

SNS COLLEGE OF PHARMACY AND HEALTH SCIENCES



Affiliated To The Tamil Nadu Dr. MGR Medical University, Chennai

Approved by Pharmacy Council of India, New Delhi.

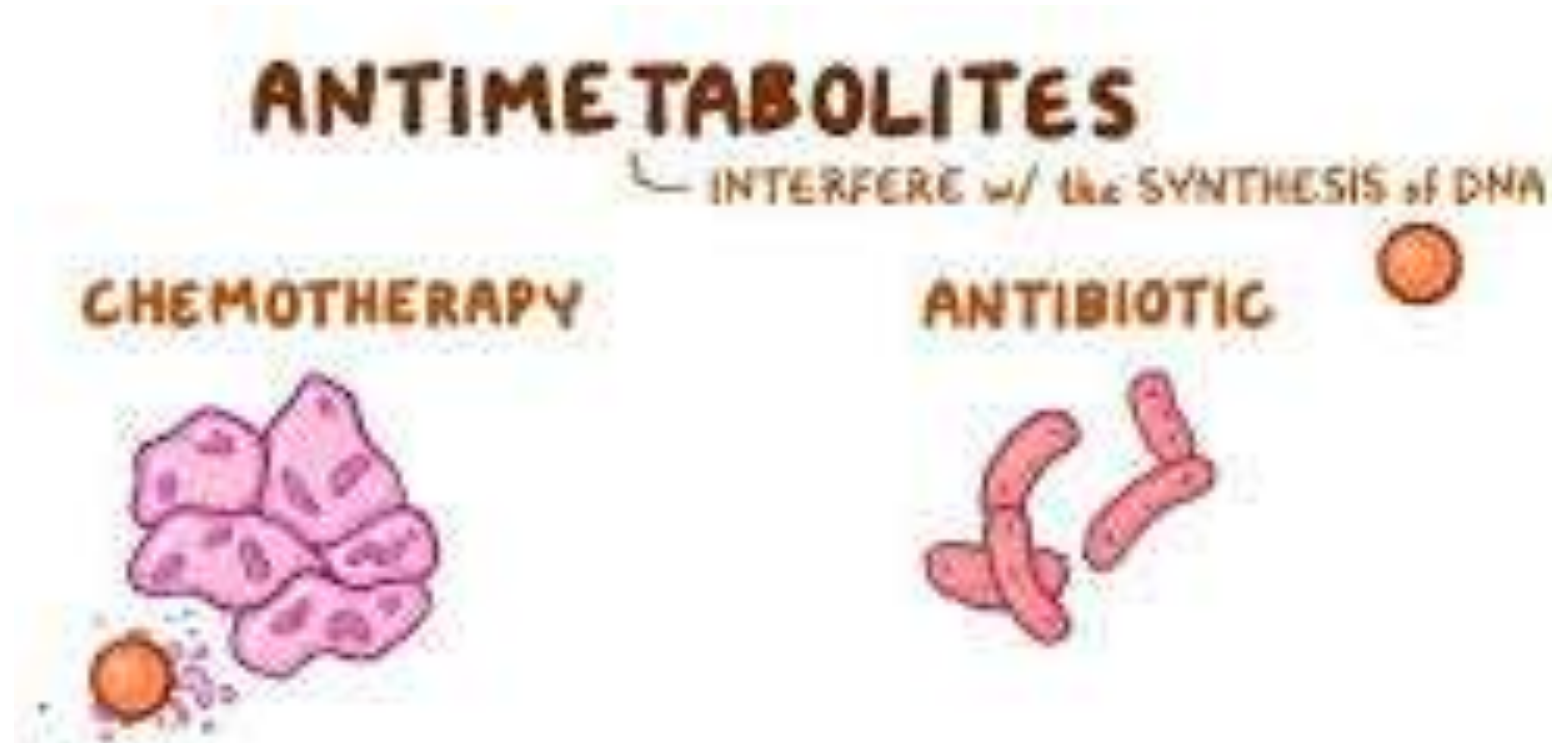
Coimbatore -641035

COURSE NAME : MEDICINAL CHEMISTRY II (BP 502 T)

