CONTRIBUTION

Two upcoming papers on the human gut microbiota

Publié le 1 avril 2021

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https://www.frontiersin.org/articles/10.3389/fcimb.2021.533528/full

A paper in collaboration with the Institut Pasteur de Lille on the influence of commensal gut protozoa (Blastocystis & Entamoeba) on the gut microbiota of lowly industrialized human populations. Notably, we analyse for the first time jointly the changes in the human gut microbiota associated with the presence of these two protozoa in the same individuals. Our data from 134 healthy individuals living in Cameroon show that Blastocystis is associated with a larger effect on both diversity and composition than Entamoeba. The specific signature of each protozoan might suggest that they interact with gut bacteria in their own way, even though precise mechanisms are still unknown.

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https://www.sciencedirect.com/science/article/pii/S0092867421002415

A paper led by the Global Microbiome Conservancy project (MIT) exploring whether industrialization affects the rate of horizontal gene transfer (HGT) in the human gut microbiota. Here, a large sampling effort of gut microbiota data in 15 human worldwide populations spanning a range of industrialization levels allowed to characterize the extent to which the rates and targets of HGT vary across bacterial strains and across human lifestyles. We showed that industrialization is associated with higher HGT rates and that the type of genes being transferred reflects the selective pressures associated with each lifestyle.