RNA m^{6}A Modification and Antitumor Immunity

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How does RNA methylation modification regulate gene expression, and how does its dysregulation lead to the development of diseases such as tumors? My research aims to answer these questions through the development of multiple RNA/DNA modification sequencing techniques and multidimensional RNA epigenomics integration analysis.

In terms of regulatory theory, I have challenged the traditional view that RNA m^{6}A modification mainly exerts post-transcriptional regulation, and instead have demonstrated that m^{6}A modification directly regulates chromatin openness and gene transcription, contributing to the advancement of regulatory theory in the field of epigenetics.

Regarding disease mechanisms, my research has focused on analyzing the tumor microenvironment and its relationship to RNA m^{6}A dysregulation in multiple immune cells, leading the forefront of research on RNA modification mutations in the tumor immune microenvironment. Based on these findings, I have proposed a new idea of intervening RNA m^{6}A modification to promote anti-tumor immunotherapy.

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