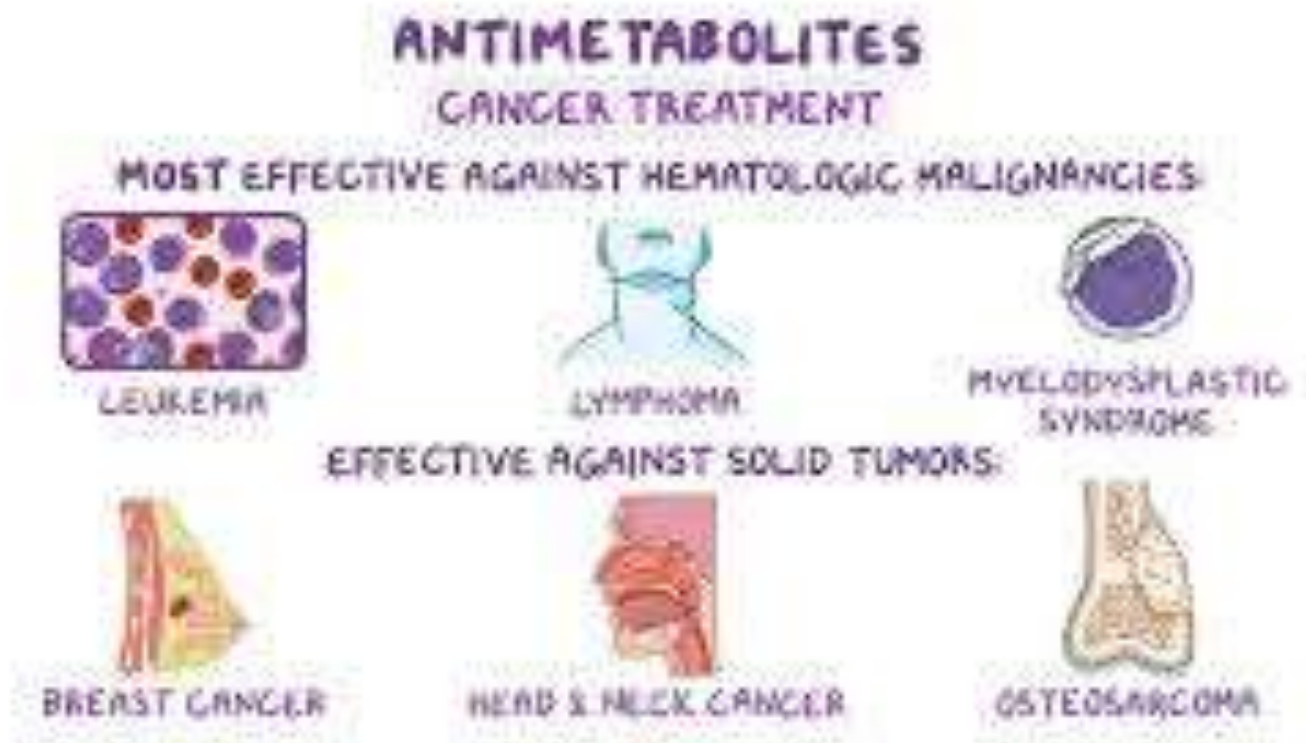
III YEAR / V SEM

TOPIC 1 :ANTIMETABOLITES

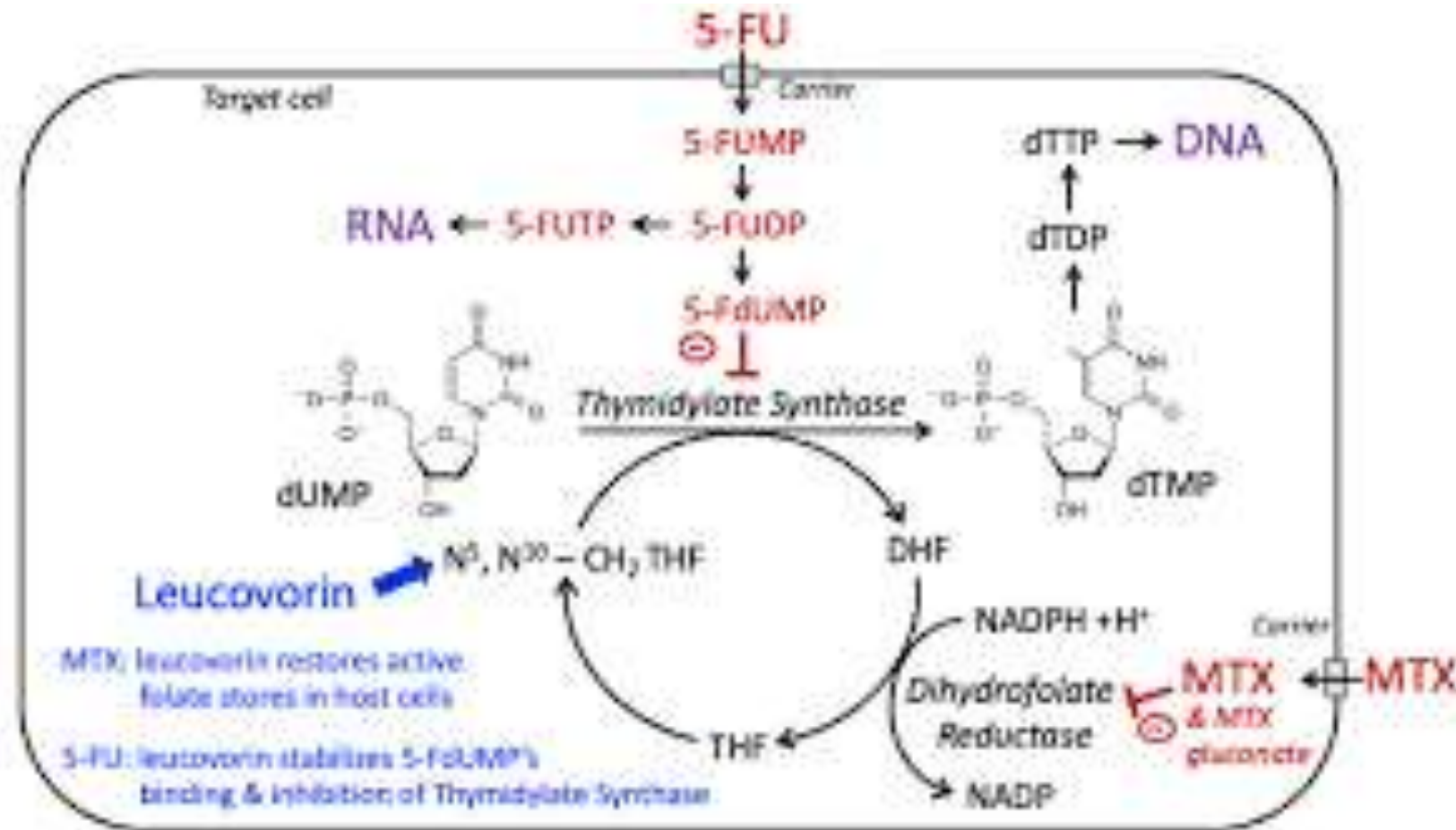
ANTI - METABOLITES



