS, A. – ZHANG, X. S. – CHUNG, J. – PEREZ-PEREZ, G. I.,... – BLASER, M. J. (2016): Gastric *Helicobacter pylori* infection affects local and distant microbial populations and host responses. – *Cell Reports*, 14(6): 1395–1407. doi:10.1016/j.celrep.2016.01.017.

YANG, I. – NELL, S. – SUERBAUM, S. (2013). Survival in hostile territory: the microbiota of the stomach. *FEMS Microbiology Reviews*, 37(5), 736–761. doi:10.1111/1574-6976.12027.

YANG, I. – WOLTEMATE, S. – PIAZUELO, M. B. – BRAVO, L. E. – YEPEZ, M. C. – ROMERO-GALLO, J.,... – SUERBAUM, S. (2016): Different gastric microbiota compositions in two human populations with high and low gastric cancer risk in Colombia. *Scientific Reports*, 6(18594). doi:10.1038/srep18594.

## 7. MEKKA MIKROBŮ: STŘEVNÍ MIKROBIOM

BALA, S. – MARCOS, M. – GATTU, A. – CATALANO, D. – SZABO, G. (2014): Acute binge drinking increases serum endotoxin and bacterial DNA levels in healthy individuals. – *PloS One*, 9(5): e96864. doi:10.1371/journal.pone.0096864.

BAOTHMAN, O. A. – ZAMZAMI, M. A. – TAHER, I. – ABUBAKER, J. – ABU-FARHA, M. (2016). The role of gut microbiota in the development of obesity and diabetes. – *Lipids in Health and Disease*, 15(108). doi:10.1186/s12944-016-0278-4.

- BIAGI, E. – FRANCESCHI, C. – RAMPELLI, S. – SEVERGNINI, M. – OSTAN, R. – TURRONI, S.,... – CANDELA, M. (2016): Gut microbiota and Extreme Longevity. *Current Biology: CB*, 26(11), 1480–1485. doi:10.1016/j.cub.2016.04.016.
- BIAN, G. – GLOOR, G. B. – GONG, A. – JIA, C. – ZHANG, W. – HU, J.,... – LI, J. (2017): The gut microbiota of healthy aged Chinese is similar to that of the healthy young. – *mSphere*, 2(5). doi:10.1128/mSphere.00327-17.
- BRANDT, L. J. (2017): Fecal microbiota therapy with a focus on *Clostridium difficile* infection. – *Psychosomatic Medicine*, 79(8): 868–873. doi:10.1097/PSY.0000000000000511.
- BRÜSSOW, H. (2013): Microbiota and healthy ageing: observational and nutritional intervention studies. – *Microbial Biotechnology*, 6(4): 326–334. doi:10.1111/1751-7915.12048.
- CHU, H. – KHOSRAVI, A. – KUSUMAWARDHANI, I. P. – KWON, A. H. – VASCONCELOS, A. C. – CUNHA, L. D.,... – MAZMANIAN, S. K. (2016): Gene-microbiota interactions contribute to the pathogenesis of inflammatory bowel disease. – *Science*, 352(6289): 1116–1120. doi:10.1126/science.aad9948.
- DEEHAN, E. C. – WALTER, J. (2016): The fiber gap and the disappearing gut microbiome: implications for human nutrition. – *Trends in Endocrinology and Metabolism: TEM*, 27(5): 239–242. doi:10.1016/j.tem.2016.03.001.
- FORSLUND, K. – HILDEBRAND, F. – NIELSEN, T. – FALONY, G. – Le CHATELIER, E. – SUNAGAWA, S.,... – PEDERSEN, O. (2015): Disentangling type 2 diabetes and metformin treatment signatures in the human gut microbiota. – *Nature*, 528(7581): 262–266. doi:10.1038/nature15766.
- IYER, N. – VAISHNAVA, S. (2016): Alcohol lowers your (intestinal) inhibitions. – *Cell Host & Microbe*, 19(2): 131–133. doi:10.1016/j.chom.2016.01.014.
- JAYASINGHE, T. N. – CHIavaroli, V. – HOLLAND, D. J. – CUTFIELD, W. S. – O’SULLIVAN, J. M. (2016): The new era of treatment for obesity and metabolic disorders: evidence and expectations for gut microbiome transplantation. – *Frontiers in cellular and Infection Microbiology*, 6(15). doi:10.3389/fcimb.2016.00015.

