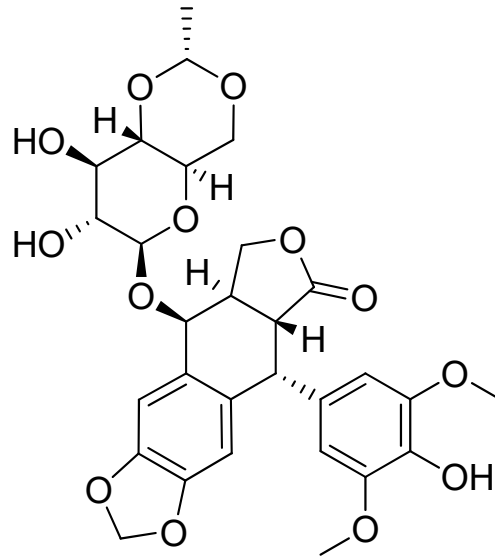


Plant products

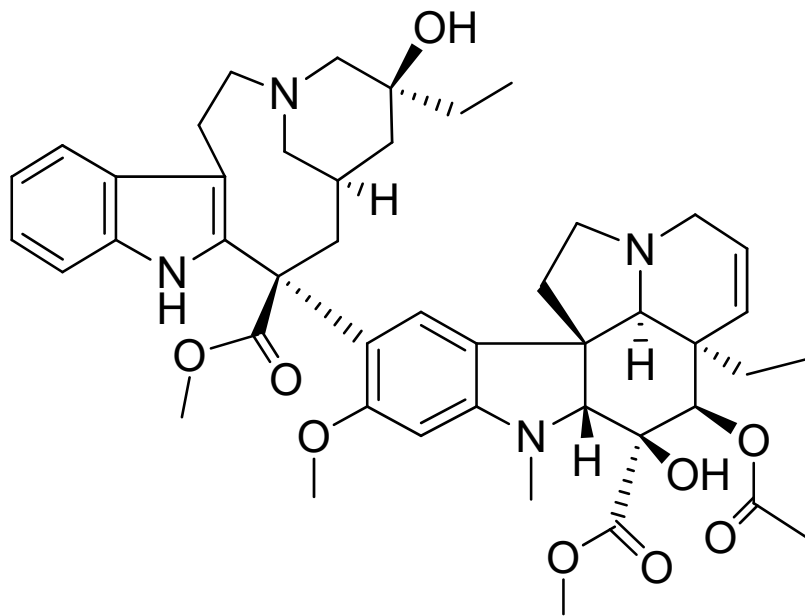
Etoposide



MOA: Etoposide inhibits DNA topoisomerase II, thereby inhibiting DNA re-ligation. This causes critical errors in DNA synthesis at the premitotic stage of cell division and can lead to apoptosis of the cancer cell. Etoposide is cell cycle dependent and phase specific, affecting mainly the S and G2 phases of cell division. Inhibition of the topoisomerase II alpha isoform results in the anti-tumour activity of etoposide.

Uses: For use in combination with other chemotherapeutic agents in the treatment of refractory testicular tumors and as first line treatment in patients with small cell lung cancer. Also used to treat other malignancies such as lymphoma, non-lymphocytic leukemia, and glioblastoma multiforme.

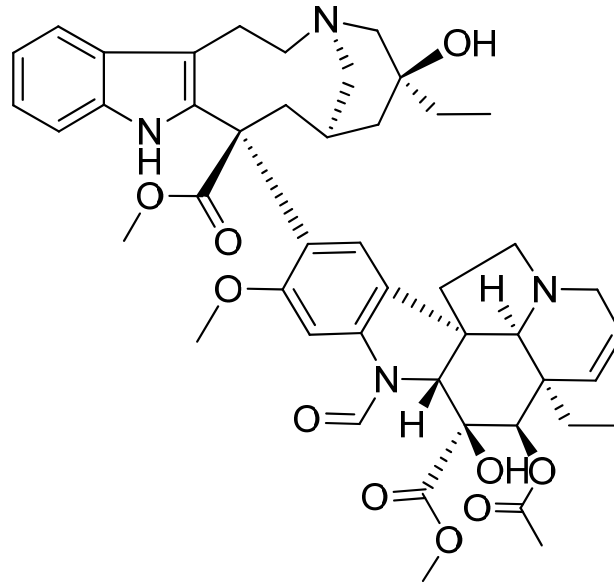
Vinblastin sulphate



MOA: It is a mitotic inhibitor, bind to microtubular protein 'tubulin', prevent its polymerization and assembly of microtubules, cause disruption of mitotic spindle and interfere with cytoskeletal function. The chromosomes fail to move apart during mitosis: metaphase arrest occurs. They are cell cycle specific and act in the mitotic phase.

Uses: For treatment of breast cancer, testicular cancer, lymphomas, neuroblastoma, Hodgkin's and non-Hodgkin's lymphomas, mycosis fungoides, histiocytosis, and Kaposi's sarcoma.

Vincristin

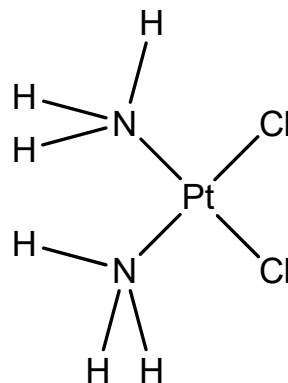


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Miscellaneous

Cisplatin



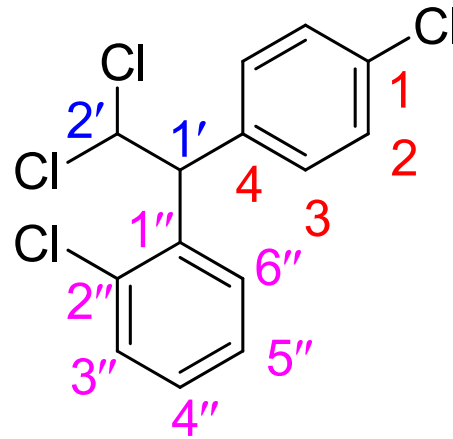
IUPAC: Cis-diamminedichloroplatinum(II)

MOA: It works by three different mechanisms:

- 1) attachment of alkyl groups to DNA bases, resulting in the DNA being fragmented by repair enzymes in their attempts to replace the alkylated bases, preventing DNA synthesis and RNA transcription from the affected DNA.
- 2) DNA damage via the formation of cross-links (bonds between atoms in the DNA) which prevents DNA from being separated for synthesis or transcription,
- 3) The induction of mispairing of the nucleotides leading to mutations.

Uses: For the treatment of metastatic testicular tumors, metastatic ovarian tumors and advanced bladder cancer.

Mitotane



IUPAC: 1-chloro-4-[2,2-dichloro-1'-(2''-chlorophenyl)ethyl] benzene

MOA: Its biochemical mechanism of action is unknown, although data are available to suggest that the drug modifies the peripheral metabolism of steroids as well as directly suppressing the adrenal cortex.

Uses: For treatment of inoperable adrenocortical tumours; Cushing's syndrome.