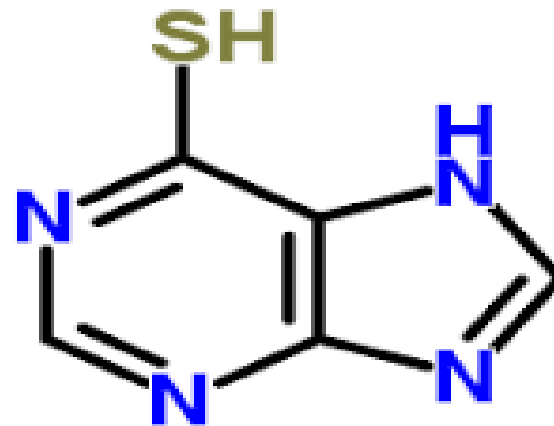
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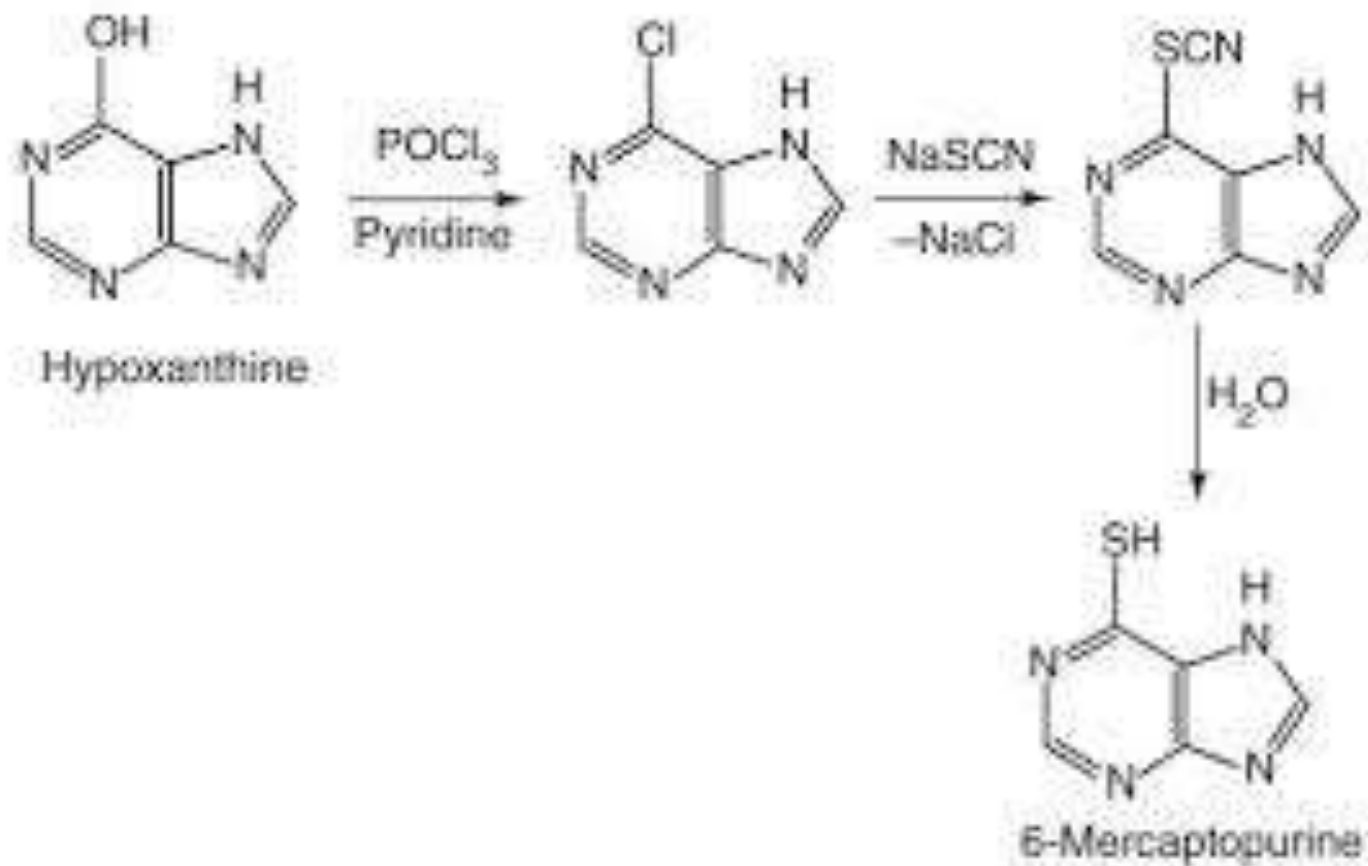
MECHANISM OF ACTION