- KONG, F. – HUA, Y. – ZENG, B. – NING, R. – LI, Y. – ZHAO, J. (2016): Gut microbiota signatures of longevity. – *Current Biology: CB*, 26(18): R832–R833. doi:10.1016/j.cub.2016.08.015.
- KONIG, J. – SIEBENHAAR, A. – HOGENAUER, C. – ARKKILA, P. – NIEUWDORP, M. – NOREN, T.,... – BRUMMER, R. J. (2017): Consensus report: faecal microbiota transfer – clinical applications and procedures. – *Alimentary Pharmacology & Therapeutics*, 45(2): 222–239. doi:10.1111/apt.13868.
- LEUNG, C. – RIVERA, L. – FURNESS, J. B. – ANGUS, P. W. (2016): The role of the gut microbiota in NAFLD. – *Nature Reviews: Gastroenterology & Hepatology*, 13(7): 412–425. doi:10.1038/nrgastro.2016.85.
- MAHER, R. L. – HANLON, J. – HAJJAR, E. R. (2014): Clinical consequences of polypharmacy in elderly. – *Expert Opinion on Drug Safety*, 13(1): 57–65. doi:10.1517/14740338.2013.827660.
- SANTORO, A. – OSTAN, R. – CANDELA, M. – BIAGI, E. – BRIGIDI, P. – CAPRI, M. – FRANCESCHI, C. (2018): Gut microbiota changes in the extreme decades of human life: a focus on centenarians. – *Cellular and Molecular Life Sciences: CMLS*, 75(1): 129–148. doi:10.1007/s00018-017-2674-y.
- SONNENBURG, E. D. – SMITS, S. A. – TIKHONOV, M. – HIGGINBOTTOM, S. K. – WINGREEN, N. S. – SONNENBURG, J. L. (2016): Diet-induced extinctions in the gut microbiota compound over generations. – *Nature*, 529(7585): 212–215. doi:10.1038/nature16504.
- SUEZ, J. – KOREM, T. – ZEEVI, D. – ZILBERMAN-SCHAPIRA, G. – THAISS, C. A. – MAZA, O.,... – ELINAV, E. (2014): Artificial sweeteners induce glucose intolerance by altering the gut microbiota. – *Nature*, 514(7521): 181–186. doi:10.1038/nature13793.
- THAISS, C. A. – ITAV, S. – ROTHSCHILD, D. – MEIJER, M. – LEVY, M. – MORESI, C.,... – ELINAV, E. (2016): Persistent microbiome alterations modulate the rate of post-dieting weight regain. – *Nature*, 540: 544–551. doi:10.1038/nature20796.
- ZEEVI, D. – KOREM, T. – ZMORA, N. – ISRAELI, D. – ROTHSCHILD, D. – WEINBERGER, A.,... – SEGAL, E. (2015): Personalized nutrition by prediction of glycemic responses. – *Cell*, 163(5): 1079–1094. doi:10.1016/j.cell.2015.11.001.

## 8. BAKTERIE LÁSKY: SRDCE A MIKROBIOM

AMERICAN HEART ASSOCIATION (2017): *Good Fats and Bad Fats: The Facts on Healthy Fats*; viz: [healthyforgood.heart.org/eat-smart/infographics/the-factson-fats](http://healthyforgood.heart.org/eat-smart/infographics/the-factson-fats).

BALA, S. – MARCOS, M. – GATTU, A. – CATALANO, D. – SZABO, G. (2014): Acute binge drinking increases serum endotoxin and bacterial DNA levels in healthy individuals. – *PloS One*, 9(5): e96864. doi:10.1371/journal.pone.0096864.

CHEN, M. L. – YI, L. – ZHANG, Y. – ZHOU, X. – RAN, L. – YANG, J.,... – MI, M. T. (2016): Resveratrol attenuates trimethylamine-N-oxide (TMAO)-induced atherosclerosis by regulating TMAO synthesis and bile acid metabolism via remodeling of the gut microbiota. – *mBio*, 7(2): e02210–02215. doi:10.1128/mBio.02210-15.

CLARKE, S. F. – MURPHY, E. F. – O’SULLIVAN, O. – LUCEY, A. J. – HUMPHREYS, M. – HOGAN, A.,... – COTTER, P. D. (2014): Exercise and associated dietary extremes impact on gut microbial diversity. – *Gut*, 63(12): 1913–1920. doi:10.1136/gutjnl-2013-306541.

GREGORY, J. C. – BUFFA, J. A. – ORG, E., WANG, Z. – LEVISON, B. S. – ZHU, W.,... – HAZEN, S. L. (2015): Transmission of atherosclerosis susceptibility with gut microbial transplantation. – *The Journal of Biological Chemistry*, 290(9): 5647–5660. doi:10.1074/jbc.M114.618249.

KOETH, R. A. – WANG, Z. – LEVISON, B. S. – BUFFA, J. A. – ORG, E. – SHEEHY, B. T.,... – HAZEN, S. L. (2013): Intestinal microbiota metabolism of L-carnitine, a nutrient in red meat, promotes atherosclerosis. – *Nature Medicine*, 19(5): 576–585. doi:10.1038/nm.3145.

TEICHLER, N. (2014): *The Big Fat Surprise: Why Butter, Meat and Cheese Belong in a Healthy Diet*, vyd. Simon & Schuster Paperbacks, New York, NY.

WANG, Z. – ROBERTS, A. B. – BUFFA, J. A. – LEVISON, B. S. – ZHU, W. – ORG, E.,... – HAZEN, S. L. (2015): Non-lethal inhibition of gut microbial trimethylamine production for the treatment of atherosclerosis. – *Cell*, 163(7): 1585–1595. doi:10.1016/j.cell.2015.11.055.

