

**TOOLS FOR GENETIC ANALYSIS OF CYNOMOLGUS MACAQUES**

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Tsukuba Primate Research Center (TPRC) in Japan has a large scale breeding colony of experimental cynomolgus monkeys (approximately 1500 monkeys), which play a significant role in the development of pharmaceutical products and medical technologies. The breeding colony is comprised of 600 cynomolgus macaques and produces 250 monkeys for biomedical research every year. The cynomolgus monkeys in TPRC were obtained from Indonesia, Malaysia and Philippines. The monkeys have been bred as pure-blood of each origin without interbreed crossing. These pure-blood monkeys should be important for comparison of various genetic effects in biological studies such as vaccine development. By this genetic management, the monkeys in our colony enable a researcher to analysis for discovering differences between lineages. Since several information, i.e. health condition, breeding condition, clinical treatment, and experimental procedures are recorded on a computer, these data can readily be used to analysis. In genetic studies, a prerequisite for mapping genes is development of a genome-wide set of microsatellite markers in target organisms. A microsatellite marker set is a versatile tool that would assist in colony management, conservation work, and paternity testing of nonhuman primates. Now, we developed about 600 microsatellite markers for cynomolgus monkeys in TPRC. The development of microsatellite marker set in this species is a first step toward exploring the genes responsible for genetic disorders in captive macaques.

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