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**Nucleotide composition and expression of plasma microRNAs in horse (*Equus caballus*)**

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The circulating microRNAs (miRNAs) in plasma or serum are stable under high levels of ribonuclease activity and could function in tissue-to-tissue communication, suggesting that they may have unusual structural characteristics compared with non-circulating miRNAs. In this study, the expression of plasma miRNAs in horse and their characteristic nucleotide composition were examined and compared with non-plasma miRNAs. Highly expressed plasma miRNA species were not part of the abundant group of miRNAs in non-plasma tissues, except for the eca-let-7 family. eca-miR-486-5p, eca-miR-92a, and eca-miR-21 were among the most abundant miRNAs in horse plasma, and their human orthologs also belong to the most abundant group of miRNAs in human plasma. Uracil and guanine were the most common nucleotides of both plasma and non-plasma miRNAs. Cytosine was the least common in plasma and non-plasma miRNAs, although levels were higher in plasma miRNAs. Plasma miRNAs also showed higher expression levels of miRNAs containing adenine and cytosine repeats, compared with non-plasma miRNAs. These observations indicate that miRNAs in the horse plasma have a unique nucleotide composition.

**Biography**

Seungwoo Lee is a student at Seoul National University, South Korea.

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