ZHU, W. – GREGORY, J. C. – ORG, E. – BUFFA, J. A. – GUPTA, N. – WANG, Z.,... – HAZEN, S. L. (2016): Gut microbial metabolite TMAO enhances

platelet hyperreactivity and thrombosis risk. – *Cell*, 165(1): 111–124. doi:10.1016/j.cell.2016.02.011.

## 9. ŽENY NEJSOU MALÍ MUŽI: MENOPAUZA A VAGINÁLNÍ MIKROBIOM

BAKER, J. M. – AL-NAKKASH, L. – HERBST-KRALOVETZ, M. M. (2017):

Estrogen-gut microbiome axis: physiological and clinical implications. – *Maturitas*, 103: 45–53. doi:10.1016/j.maturitas.2017.06.025.

MA, B. – FORNEY, L. J. – RAVEL, J. (2012): Vaginal microbiome: rethinking health and disease. – *Annual Review of Microbiology*, 66: 371–389. doi:10.1146/annurev-micro-092611-150157.

MARTIN, D. H. (2012): The microbiota of the vagina and its influence on women's health and disease. – *The American Journal of the Medical Sciences*, 343(1): 2–9. doi:10.1097/MAJ.0b013e31823ea228.

MUHLEISEN, A. L. – HERBST-KRALOVETZ, M. M. (2016): Menopause and the vaginal microbiome. – *Maturitas*, 91: 42–50. doi:10.1016/j.maturitas.2016.05.015.

SCHRODER, W. – SOMMER, H. – GLADSTONE, B. P. – FOSCHI, F. – HELLMAN, J. – EVENGARD, B. – TACCONELLI, E. (2016): Gender differences in antibiotic prescribing in the community: a systematic review and meta-analysis. – *The Journal of Antimicrobial Chemotherapy*, 71(7): 1800–1806. doi:10.1093/jac/dkw054.

SCHWENGER, E. M. – TEJANI, A. M. – LOEWEN, P. S. (2015): Probiotics for preventing urinary tract infections in adults and children. – *The Cochrane Database of Systematic Reviews* (12), CD008772. doi:10.1002/14651858.CD008772.pub2.

SHEN, J. – SONG, N. – WILLIAMS, C. J. – BROWN, C. J. – YAN, Z. – XU, C. – FORNEY, L. J. (2016): Effects of low dose estrogen therapy on the vaginal microbiomes of women with atrophic vaginitis. – *Scientific Reports*, 6(24380). doi:10.1038/srep24380.

THOMAS-WHITE, K. – BRADY, M. – WOLFE, A. J. – MUELLER, E. R. (2016): The bladder is not sterile: history and current discoveries on the urinary microbiome. – *Current Bladder Dysfunction Reports*, 11(1): 18–24. doi:10.1007/s11884-016-0345-8.

YOUNES, J. A. – LIEVENS, E. – HUMMELEN, R. – van der WESTEN, R. – REID, G. – PETROVA, M. I. (2018): Women and their microbes: the unexpected friendship. – *Trends in Microbiology*, 26(1): 16–32. doi:10.1016/j.tim.2017.07.008.

## 10. MIKROBI A RAKOVINA

BACCHUS, C. M. – DUNFIELD, L. – GORBER, S. C. – HOLMES, N. M. – BIRTHE WHISTLE, R. – DICKINSON, J. A.,... – TONELLI, M. (2016): Recommendations on screening for colorectal cancer in primary care. – *CMAJ: Canadian Medical Association Journal = Journal de l'Association médicale canadienne*, 188(5): 340–348. doi:10.1503/cmaj.151125.

CAO, Y. – WU, K. – MEHTA, R. – DREW, D. A. – SONG, M. – LOCHHEAD, P.,... – CHAN, A. T. (2018): Long-term use of antibiotics and risk of colorectal adenoma. – *Gut*, 67(4): 672–678. doi:10.1136/gutjnl-2016-313413.

GARRETT, W. S. (2015): Cancer and the microbiota. – *Science*, 348(6230): 80–86. doi:10.1126/science.aaa4972.

GOPALAKRISHNAN, V. – SPENCER, C. N. – NEZI, L. – REUBEN, A. – ANDREWS, M. C. – KARPINETS, T. V.,... – WARGOOVÁ, J. A. (2018): Gut microbiome modulates response to anti-PD-1 immunotherapy in melanoma patients. – *Science*, 359(6371): 97–103. doi:10.1126/science.aan4236.

HULLAR, M. A. – BURNETT-HARTMAN, A. N. – LAMPE, J. W. (2014). Gut microbes, diet, and cancer. *Cancer Treatment and Research*, 159: 377–399. doi:10.1007/978-3-642-38007-5\_22.

KOSTIC, A. D. – CHUN, E. – ROBERTSON, L. – GLICKMAN, J. N. – GALLINI, C. A. – MICHAUD, M.,... – GARRETT, W. S. (2013): *Fusobacterium nucleatum* potentiates intestinal tumorigenesis and modulates the tumor-immune microenvironment. – *Cell Host & Microbe*, 14(2): 207–215. doi:10.1016/j.chom.2013.07.007.

