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MMHP to build the world's largest human microbiome database

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The project will rely on MGI's DNBSEQTM microbial genome sequencing technology to draw human microbial maps of different populations and health conditions and establish a baseline of microecology research



The "Million Microbiome of Humans Project" (MMHP) was officially launched at the 14th International Conference on Genomics (ICG-14). Scientists from China, Sweden, Denmark, France, Latvia and other countries will cooperate in microbial metagenomic research, aiming to sequence and analyze one million microbial samples from intestines, mouth, skin, reproductive tract and other organs in the next three to five years to draw a microbiome map of the human body and build the world's largest database of human microbiome.

The project was jointly begun by the Karolinska Institutet of Sweden, Shanghai National Clinical Research Center for Metabolic Diseases in China; the University of Copenhagen, Denmark; Technical University of Denmark; MetaGenoPolis at the National Institute for Agricultural Research (INRA), France; the Latvian Biomedical Research and Study Centre; and Shenzhen BGI Research. The project will rely on MGI's DNBSEQ^{TM} microbial genome sequencing technology to draw human microbial maps of different populations and health conditions and establish a baseline of microecology research at the large-scale population level, in order to promote the research of cutting-edge translational medicine in the field of human microbiome.

International scientific leaders gathered in Shenzhen on Oct. 26 to launch the project, including Professor Lars Engstrand, director of the Centre for Translational Microbiome Research (CTMR) of the Karolinska Institutet; Liu Ruixin, researcher at the Shanghai National Clinical Research Center for Metabolic Diseases; and Dr. Xu Xun, CEO of BGI Group and Director of BGI Research, along with Duncan Yu, President of MGI, and Hou Yong, Executive Director of BGI Research.

Dr. Liu of the Shanghai National Clinical Research Center for Metabolic Diseases, said, "By studying the changes in the human microbiome between the normal and pathological states, before and after treatment in larger metagenomics datasets, and analyzing its effects on human metabolism and health, in the future we will provide more possibilities for new therapies in many fields such as metabolic diseases, cancer, reproductive health and newborn health."

As one of the lead principal investigators of the program, Professor Engstrand from the Karolinska Institutet noted, "the Million Microbiome of Humans Project plans to complete a human microbiome of a million-sample-sized map, which will lay a solid data foundation for current micro-ecological research."

As the leading basic scientific research institution of metagenomic research, BGI Research will provide corresponding research platforms and analytical resources for 200,000 of the samples in the project. Like individual genomes, the human microbiome is closely related to individual health, said Dr. Xu Xun, CEO of BGI Group and Director of BGI Research.

At present, relying on MGI's sequencing technology and platform, MMHP international partners have completed the first batch of 10,000 samples of metagenomic sequencingIts data quality has been well received by scientists from around the world, laying a solid foundation for the subsequent mapping of human microbiome maps of 100,000 and 1 million samples.