

Publications using GlyCare® HMOs

- Marcabal, A. et al. Bacteroides in the infant gut consume milk oligosaccharides via mucus-utilization pathways. *Cell Host Microbe* 10, 507–514 (2011).
- Ruiz-Moyano, S. et al. Variation in consumption of human milk oligosaccharides by infant gut-associated strains of *bifidobacterium breve*. *Appl. Environ. Microbiol.* 79, 6040–6049 (2013).
- Crost, E. H. et al. Utilisation of Mucin Glycans by the Human Gut Symbiont *Ruminococcus gnavus* Is Strain-Dependent. *PLoS One* 8, (2013).
- Weiss, G. A., Chassard, C. & Hennet, T. Selective proliferation of intestinal *Barnesiella* under fucosyllactose supplementation in mice. *Br. J. Nutr.* 111, 1602–1610 (2014).
- Li, M. et al. Human milk oligosaccharides shorten rotavirus-induced diarrhea and modulate piglet mucosal immunity and colonic microbiota. *ISME J.* 8, 1609–1620 (2014).
- Li, M. et al. Human milk oligosaccharides shorten rotavirus-induced diarrhea and modulate piglet mucosal immunity and colonic microbiota. *ISME J.* 8, 1609–1620 (2014).
- Huang, Y. L., Chassard, C., Hausmann, M., Von Itzstein, M. & Hennet, T. Sialic acid catabolism drives intestinal inflammation and microbial dysbiosis in mice. *Nat. Commun.* 6, (2015).
- Garrido, D. et al. Comparative transcriptomics reveals key differences in the response to milk oligosaccharides of infant gut-associated bifidobacteria. *Sci. Rep.* 5, (2015).
- Dotz, V., Rudloff, S., Meyer, C., Lochnit, G. & Kunz, C. Metabolic fate of neutral human milk oligosaccharides in exclusively breast-fed infants. *Mol. Nutr. Food Res.* 59, 355–364 (2015).
- Balogh, R., Szarka, S. & Béni, S. Determination and quantification of 2'-O-fucosyllactose and 3-O-fucosyllactose in human milk by GC-MS as O-trimethylsilyl-oxime derivatives. *J. Pharm. Biomed. Anal.* 115, 450–456 (2015).
- James, K., Motherway, M. O. C., Bottacini, F. & Van Sinderen, D. *Bifidobacterium breve* UCC2003 metabolises the human milk oligosaccharides lacto-N-tetraose and lacto-N-neotetraose through overlapping, yet distinct pathways. *Sci. Rep.* 6, (2016).
- Garrido, D. et al. A novel gene cluster allows preferential utilization of fucosylated milk oligosaccharides in *Bifidobacterium longum* subsp. *longum* SC596. *Sci. Rep.* 6, (2016).
- Elison, E. et al. Oral supplementation of healthy adults with 2'-O-fucosyllactose and lacto-N-neotetraose is well tolerated and shifts the intestinal microbiota. *Br. J. Nutr.* 116, 1356–1368 (2016).
- Crost, E. H. et al. The mucin-degradation strategy of *Ruminococcus gnavus*: The importance of intramolecular trans-sialidases. *Gut Microbes* 7, 302–312 (2016).
- Bunesova, V., Lacroix, C. & Schwab, C. Fucosyllactose and L-fucose utilization of infant *Bifidobacterium longum* and *Bifidobacterium kashiwanohense*. *BMC Microbiol.* 16, 1–12 (2016).
- Yamada, C. et al. Molecular Insight into Evolution of Symbiosis between Breast-Fed Infants and a Member of the Human Gut Microbiome *Bifidobacterium longum*. *Cell Chem. Biol.* 24, 515–524. e5 (2017).
- Schwab, C. et al. Trophic interactions of infant bifidobacteria and *eubacterium hallii* during L-fucose and fucosyllactose degradation. *Front. Microbiol.* 8, (2017).
- Rasmussen, S. O. et al. Human milk oligosaccharide effects on intestinal function and inflammation after preterm birth in pigs. *J. Nutr. Biochem.* 40, 141–154 (2017).
- Comstock, S. S. et al. Dietary human milk oligosaccharides but not prebiotic oligosaccharides increase circulating natural killer cell and mesenteric lymph node memory T cell populations in noninfected and rotavirus-infected neonatal piglets. *J. Nutr.* 147, 1041–1047 (2017).
- O'Connell Motherway, M. et al. Carbohydrate Syntrophy enhances the establishment of *Bifidobacterium breve* UCC2003 in the neonatal gut. *Sci. Rep.* 8, (2018).
- Medina, D. A., Pinto, F., Ortuzar, V. & Garrido, D. Simulation and modeling of dietary changes in the infant gut microbiome. *FEMS Microbiol. Ecol.* 94, (2018).
- James, K., O'Connell Motherway, M., Penno, C., Louise O'brien, R. & Van Sinderen, D. *Bifidobacterium breve* UCC2003 Employs Multiple Transcriptional Regulators To Control Metabolism of Particular Human Milk Oligosaccharides. (2018) doi:10.1128/AEM.
- Gotoh, A. et al. Sharing of human milk oligosaccharides degradants within bifidobacterial communities in faecal cultures supplemented with *Bifidobacterium bifidum*. *Sci. Rep.* 8, (2018).
- Craft, K. M., Thomas, H. C. & Townsend, S. D. Interrogation of Human Milk Oligosaccharide Fucosylation Patterns for Antimicrobial and Antibiofilm Trends in Group B *Streptococcus*. *ACS Infect. Dis.* 4, 1755–1765 (2018).
- Bunesova, V., Lacroix, C. & Schwab, C. Mucin Cross-Feeding of Infant Bifidobacteria and *Eubacterium hallii*. *Microb. Ecol.* 75, 228–238 (2018).
- Arboleya, S. et al. Gene-trait matching across the *Bifidobacterium longum* pan-genome reveals considerable diversity in carbohydrate catabolism among human infant strains. *BMC Genomics* 19, (2018).
- Schwab, C., Voney, E., Ramirez Garcia, A., Vischer, M. & Lacroix, C. Characterization of the Cultivable Microbiota in Fresh and Stored Mature Human Breast Milk. *Front. Microbiol.* 10, (2019).