ROUTY, B. – LE CHATELIER, E. – DEROSA, L. – DUONG, C. P. M. – ALOU, M. T. – DAILLERE, R.,... – ZITVOGEL, L. (2018): Gut microbiome influences efficacy of PD-1-based immunotherapy against epithelial tumors. – *Science*, 359(6371): 91–97. doi:10.1126/science.aan3706.

- ROY, S. – TRINCHIERI, G. (2017): Microbiota: a key orchestrator of cancer therapy. – *Nature Reviews: Cancer*, 17(5):271–285. doi:10.1038/nrc.2017.13.
- SHONO, Y. – DOCAMPO, M. D. – PELED, J. U. – PEROBELLI, S. M. – VELARDI, E. – TSAI, J. J.,... – JENQ, R. R. (2016): Increased GVHD-related mortality with broad-spectrum antibiotic use after allogeneic hematopoietic stem cell transplantation in human patients and mice. – *Science Translational Medicine*, 8(339): 339ra371. doi:10.1126/scitranslmed.aaf2311.
- SIVAN, A. – CORRALES, L. – HUBERT, N. – WILLIAMS, J. B. – AQUINO-MICHAELES, K. – EARLEY, Z. M.,... – GAJEWSKI, T. F. (2015). Commensal *Bifidobacterium* promotes antitumor immunity and facilitates anti-PD-L1 efficacy. *Science*, 350(6264): 1084–1089. doi:10.1126/science.aac4255.
- URBANIAK, C. – GLOOR, G. B. – BRACKSTONE, M. – SCOTT, L. – TANGNEY, M. – REID, G. (2016): The microbiota of breast tissue and its association with breast cancer. – *Applied and Environmental Microbiology*, 82(16): 5039–5048. doi:10.1128/AEM.01235-16.
- VETIZOU, M. – PITTE, J. M. – DAUILLERE, R. – LEPAGE, P. – WALDSCHMITT, N. – FLAMENT, C.,... – ZITVOGEL, L. (2015): Anticancer immunotherapy by CTLA-4 blockade relies on the gut microbiota. – *Science*, 350(6264): 1079–1084. doi:10.1126/science.aad1329.
- WEBER, D. – JENQ, R. R. – PELED, J. U. – TAUR, Y. – HIERGEIST, A. – KOESTLER, J.,... – HOLLER, E. (2017): Microbiota disruption induced by early use of broad-spectrum antibiotics is an independent risk factor of outcome after allogeneic stem cell transplantation. – *Biology of Blood and Marrow Transplantation: Journal of the American Society for Blood and Marrow Transplantation*, 23(5): 845–852. doi:10.1016/j.bbmt.2017.02.006.
- YANG, Y. – XIA, Y. – CHEN, H. – HONG, L. – FENG, J. – YANG, J.,... – MA, Y. (2016): The effect of perioperative probiotics treatment for colorectal cancer: short-term outcomes of a randomized controlled trial. – *Oncotarget*, 7(7): 8432–8440. doi:10.18632/oncotarget.7045.
- ZITVOGEL, L. – DAUILLERE, R. – ROBERTI, M. P. – ROUTY, B. – KROEMER, G. (2017): Anticancer effects of the microbiome and its products. – *Nature Reviews: Microbiology*, 15(8), 465–478. doi:10.1038/nrmicro.2017.44.

## 11. VÁLKA MIKROBŮ: IMUNITNÍ SYSTÉM

- ATARASHI, K. – TANOUYE, T. – OSHIMA, K. – SUDA, W. – NAGANO, Y. – NISHIKAWA, H.,... – HONDA, K. (2013): Treg induction by a rationally selected mixture of Clostridia strains from the human microbiota. – *Nature*, 500(7461): 232–236. doi:10.1038/nature12331.
- BERER, K. – GERDES, L. A. – CEKANAVICIUTE, E. – JIA, X. – XIAO, L. – XIA, Z.,... – WEKERLE, H. (2017): Gut microbiota from multiple sclerosis patients enables spontaneous autoimmune encephalomyelitis in mice. – *Proceedings of the National Academy of Sciences of the United States of America*, 114(40): 10719–10724. doi:10.1073/pnas.1711233114.
- CABALLERO, S. – PAMER, E. G. (2015): Microbiota-mediated inflammation and antimicrobial defense in the intestine. – *Annual Review of Immunology*, 33:227–256. doi:10.1146/annurev-immunol-032713-120238.
- CALDER, P. C. – BOSCO, N. – BOURDET-SICARD, R. – CAPURON, L. – DELZENNE, N. – DORE, J.,... – VISIOLI, F. (2017): Health relevance of the modification of low-grade inflammation in ageing (inflammageing) and the role of nutrition. – *Ageing Research Reviews*, 40: 95–119. doi:10.1016/j.arr.2017.09.001.
- CEKANAVICIUTE, E. – YOO, B. B. – RUNIA, T. F. – DEBELIUS, J. W. – SINGH, S. – NELSON, C. A.,... – BARANZINI, S. E. (2017): Gut bacteria from multiple sclerosis patients modulate human T cells and exacerbate symptoms in mouse models. – *Proceedings of the National Academy of Sciences of the United States of America*, 114(40): 10713–10718. doi:10.1073/pnas.1711235114.
- CERVANTES-BARRAGAN, L. – CHAI, J. N. – TIANERO, M. D. – Di LUCCIA, B. – AHERN, P. P. – MERRIMAN, J.,... – COLONNA, M. (2017): *Lactobacillus reuteri* induces gut intraepithelial CD4(+)CD8 alpha alpha(+) T cells. – *Science*, 357(6353): 806–810. doi:10.1126/science.aah5825.
- FURUSAWA, Y. – OBATA, Y. – FUKUDA, S. – ENDO, T. A. – NAKATO, G. – TAKAHASHI, D.... OHNO, H. (2013): Commensal microbe-derived butyrate induces the differentiation of colonic regulatory T cells. – *Nature*, 504(7480): 446–450. doi:10.1038/nature12721.
- GILL, N. – FINLAY, B. B. (2011): The gut microbiota: challenging immunology. – *Nature Reviews: Immunology*, 11(10): 636–637. doi:10.1038/nri3061.

