The developing infant gut microbiota: mathematical predictions of the effects of oligosaccharides

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Publications

D. M. Versluis, R. Schoemaker, E. Looijesteijn, D. Muysken, P. V. Jeurink, M. Paques, J. M. W. Geurts, and R. M. H. Merks, "A Multiscale Spatiotemporal Model Including a Switch from Aerobic to Anaerobic Metabolism Reproduces Succession in the Early Infant Gut Microbiota," *mSystems*, vol. 7, 2022.
D. M. Versluis, R. Schoemaker, E. Looijesteijn, J. M. W. Geurts, and R. M. H. Merks, "2'-Fucosyllactose helps butyrate producers outgrow competitors in infant gut microbiota simulations," *iScience*, vol. 27, 2024.

Curriculum Vitae

David Versluis was born on September 9, 1996 in Gorinchem, the Netherlands. He attended the basisschool Koningin Wilhelmina in Leerdam, and in 2011 he obtained his VWO Diploma with the profiles "Natuur en Techniek" en "Natuur en Gezondheid" at the Heerenlanden College in Leerdam. He followed the bachelor Biology at Utrecht University, with a focus on plant sciences, microbial interactions, and (paleo)ecology, graduating in 2014 with a thesis on the effects of geography on migrations and competition during the glacial periods.
He then switched topics and followed a pre-master in computer science and the master program Artificial Intelligence at Utrecht University. He graduated from this in 2018 with a thesis on solving the vehicle routing program using a model inspired by the slime mold *Physarum polycephalum*.
Combining his previous interests he started his PhD research on 'Multiscale modelling of the infant gut microbiota' in 2019 in the Multiscale Mathematical Biology group of prof. dr. Roeland Merks at Leiden University, funded by FrieslandCampina. In the course of this PhD he has presented posters and presentations at many national and international conferences, workshops, and seminars. He has also assisted the Mathematical multiscale biology course and given lectures on multiscale modelling in general and metabolic modelling in particular. He is now carrying out postdoctoral work funded by FrieslandCampina at Leiden University and at the university of Cincinnati, to further improve and validate the models presented in this thesis.

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