

## Inhibitors for Protein alpha-N-terminal Methyltransferases

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**Categories:**

- Chemistry and Chemical Analysis
- Pharmaceuticals

**Keywords:**

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Protein N-terminal methyltransferase 1 (NTMT1) plays an important role in regulating cell mitosis, chromatin interactions, and DNA repair. NTMT1 is over-expressed in cancer patient tissues including the head and neck, colorectal, malignant melanoma, compared to normal tissue. Knockdown of NTMT1 promotes hypersensitivity of breast cancer cell lines to double-strand DNA breaks (DSBs) by etoposide and gamma irradiation. This knowledge has made NTMT1 an important anticancer target. Currently, there are no specific cell-potent probes available for NTMT1. There is a need for a new technology that can target the NTMT1 protein.

Researchers at Purdue University have developed new potent inhibitors for the protein NTMT. The inhibitor exhibited high selectivity to NTMT1/2 over a panel of 41 methyltransferases. These chemical compounds are novel because they are amenable for cell-based studies. They may be further optimized for animal studies. This technology is more stable and cell-permeable than existing solutions. This technology could open the door for elucidate the pharmacological functions of protein NTMT1.

**Advantages:**

- Amenable for cell based studies
- Displays selective inhibition for NTMT1
- May be used for animal studies

**Potential Applications:**

- Cell based studies
- Animal studies

**People:**

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**Intellectual Property:**

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**Type:** Utility Patent

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