- HONDA, K. – LITTMAN, D. R. (2016): The microbiota in adaptive immune homeostasis and disease. – *Nature*, 535(7610): 75–84. doi:10.1038/nature18848.
- HOOPER, L. V. – LITTMAN, D. R. – MACPHERSON, A. J. (2012): Interactions between the microbiota and the immune system. – *Science*, 336(6086): 1268–1273. doi:10.1126/science.1223490.
- IVANOV, I. I. – FRUTOS RDE, L. – MANEL, N. – YOSHINAGA, K. – RIFKIN, D. B. – SARTOR, R. B.,... – LITTMAN, D. R. (2008): Specific microbiota direct the differentiation of IL-17-producing T-helper cells in the mucosa of the small intestine. – *Cell Host & Microbe*, 4(4): 337–349. doi:10.1016/j.chom.2008.09.009.
- MAZMANIAN, S. K. – LIU, C. H. – TZIANABOS, A. O. – KASPER, D. L. (2005): An immunomodulatory molecule of symbiotic bacteria directs maturation of the host immune system. – *Cell*, 122(1): 107–118. doi:10.1016/j.cell.2005.05.007.
- POSTLER, T. S. – GHOSH, S. (2017): Understanding the holobiont: how microbial metabolites affect human health and shape the immune system. – *Cell Metabolism*, 26(1): 110–130. doi:10.1016/j.cmet.2017.05.008.
- SALAZAR, N. – ARBOLEYA, S. – VALDES, L. – STANTON, C. – ROSS, P. – RUIZ, L.,... – de LOS REYES-GAVILAN, C. G. (2014): The human intestinal microbiome at extreme ages of life: dietary intervention as a way to counteract alterations. – *Frontiers in Genetics*, 5(406). doi:10.3389/fgene.2014.00406.
- SCHER, J. U. – SCZESNAK, A. – LONGMAN, R. S. – SEGATA, N. – UBEDA, C. – BIELSKI, C.,... – LITTMAN, D. R. (2013): Expansion of intestinal *Prevotella copri* correlates with enhanced susceptibility to arthritis. – *eLife*, 2, e01202. doi:10.7554/eLife.01202.
- THEVARANJAN, N. – PUCHTA, A. – SCHULZ, C. – NAIDOO, A. – SZAMOSI, J. C. – VERSCHOOR, C. P.,... – BOWDISHOVÁ, D. M. E. (2017): Age-associated microbial dysbiosis promotes intestinal permeability, systemic inflammation, and macrophage dysfunction. – *Cell Host & Microbe*, 21(4): 455–466, e454. doi:10.1016/j.chom.2017.03.002.
- ZHONG, D. – WU, C. – ZENG, X. – WANG, Q. (2018): The role of gut microbiota in the pathogenesis of rheumatic diseases. – *Clinical Rheumatology*, 37(1): 25–34. doi:10.1007/s10067-017-3821-4.