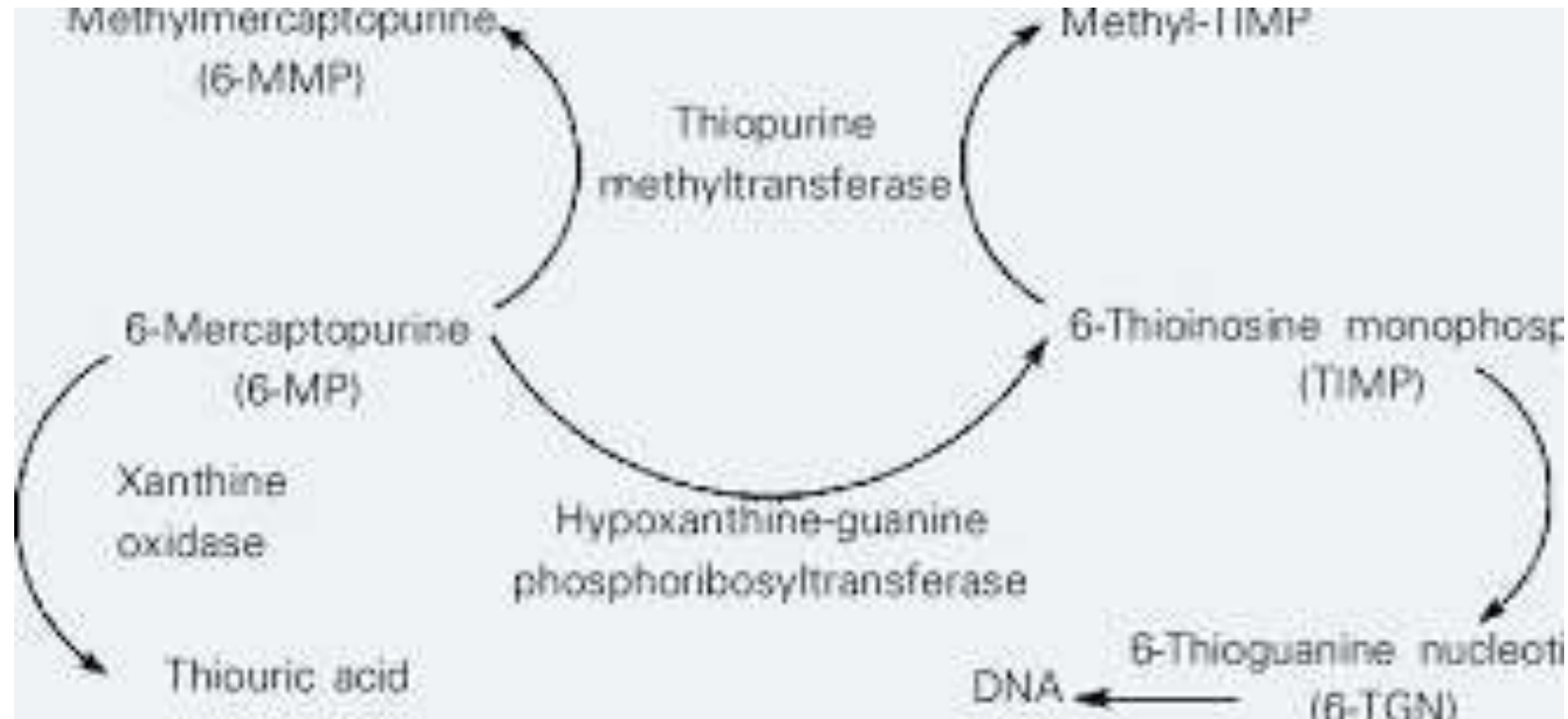
MERCAPTOPURINE

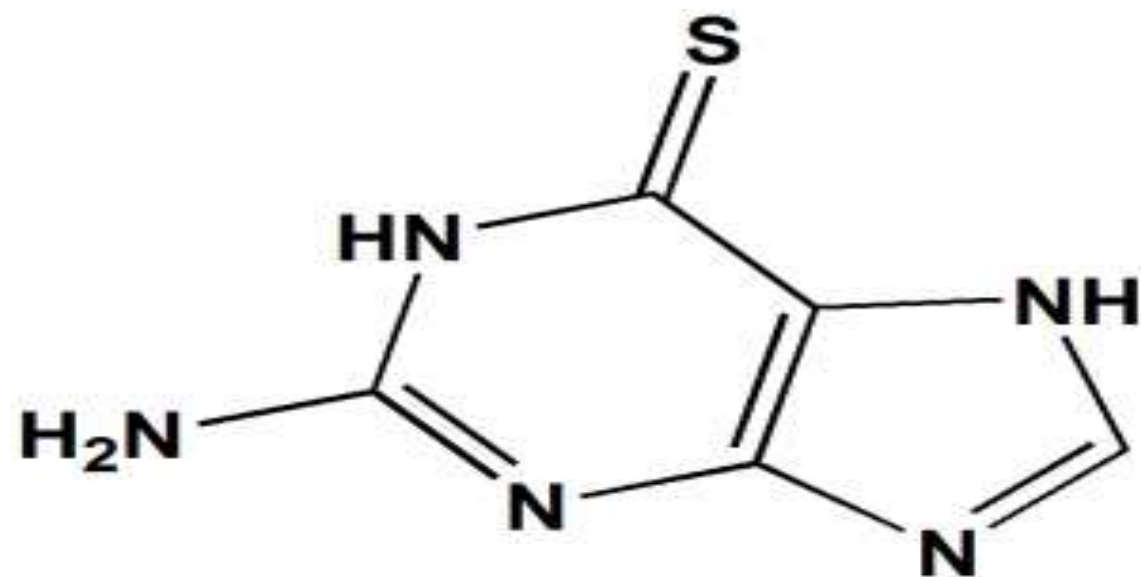


