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Nucleotide Analogue GS 9219

National Cancer Institute

Source

National Cancer Institute. *Nucleotide Analogue GS 9219*. NCI Thesaurus. Code C71742.

A prodrug of the acyclic nucleoside phosphonate analogue 9-(2-phosphonylmethoxyethyl)guanine (PMEG) with potential antineoplastic activity. Formulated to selectively accumulate in lymphocytes, nucleotide analogue GS 9219 is converted to its active metabolite, PMEG diphosphate (PMEGpp), via enzymatic hydrolysis, deamination, and phosphorylation; subsequently, PMEGpp is incorporated into nascent DNA chains by DNA polymerases, which may result in the termination of DNA synthesis, S-phase cell cycle arrest, and the induction of apoptosis in susceptible lymphoma cell populations.