***Cite this as*:** Shanghong JIANG, Yongchao ZHAO, Danrui CUI. HENMT1: an RNA methyltransferase in biology and disease. *Journal of Zhejiang University-SCIENCE B*, 2026, 27(6):590-602. https://doi.org/10.1631/jzus.B2500059

JZUS-B

HENMT1: an RNA methyltransferase in biology and disease

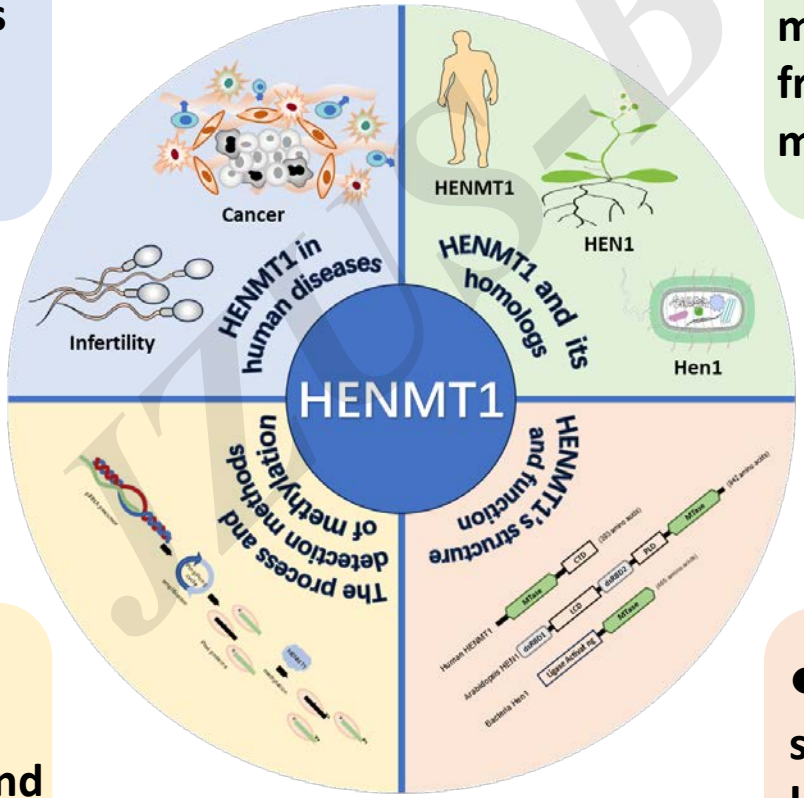
Key words: HEN methyltransferase 1 (HENMT1); RNA methyltransferase; 2'-*O*-Methylation; Tumor development; Infertility

Review Summary

This review mainly introduces HEN methyltransferase 1 (HENMT1) from the following four aspects:

● **Summary** of the latest research progress on HENMT1 protein in infertility and cancer development.

● **Introduction** to major HENMT1 homologs: from structural features to molecular functions.



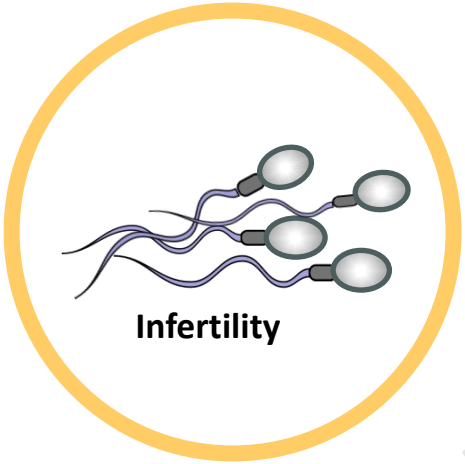
● **Overview** of the methylation process catalyzed by HENMT1 and the corresponding detection methods.

● **Description** of the structure and function of HENMT1 across different species.

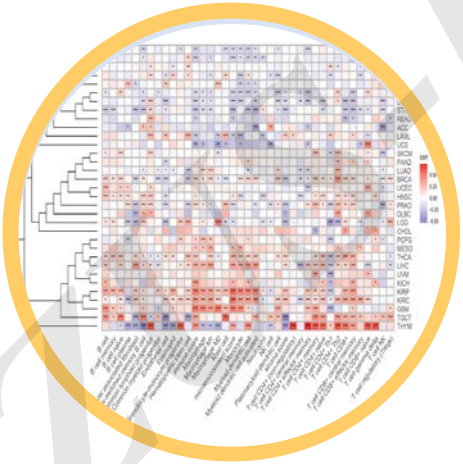
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Review Summary

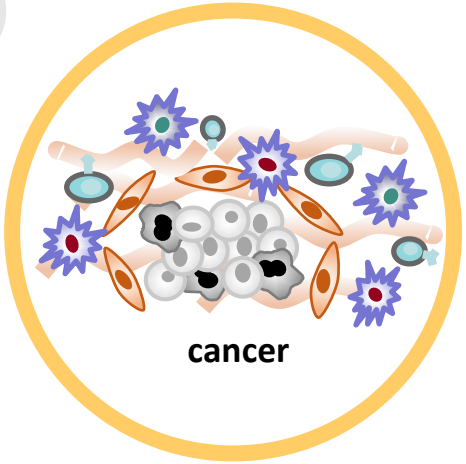
This review focuses on the following key aspects to introduce the role of HENMT1 in infertility and cancer development:



- **Role in infertility**



- **Relationship with immune cell infiltration**



- **Abnormal expression of HENMT1 in cancers and its association with tumor-type-specific development**

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Review Summary

A series of figures and table were generated to elucidate the knowledge about HENMT1:

Figure 1 | Domain architecture of HENMT1 homologs and the process of 2′-*O*-methylation of piRNAs by HENMT1.

Figure 2 | HENMT1 expression in human tissues.

Figure 3 | HENMT1 expression in human tumor tissues and corresponding normal tissues.

Figure 4 | Association between HENMT1 expression and patient survival across various human cancers.

Figure 5 | HENMT1 involvement in immune cell infiltration across pan-cancer types.

Table 1 | HENMT1 homologs and their biological function.

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