MERCAPTOPURINE SYNTHESIS



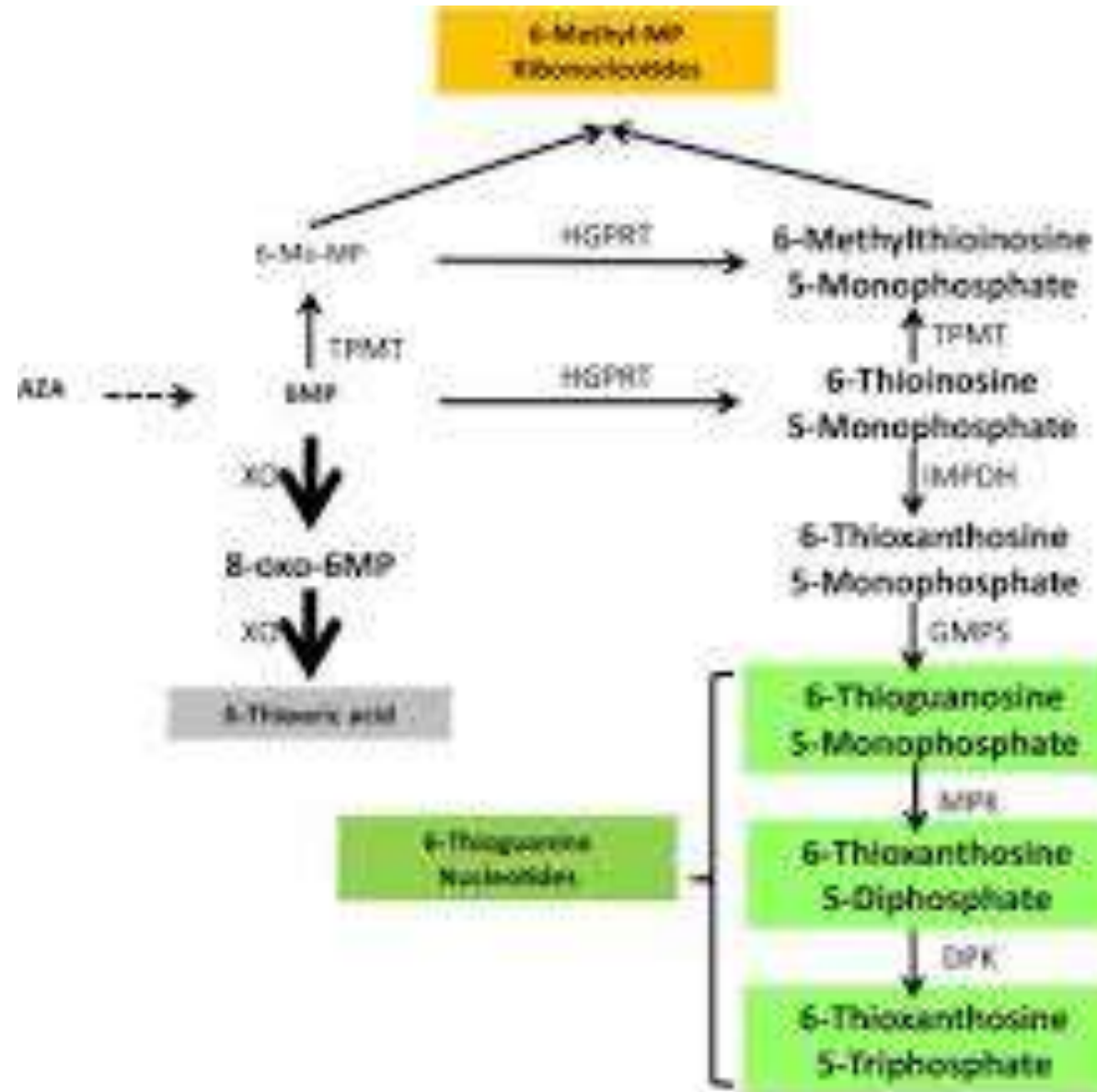