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Sakanaka, M. et al. Evolutionary adaptation in fucosyllactose uptake systems supports bifidobacteria-infant symbiosis. *Sci. Adv.* 5, 7696–7724 (2019).

Rudloff, S. et al. Metabolism of milk oligosaccharides in preterm pigs sensitive to necrotizing enterocolitis. *Front. Nutr.* 6, (2019).

James, K. et al. Metabolism of the predominant human milk oligosaccharide fucosyllactose by an infant gut commensal. *Sci. Rep.* 9, (2019).

Duranti, S. et al. *Bifidobacterium bifidum* and the infant gut microbiota: an intriguing case of microbe-host co-evolution. *Environ. Microbiol.* 21, 3683–3695 (2019).

Craft, K. M. & Townsend, S. D. Mother Knows Best: Deciphering the Antibacterial Properties of Human Milk Oligosaccharides. *Acc. Chem. Res.* 52, 760–768 (2019).

Craft, K. M., Thomas, H. C. & Townsend, S. D. Sialylated variants of lacto- N -tetraose exhibit antimicrobial activity against Group B Streptococcus. *Org. Biomol. Chem.* 17, 1893–1900 (2019).

Šuligoj, T. et al. Effects of human milk oligosaccharides on the adult gut microbiota and barrier function. *Nutrients* 12, 1–21 (2020).

Martín, R. et al. The infant-derived *bifidobacterium bifidum* strain cncm i-4319 strengthens gut functionality. *Microorganisms* 8, 1–19 (2020).

