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Molecular phylogeny of *Hylobates* based on *Alu* elements on the Y chromosome

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The phylogenetic relationship among the *Hylobates* subgenera is one of the most controversial issues among primates. Using the PCR amplification and sequencing of AZF (AZoospermia Factor region) gene in hominoid primates (chimpanzee, gorilla, orangutan and gibbon), we found the *Alu* elements (*AluHy*) on the genome of gibbon species only in orthologous locus of the *EIF1AY* (Eukaryote translation Initiation Factor 1A on Y chromosome). Therefore, we used the *Alu* sequences for understanding the phylogenetic relationship of gibbon species. It could be good marker on the Y chromosome because of male specificity and inheritance. Phylogenetic trees by neighbor-joining and maximum parsimony methods indicated that *H. agilis* and *H. klossii* showed sister relationship. This phenomenon was supported by the previous studies from the morphological data and the mitochondrial 16S rRNA data.