New databank sheds light into the human gut microbiome

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Video Byte

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Abstract

The gut microbiome (GM) plays an integral role in overall human health, yet over 70% of human GM species have never been cultured, and these microbes may hold important clues into the function of the human GM and GM-host interactions. To address this gap, researchers recently cultured 10,558 bacterial isolates representing 400 GM species from 239 healthy human donors. Of the 400 cultured species, 102 new species were identified and characterized, 28 new genera and 3 new families were proposed, and 115 genomes were newly sequenced. These data were used to construct the human Gut Microbial Biobank, an open-access resource containing taxonomic and genetic information on over 80% of the dominant microbial taxa in the human gut. Although numerous gut microbes remain uncultured, the Gut Microbial Biobank sheds new light on the identities and functions of the microbes composing the human GM and has potential applications in the development of next-generation probiotics.