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BITTER TASTE RECEPTORS OF PRIMATES

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In mammals, bitter taste is mediated by *T2R* gene family members, which belong to the large family of seven transmembrane G protein-coupled receptors. Since T2Rs are directly involved in the interaction between mammals and their dietary sources, it is likely that these genes evolved to reflect regionally specific diets during mammalian evolution. Human *T2R* genes (h*T2Rs*) have been observed to be polymorphic, however, polymorphisms in other wild animals has not been investigated so far. In order to elucidate the evolutional process of bitter taste recognition, we started genotyping of bitter taste receptors of individual primates living in the Primate Research Institute, Kyoto University. As a result, it has been revealed that there are lots of Single Nucleotide Polymorphisms (SNPs) in T2Rs compared to visual photoreceptors, opsins. In addition to furthering analysis of molecular properties and behavioral impacts, in cooperation with the global COE program, we are constructing the genetic database of the individual captive primates in the institute.

Keywords: genome, receptor, bitter, behavior