**Chapter 1**

**General**

**Diversity**

**Ecology and Geomicrobiology**

Allsup, C. M. *et al*. (2023). Shifting microbial communities can enhance tree tolerance to changing climates. *Science* **380**(6647), 835-840. <https://www.science.org/doi/abs/10.1126/science.adf2027>

Bhadrecha, P. *et al*. (2023). ‘A plant’s major strength in rhizosphere’: the plant growth promoting rhizobacteria. *Archives of Microbiology* **205**(5), 165. <https://doi.org/10.1007/s00203-023-03502-2>

Chepsergon, J. & Moleleki, L. N. (2023). Rhizosphere bacterial interactions and impact on plant health. *Current Opinion in Microbiology* **73**, 102297. <https://doi.org/10.1016/j.mib.2023.102297>

Pantigoso, H. A. *et al*. (2023). Root exudate-derived compounds stimulate the phosphorus solubilizing ability of bacteria. *Scientific Reports* **13**, 4050. <https://doi.org/10.1038/s41598-023-30915-2>

Pantigoso, H. A. *et al*. (2022). The rhizosphere microbiome: Plant–microbial interactions for resource acquisition. *Journal of Applied Microbiology* **133**(5), 2864-2876. <https://doi.org/10.1111/jam.15686>

Poppeliers, S. W. M. *et al*. (2023). Microbes to support plant health: understanding bioinoculant success in complex conditions. *Current Opinion in Microbiology* **73**, 102286. <https://doi.org/10.1016/j.mib.2023.102286>

**Evolution**

**Genomics**

**Extreme environments**

**Human microbiome**

Bender, M. J. *et al*. (2023). Dietary tryptophan metabolite released by intratumoral *Lactobacillus reuteri* facilitates immune checkpoint inhibitor treatment. *Cell* **186**(9), 1846-1862.e1826. <https://doi.org/10.1016/j.cell.2023.03.011>

Brown, E. M. *et al*. (2023). Gut microbiome lipid metabolism and its impact on host physiology. *Cell Host & Microbe* **31**(2), 173-186. <https://doi.org/10.1016/j.chom.2023.01.009>

Correa-Garcia, S. *et al*. (2023). The forecasting power of the microbiome. *Trends in Microbiology* **31**(5), 444-452. <https://doi.org/10.1016/j.tim.2022.11.013>

Das, S. *et al*. (2023). Recent advances in understanding of multifaceted changes in the vaginal microenvironment: implications in vaginal health and therapeutics. *Critical Reviews in Microbiology* **49**(2), 256-282. <https://doi.org/10.1080/1040841X.2022.2049696>

Dohnalová, L. *et al*. (2022). A microbiome-dependent gut–brain pathway regulates motivation for exercise. *Nature* **612**(7941), 739-747. <https://doi.org/10.1038/s41586-022-05525-z>

Feng, P. *et al*. (2023). A review of probiotics in the treatment of autism spectrum disorders: Perspectives from the gut–brain axis. *Frontiers in Microbiology* **14**: 1123462. <https://www.frontiersin.org/articles/10.3389/fmicb.2023.1123462>

Frioux, C. *et al*. (in press). Enterosignatures define common bacterial guilds in the human gut microbiome. *Cell Host & Microbe*. <https://doi.org/10.1016/j.chom.2023.05.024>

Gao, T. *et al*. (2023). Butyrate ameliorates insufficient sleep-induced intestinal mucosal damage in humans and mice. *Microbiology Spectrum* **11**(1), e02000-22. <https://journals.asm.org/doi/abs/10.1128/spectrum.02000-22>

Gu, Y. *et al*. (2023). Bile acid–gut microbiota crosstalk in irritable bowel syndrome. *Critical Reviews in Microbiology* **49**(3), 350-369. <https://doi.org/10.1080/1040841X.2022.2058353>

Guo, C. *et al*. (2023). Deficient butyrate-producing capacity in the gut microbiome is associated with bacterial network disturbances and fatigue symptoms in ME/CFS. *Cell Host & Microbe* **31**(2), 288-304.e288. <https://doi.org/10.1016/j.chom.2023.01.004>

Han, Y. *et al*. (2023). *Akkermansia muciniphila* inhibits nonalcoholic steatohepatitis by orchestrating TLR2-activated γδT17 cell and macrophage polarization. *Gut Microbes* **15**, 2221485. <https://doi.org/10.1080/19490976.2023.2221485>

Jones, J. *et al*. (2022). Changes to the gut microbiome in young children showing early behavioral signs of autism. *Frontiers in Microbiology* **13**, 905901. <https://www.frontiersin.org/articles/10.3389/fmicb.2022.905901>

Krypotou, E. *et al*. (2023). Bacteria require phase separation for fitness in the mammalian gut. *Science* **379**(6637), 1149-1156. <https://www.science.org/doi/abs/10.1126/science.abn7229>

Ma, B. *et al*. (2023). Strain-specific alterations in gut microbiome and host immune responses elicited by tolerogenic *Bifidobacterium pseudolongum*. *Scientific Reports* **13**, 1023. <https://doi.org/10.1038/s41598-023-27706-0>

Mancin, L. *et al*. (2023). Gut microbiota-bile acid-skeletal muscle axis. *Trends in Microbiology* **31**(3), 254-269. <https://doi.org/10.1016/j.tim.2022.10.003>

Neveu, V. *et al*. (2023). The human microbial exposome: expanding the Exposome-Explorer database with gut microbial metabolites. *Scientific Reports* **13**, 1946. <https://doi.org/10.1038/s41598-022-26366-w>

Oosterlinck, B. *et al*. (2023). Mucin-microbiome signatures shape the tumor microenvironment in gastric cancer. *Microbiome* **11**, 86. <https://doi.org/10.1186/s40168-023-01534-w>

Seo, D.-O. *et al*. (2023). ApoE isoform- and microbiota-dependent progression of neurodegeneration in a mouse model of tauopathy. *Science* **379**(6628), eadd1236. <https://www.science.org/doi/abs/10.1126/science.add1236>

Valles-Colomer, M. *et al*. (2023). The person-to-person transmission landscape of the gut and oral microbiomes. *Nature* **614**(7946), 125-135. <https://doi.org/10.1038/s41586-022-05620-1>

Zhou, L. *et al*. (in press). Effects of vaginal microbiota transfer on the neurodevelopment and microbiome of cesarean-born infants: A blinded randomized controlled trial. *Cell Host & Microbe*. <https://doi.org/10.1016/j.chom.2023.05.022>

Zhu, B. *et al*. (2022). Roles of the microbiota of the female reproductive tract in gynecological and reproductive health. *Microbiology & Molecular Biology Reviews* **86**(4), e00181-21. <https://journals.asm.org/doi/abs/10.1128/mmbr.00181-21>