## 12. ROZHÝBEJTE MIKROBY: MUSKULOSKELETÁLNÍ SYSTÉM

- ALLEN, J. M. – MAILING, L. J. – NIEMIRO, G. M. – MOORE, R. – COOK, M. D. – WHITE, B. A.,... – WOODS, J. A. (2018): Exercise alters gut microbiota composition and function in lean and obese humans. – *Medicine and Science in Sports and Exercise*, 50(4): 747–757. doi:10.1249/MSS.0000000000001495.
- BRESSA, C. – BAILEN-ANDRINO, M. – PEREZ-SANTIAGO, J. – GONZALEZ-SOLTERO, R. – PEREZ, M. – MONTALVO-LOMINCHAR, M. G.,... – LARROSA, M. (2017): Differences in gut microbiota profile between women with active lifestyle and sedentary women. – *PLoS One*, 12(2): e0171352. doi:10.1371/journal.pone.0171352.
- Claesson, M. J. – Jeffery, I. B. – Conde, S. – Power, S. E. – O'Connor, E. M. – Cusack, S.,... – O'Toole, P. W. (2012): Gut microbiota composition correlates with diet and health in the elderly. – *Nature*, 488(7410): 178–184. doi:10.1038/nature11319.
- Jackson, M. A. – Jeffery, I. B. – Beaumont, M. – Bell, J. T. – Clark, A. G. – Ley, R. E.,... – Steves, C. J. (2016): Signatures of early frailty in the gut microbiota. – *Genome Medicine*, 8(1): 8. doi:10.1186/s13073-016-0262-7.
- Kelaидити, Е. – Jennings, А. – Steves, С. J. – Skinner, J. – Cassidy, А., MacGregor, А. J. – Welch, А. A. (2016): Measurements of skeletal muscle mass and power are positively related to a Mediterranean dietary pattern in women. – *Osteoporosis International: a journal established as result of cooperation between the European Foundation for Osteoporosis and the National Osteoporosis Foundation of the USA*, 27(11): 3251–3260. doi:10.1007/s00198-016-3665-9.
- O'Sullivan, O. – Cronin, O. – Clarke, S. F. – Murphy, E. F. – Molloy, M. G. – Shanahan, F. – Cotter, P. D. (2015): Exercise and the microbiota. – *Gut Microbes*, 6(2): 131–136. doi: 10.1080/19490976.2015.1011875.
- Rankin, A. – O'Donavon, C. – Madigan, S. M. – O'Sullivan, O. – Cotter, P. D. (2017): „Microbes in sport“: the potential role of the gut microbiota in athlete health and performance. – *British Journal of Sports Medicine*, 51(9): 698–699. doi:10.1136/bjsports-2016-097227.

- STEVES, C. J. – BIRD, S. – WILLIAMS, F. M. – SPECTOR, T. D. (2016): The microbiome and musculoskeletal conditions of aging: a review of evidence for impact and potential therapeutics. – *Journal of Bone and Mineral Research: the Official Journal of the American Society for Bone and Mineral Research*, 31(2): 261–269. doi:10.1002/jbmr.2765.
- VILLA, C. R. – WARD, W. E. – COMELLI, E. M. (2017): Gut microbiota-bone axis. – *Critical Reviews in Food Science and Nutrition*, 57(8): 1664–1672. doi:10.1080/10408398.2015.1010034.
- WANG, J. – WANG, Y. – GAO, W. – WANG, B. – ZHAO, H. – ZENG, Y., ... – HAO, D. (2017). Diversity analysis of gut microbiota in osteoporosis and osteopenia patients. – *PeerJ*, 5: e3450. doi:10.7717/peerj.3450.
- WEAVER, C. M. (2015): Diet, gut microbiome, and bone health. – *Current Osteoporosis Reports*, 13(2): 125–130. doi:10.1007/s11914-015-0257-0.

### 13. MÝT, ČI NEMÝT: ENVIRONMENTÁLNÍ MIKROBI

- ALIYU, S. – SMALDONE, A. – LARSON, E. (2017): Prevalence of multidrug-resistant gramnegative bacteria among nursing home residents: a systematic review and metaanalysis. – *American Journal of Infection Control*, 45(5): 512–518. doi:10.1016/j.ajic.2017.01.022.
- ANDERSEN, B. – FRISVAD, J. C. – SONDERGAARD, I. – RASMUSSEN, I. S. – LARSEN, L. S. (2011): Associations between fungal species and water-damaged building materials. – *Applied and Environmental Microbiology*, 77(12): 4180–4188. doi:10.1128/AEM.02513-10.
- BERG, G. – MAHNERT, A. – MOISSL-EICHINGER, C. (2014): Beneficial effects of plant-associated microbes on indoor microbiomes and human health? – *Frontiers of Microbiology*, 5(15). doi:10.3389/fmicb.2014.00015.
- BLOOMFIELD, S. F. – STANWELL-SMITH, R. – CREVEL, R. W. R. – PICKUP, J. (2006): Too clean, or not too clean: the Hygiene Hypothesis and home hygiene. – *Clinical & Experimental Allergy*, 36(4): 402–425. doi:10.1111/j.13652222.2006.02463.x.
- CARDINALE, M. – KAISER, D. – LUEDERS, T. – SCHNELL, S. – EGERT, M. (2017): Microbiome analysis and confocal microscopy of used kitchen sponges reveal massive colonization by Acinetobacter, Moraxella and

