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Palifosfamide

National Cancer Institute

Source

National Cancer Institute. *Palifosfamide*. NCI Thesaurus. Code C66990.

A synthetic mustard compound with potential antineoplastic activity. An active metabolite of ifosfamide covalently linked to the amino acid lysine for stability, palifosfamide irreversibly alkylates and cross-links DNA through GC base pairs, resulting in irreparable 7-atom inter-strand cross-links; inhibition of DNA replication and cell death follow. Unlike ifosfamide, this agent is not metabolized to acrolein or chloroacetaldehyde, metabolites associated with bladder and CNS toxicities. In addition, because palifosfamide does not require activation by aldehyde dehydrogenase, it may overcome the tumor resistance seen with ifosfamide.