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## Sequence Analysis of Domesticated Retroelements

レトロエレメントの配列解析

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Retroelements are one of the major constituents of genomes. They were previously regarded as junk or selfish DNA. However, recent progress of the studies on the elements has changed the view. It has been revealed that they have often played important roles in the innovation of the systems during the evolution of various organisms. One of the ways for such innovation is called “domestication”, which means that the entire region or the part of an element is diverted into a gene of the host. It is suggested that the acquisition of introns and/or non-coding exons are key events for domestication. The domesticated retroelements are considered to have been under control of hosts by recruiting the regulatory sequences through such events. So, we investigated the non-coding regions of a domesticated family of the Gypsy-like LTR retroelements. We found strange evolutionary behavior in the evolution of the non-coding regions which seemed to be associated with the mammalian evolution. The functional and evolutionary meaning of the non-coding regions will be discussed.

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