- Chryseobacterium species. – *Sci Rep*, 7(1): 5791. doi:10.1038/s41598-017-06055-9.
- DAVID, L. A. – MATERNA, A. C. – FRIEDMAN, J. – CAMPOS-BAPTISTA, M. I. – BLACKBURN, M. C. – PERROTTA, A.,... – ALM, E. J. (2014): Host lifestyle affects human microbiota on daily timescales. – *Genome Biology*, 15, R89. doi:10.1186/gb-2014-15-7-r89.
- HOISINGTON, A. J. – BRENNER, L. A. – KINNEY, K. A. – POSTOLACHE, T. T. – LOWRY, C. A. (2015): The microbiome of the built environment and mental health. – *Microbiome*, 3(60). doi:10.1186/s40168-015-0127-0.
- KOLJALG, S. – MANDAR, R. – SOBER, T. – ROOP, T. – MANDAR, R. (2017): High level bacterial contamination of secondary school students' mobile phones. – *Germs*, 7(2): 73–77. doi:10.18683/germs.2017.1111.
- LAX, S. – SMITH, D. P. – HAMPTON-MARCELL, J. – OWENS, S. M. – HANDLEY, K. M. – SCOTT, N. M.,... – GILBERT, J. A. (2014): Longitudinal analysis of microbial interaction between humans and the indoor environment. – *Science*, 345(6200): 1048–1052. doi:10.1126/science.1254529.
- MEADOW, J. F. – ALTRICHTER, A. E. – GREEN, J. L. (2014): Mobile phones carry the personal microbiome of their owners. – *PeerJ*, 2: e447. doi:10.7717/peerj.447.
- PECCIA, J. – KWAN, S. E. (2016): Buildings, beneficial microbes, and health. – *Trends in Microbiology*, 24(8): 595–597. doi:10.1016/j.tim.2016.04.007.
- RIDDLE, M. S. – CONNOR, B. A. (2016): The traveling microbiome. – *Current Infectious Diseases Reports*, 18(9): 29. doi:10.1007/s11908-016-0536-7.
- ROTHSCHILD, D. – WEISSBROD, O. – BARKAN, E. – KURILSHIKOV, A. – KOREM, T. – ZEEVI, D.,... – SEGAL, E. (2018): Environment dominates over host genetics in shaping human gut microbiota. – *Nature*, 555(7695): 210–215. doi:10.1038/nature25973.

#### 14. PRAMEN ZDRAVÍ JE PLNÝ MIKROBŮ: BUDOUCNOST MIKROBIOMU LIDSKÉHO TĚLA

- BIAGI, E. – CANDELA, M. – TURRONI, S. – GARAGNANI, P. – FRANCESCHI, C. – BRIGIDI, P. (2013): Ageing and gut microbes: perspectives for

- health maintenance and longevity. – *Pharmacological Research*, 69(1): 11–20. doi:10.1016/j.phrs.2012.10.005.
- BLASER, M. J. (2014): *Missing Microbes: How the Overuse of Antibiotics is Fueling Our Modern Plagues*, vyd. Henry Holt and Company, New York, NY.
- BRANDT, L. J. (2017): Fecal microbiota therapy with a focus on *Clostridium difficile* infection. – *Psychosomatic Medicine*, 79(8): 868–873. doi:10.1097/PSY.0000000000000511.
- BRÜSSOW, H. (2013): Microbiota and healthy ageing: observational and nutritional intervention studies. – *Microbial Biotechnology*, 6(4): 326–334. doi:10.1111/1751-7915.12048.
- BUETTNER, D. (2008): *The Blue Zones: Lessons for Living Longer From the People Who've Lived the Longest*, vyd. National Geographic Society, Washington, DC.
- COCKBURN, D. W. – KOROPATKIN, N. M. (2016): Polysaccharide degradation by the intestinal microbiota and its influence on human health and disease. – *Journal of Molecular Biology*, 428(16): 3230–3252. doi:10.1016/j.jmb.2016.06.021.
- FOND, G. – BOUKOUACI, W. – CHEVALIER, G. – REGNAULT, A. – EBERL, G. – HAMDANI, N.,... – LEBOYER, M. (2015): The „psychomicrobiotic“: targeting microbiota in major psychiatric disorders: a systematic review. – *Pathologie-Biologie*, 63(1): 35–42. doi:10.1016/j.patbio.2014.10.003.
- GIBSON, G. R. – HUTKINS, R. – SANDERSOVÁ, M. E. – PRESCOTT, S. L. – REIMER, R. A. – SALMINEN, S. J.,... – REID, G. (2017): Expert consensus document: The International Scientific Association for Probiotics and Prebiotics (ISAPP) consensus statement on the definition and scope of prebiotics. – *Nature Reviews: Gastroenterology & Hepatology*, 14(8): 491–502. doi:10.1038/nrgastro.2017.75.
- HAN, B. – SIVARAMAKRISHNAN, P. – LIN, C. J. – NEVE, I. A. A. – HE, J. – TAY, L.W. R.,... – WANG, M. C. (2017): Microbial genetic composition tunes host longevity. – *Cell*, 169(7): 1249–1262. e1213. doi:10.1016/j.cell.2017.05.036.
- HOD, K. – RINGEL, Y. (2016): Probiotics in functional bowel disorders. – *Best Practice & Research: Clinical Gastroenterology*, 30(1): 89–97. doi:10.1016/j.bpg.2016.01.003.

