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RNA modifications in insects

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More than 100 RNA chemical modifications to cellular RNA have been identified. N^6-methyladenosine (m^6A) is the most prevalent modification of mRNA. RNA modifications have recently attracted significant attention due to their critical role in regulating mRNA processing and metabolism. tRNA and rRNA rank among the most heavily modified RNAs, and their modifications are essential for maintaining their structure and function. With our advanced understanding of RNA modifications, increasing evidence suggests RNA modifications are important in regulating various aspects of insect life. In this review, we will summarize recent studies investigating the impact of RNA modifications in insects, particularly highlighting the role of m^6A in insect development, reproduction, and adaptation to the environment.

KEYWORDS

m^6A, epigenetics, insect development, environmental adaptation, reproduction

1 Introduction