Lawson, M. A. E. et al. Breast milk-derived human milk oligosaccharides promote *Bifidobacterium* interactions within a single ecosystem. *ISME J.* 14, 635–648 (2020).

Kujawska, M. et al. Succession of *Bifidobacterium longum* Strains in Response to a Changing Early Life Nutritional Environment Reveals Dietary Substrate Adaptations. *iScience* 23, (2020).

Csernák, O., Rácz, B., Alberti, Á. & Béni, S. Quantitative analysis of 3'- and 6'-sialyllactose in human milk samples by HPLC-MS/MS: A validated method for the comparison of two consecutive lactation periods in the same woman. *J. Pharm. Biomed. Anal.* 184, (2020).

Chambers, S. A. & Townsend, S. D. Bioorthogonal human milk oligosaccharide probes for antimicrobial target identification within *Streptococcus agalactiae*. *Carbohydr. Res.* 488, (2020).

Alcon-Giner, C. et al. Microbiota Supplementation with *Bifidobacterium* and *Lactobacillus* Modifies the Preterm Infant Gut Microbiota and Metabolome: An Observational Study. *Cell Reports Med.* 1, (2020).

Szigeti, M., Meszaros-Matwiejk, A., Molnar-Gabor, D. & Guttman, A. Rapid capillary gel electrophoresis analysis of human milk oligosaccharides for food additive manufacturing in-process control. *Anal. Bioanal. Chem.* 1595–1603 (2021) doi:10.1007/s00216- 020-03119-0/ Published.

Sarkozy, D. et al. Ultrafast high-resolution analysis of human milk oligosaccharides by multicapillary gel electrophoresis. *Food Chem.* 341, (2021).

Hoedt, E. C. et al. Broad Purpose Vector for Site-Directed Insertional Mutagenesis in *Bifidobacterium breve*. *Front. Microbiol.* 12, (2021).

Penno, C. et al. Maximum depth sequencing reveals an ON/OFF replication slippage switch and apparent in vivo selection for bifidobacterial pilus expression. *Sci. Rep.* 12, (2022).

Miriam N. Ojima et al. Diversification of a fucosyllactose transporter within the genus *Bifidobacterium*. *Appl. Environ. Microbiol.* 88, (2022).

Luna, E. et al. Utilization Efficiency of Human Milk Oligosaccharides by Human-Associated *Akkermansia* Is Strain Dependent. *Appl. Environ. Microbiol.* 88, (2022).

Li, D., Chen, D., Yu, B., Luo, Y. & He, J. Effect of sialyllactose administration on growth performance and intestinal epithelium development in suckling piglets. *Anim. Feed Sci. Technol.* 284, (2022).

Kijner, S., Cher, A. & Yassour, M. The Infant Gut Commensal *Bacteroides dorei* Presents a Generalized Transcriptional Response to Various Human Milk Oligosaccharides. *Front. Cell. Infect. Microbiol.* 12, (2022).

Giorgetti, A. et al. The effects of 2'-fucosyllactose and lacto- N -neotetraose, galacto-oligosaccharides, and maternal human milk oligosaccharide profile on iron absorption in Kenyan infants. *Am. J. Clin. Nutr.* (2022) doi:10.1016/jajcnut.2022.10.005.

Duan, Q. et al. Effect of sialyllactose on growth performance and intestinal epithelium functions in weaned pigs challenged by enterotoxigenic *Escherichia Coli*. *J. Anim. Sci. Biotechnol.* 13, (2022).

Arzamasov, A. A. et al. Human Milk Oligosaccharide Utilization in Intestinal *Bifidobacteria* is Governed by a Global Transcriptional Regulator NagR. *bioRxiv Prepr.* (2022) doi:10.1101/2022.04.06.487429.

Garádi, Z., Tóth, A., Gáti, T., Dancsó, A. & Béni, S. Utilizing the ^1H - ^{15}N NMR Methods for the Characterization of Isomeric Human Milk Oligosaccharides. *Int. J. Mol. Sci.* 24, 2180 (2023).