- HORVATH, A. – LEBER, B. – SCHMERBOECK, B. – TAWDROUS, M. – ZETTEL, G. – HARTL, A.,... – STADLBAUER, V. (2016): Randomised clinical trial: the effects of a multispecies probiotic vs. placebo on innate immune function, bacterial translocation and gut permeability in patients with cirrhosis. – *Alimentary Pharmacology & Therapeutics*, 44(9): 926–935. doi:10.1111/apt.13788.
- HUNGIN, A. P. S. – MITCHELL, C. R. – WHORWELL, P. – MULLIGAN, C. – COLE, O. – AGREUS, L.,... – deWIT, N. (2018): Systematic review: probiotics in the management of lower gastrointestinal symptoms: an updated evidence-based international consensus. – *Alimentary Pharmacology & Therapeutics*, 47(8): 1054–1070. doi:10.1111/apt.14539.
- KONIG, J. – SIEBENHAAR, A. – HOGENAUER, C. – ARKKILA, P. – NIEUWDORP, M. – NOREN, T.,... – BRUMMER, R. J. (2017): Consensus report: faecal microbiota transfer: clinical applications and procedures. – *Alimentary Pharmacology & Therapeutics*, 45(2): 222–239. doi:10.1111/apt.13868.
- LEWIS, B. B. – PAMER, E. G. (2017): Microbiota-based therapies for *Clostridium difficile* and antibiotic-resistant enteric infections. – *Annual Review of Microbiology*, 71: 157–178. doi:10.1146/annurev-micro-090816-093549.
- LURIE, I. – YANG, Y. X. – HAYNES, K. – MAMTANI, R. – BOURSI, B. (2015): Antibiotic exposure and the risk for depression, anxiety, or psychosis: a nested case-control study. – *The Journal of Clinical Psychiatry*, 76(11): 1522–1528. doi:10.4088/JCP.15m09961.
- McCARVILLE, J. L. – CAMINERO, A. – VERDU, E. F. (2016): Novel perspectives on therapeutic modulation of the gut microbiota. – *Therapeutic Advances in Gastroenterology*, 9(4): 580–593. doi:10.1177/1756283X16637819.
- PINTO-SANCHEZ, M. I. – HALL, G. B. – GHAJAR, K. – NARDELLI, A. – BOLINO, C. – LAU, J. T.,... – BERCIK, P. (2017): Probiotic *Bifidobacterium longum* NCC3001 reduces depression scores and alters brain activity: a pilot study in patients with irritable bowel syndrome. – *Gastroenterology*, 153(2): 448–459, e448. doi:10.1053/j.gastro.2017.05.003.

- REES, T. – BLASER, M. (2016): Waking up from antibiotic sleep. – *Perspectives in Public Health*, 136(4): 202–204. doi:10.1177/1757913916643449.
- RONDANELLI, M. – GIACOSA, A. – FALIVA, M. A. – PERNIA, S. – ALLIERI, F. – CASTELLAZZI, A. M. (2015): Review on microbiota and effectiveness of probiotics use in older. – *World Journal of Clinical Cases*, 3(2): 156–162. doi:10.12998/wjcc.v3.i2.156.
- ROTHSCHILD, D. – WEISSBROD, O. – BARKAN, E. – KURILSHIKOV, A. – KOREM, T. – ZEEVI, D.,... – SEGAL, E. (2018): Environment dominates over host genetics in shaping human gut microbiota. – *Nature*, 555(7695): 210–215. doi:10.1038/nature25973.
- SALAZAR, N. – ARBOLEYA, S. – VALDES, L. – STANTON, C. – ROSS, P. – RUIZ, L.,... – de LOS REYES-GAVILAN, C. G. (2014): The human intestinal microbiome at extreme ages of life: dietary intervention as a way to counteract alterations. – *Frontiers in Genetics*, 5(406). doi:10.3389/fgene.2014.00406.
- SANDERSOVÁ, M. E. (2016): Probiotics and microbiota composition. – *BMC Medicine*, 14(1): 82. doi:10.1186/s12916-016-0629-z.
- SCHWIERTZ, A. (2016): Microbiota of the human body: implications in health and disease. – *Advances in Experimental Medicine and Biology*, 902. doi: 10.1007/978-3-319-31248-4.
- STEENBERGEN, L. – SELLARO, R. – van HEMERT, S. – BOSCH, J. A. – COLZATO, L. S. (2015): A randomized controlled trial to test the effect of multispecies probiotics on cognitive reactivity to sad mood. – *Brain, Behavior, and Immunity*, 48: 258–264. doi:10.1016/j.bbi.2015.04.003.
- VANEGAS, S. M. – MEYDANI, M. – BARNETT, J. B. – GOLDIN, B. – KANE, A. – RASMUSSEN, H.,... – MEYDANI, S. N. (2017): Substituting whole grains for refined grains in a 6-wk randomized trial has a modest effect on gut microbiota and immune and inflammatory markers of healthy adults. – *The American Journal of Clinical Nutrition*, 105(3): 635–650. doi:10.3945/ajcn.116.146928.
- ZHANG, C. – LI, S. – YANG, L. – HUANG, P. – LI, W. – WANG, S.,... – ZHAO, L. (2013): Structural modulation of gut microbiota in life-long calorie-restricted mice. – *Nature Communications*, 4(2163). doi:10.1038/ncomms3163.