

Abstract

In eukaryotic organisms, there are known more than 200 internal post-transcriptional modifications of RNA. N6-methyladenosine (m⁶A) is the most common modification in mRNA. In plants, m⁶A affects many aspects of mRNA processing, such as mRNA splicing, alternative polyadenylation, export from the nucleus, its overall stability or translation. Adding, removing, and perceiving of m⁶A are handled by protein complexes containing methyltransferases (writers), demethylases (erasers), and m⁶A-binding proteins (readers), respectively. Dynamic regulations of m⁶A have a significant effect on plant development. Also, m⁶A exerts its role in response to abiotic stress and viral infection. This thesis summarizes current knowledge on m⁶A in plants in light of the latest advances in animal experimental models.