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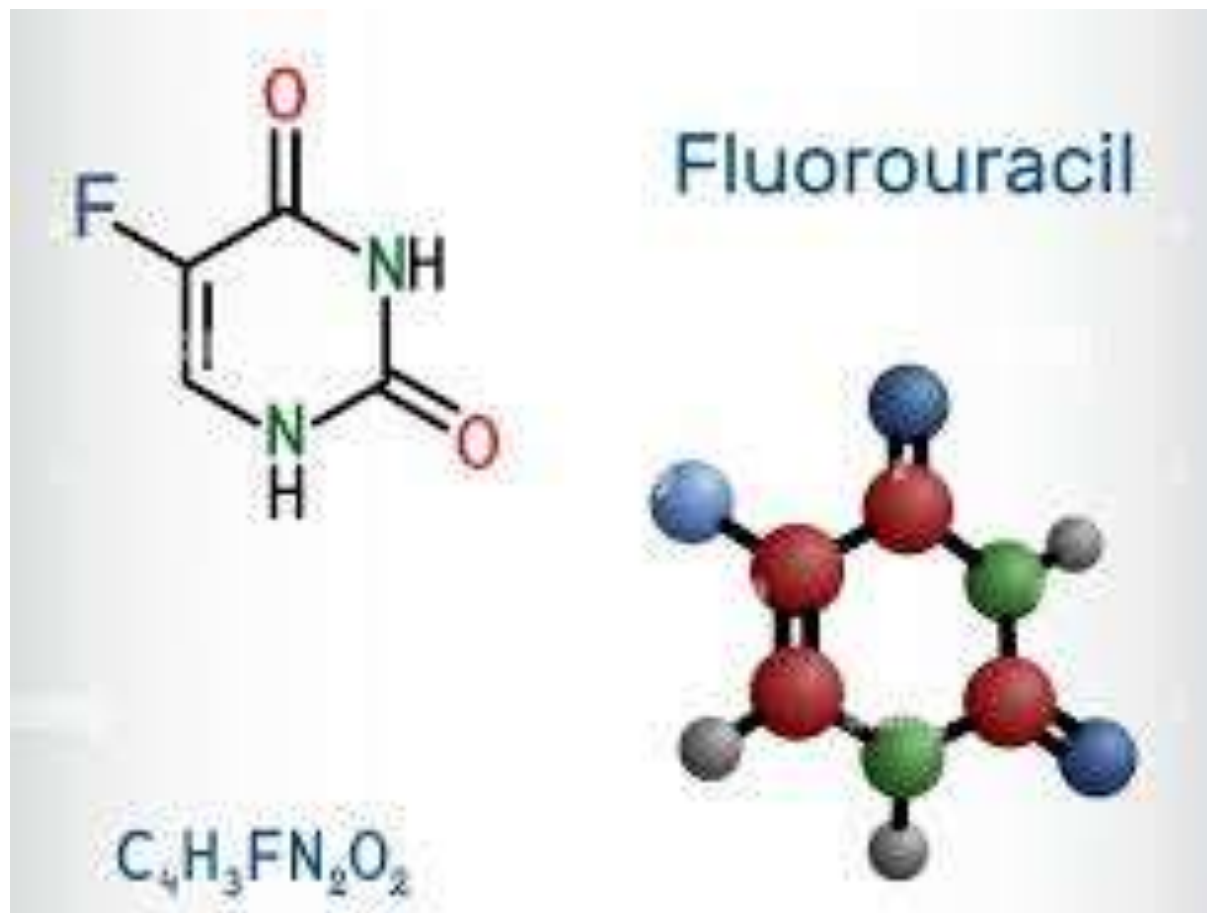




