

BGI develops first monkey exome sequencing platform for biomedical research

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BGI, the world's largest genomics organization, has developed the first exome sequencing platform for the monkey, based on next-generation sequencing technology and monkey exome capturing array (MECA). MECA is a proprietary exome capture array designed by BGI for capturing the entire monkey exome. The combination of this revolutionary array and BGI's high-throughput sequencing technology not only can simplify the workflow of exome sequencing experiments, but also improve cost-effectiveness and turnaround time.

Due to its close relationship genetically and physiologically to humans, the monkey is the most extensively used non-human primate in biomedical research and animal models for human disease research. Macaque monkeys, in particular, are commonly used in research. Each year, there are thousands of Macaques used in pre-clinical studies throughout the world, including studies of pathogenic mechanisms, drug selection, drug dosage, treatment duration and [adverse drug reactions](#), among others.

"Considering the important significance of studying the genetic variations of Macaque monkeys, we initiated the Chinese [rhesus macaque](#) (*Macaca mulatta*) genome project and *Cynomolgus* macaque (*Macaca fascicularis*) genome project," said Jiong Zhang, Technical Specialist at BGI. "Based on the genomic data generated from the two projects, BGI designed the exome capture array and developed the exome sequencing platform for the monkey to facilitate biomedical research."

Utilizing the monkey exome sequencing platform, researchers can access genomic regions of interest in their sequencing experiments. "The unique combination of MECA and next-generation sequencing allows researchers to understand efficiently the detailed genetics of monkeys. We believe our breakthrough will enable monkey exome sequencing to play a more important role in biomedical and [evolutionary studies](#)," Zhang added.

Provided by Beijing Genomics Institute

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