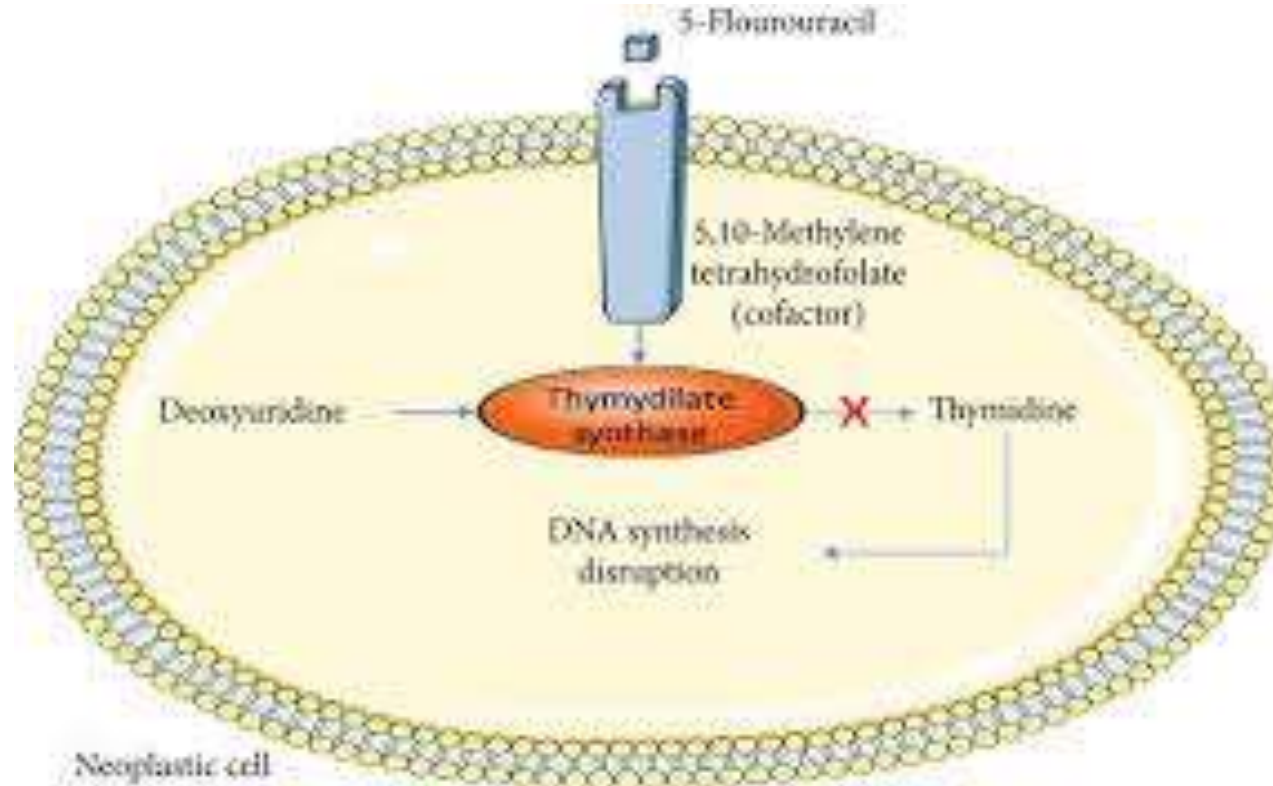
6-Thioguanine

MECHANISM OF ACTION





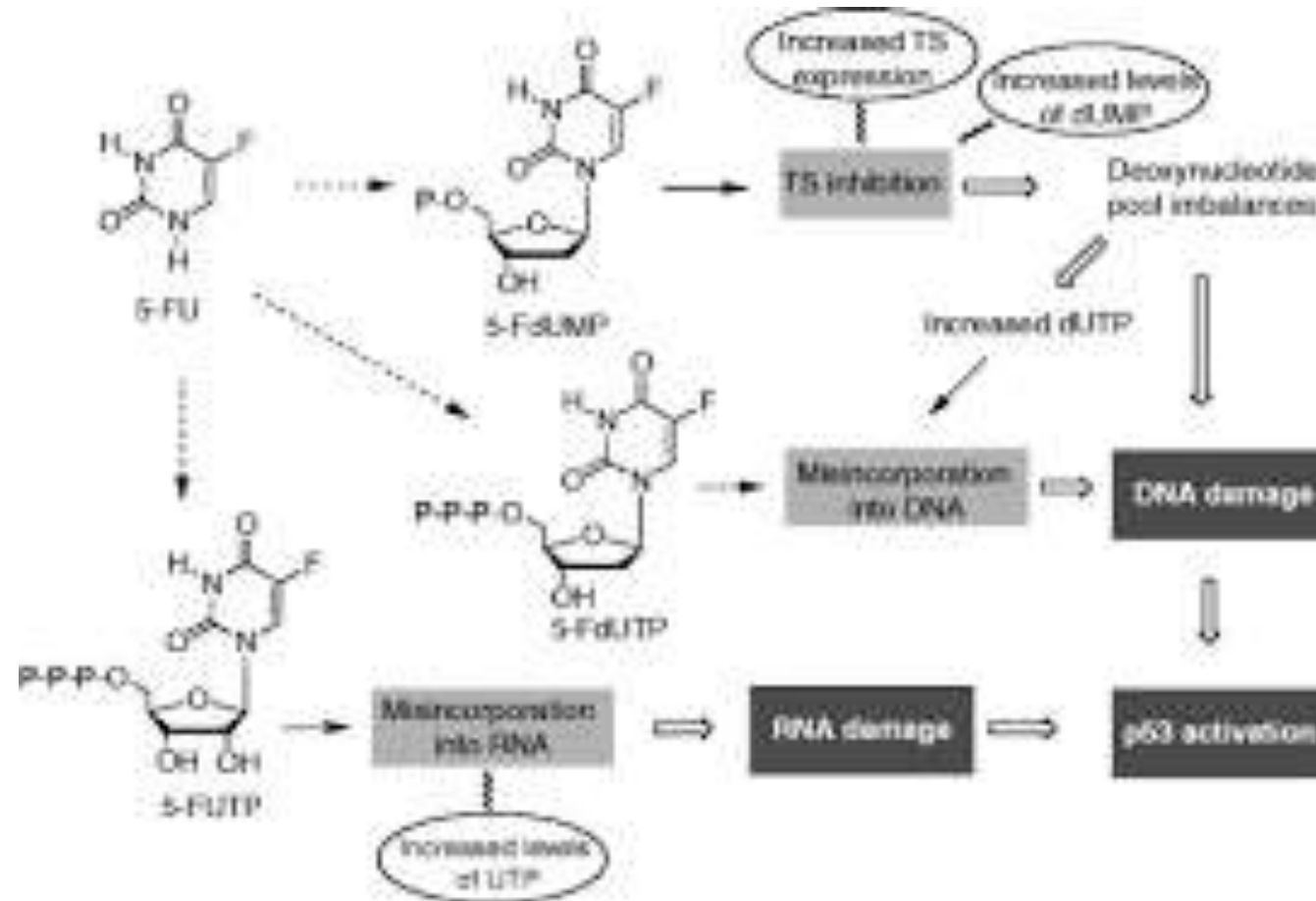
MECHANISM OF ACTION



FLOXURIDINE



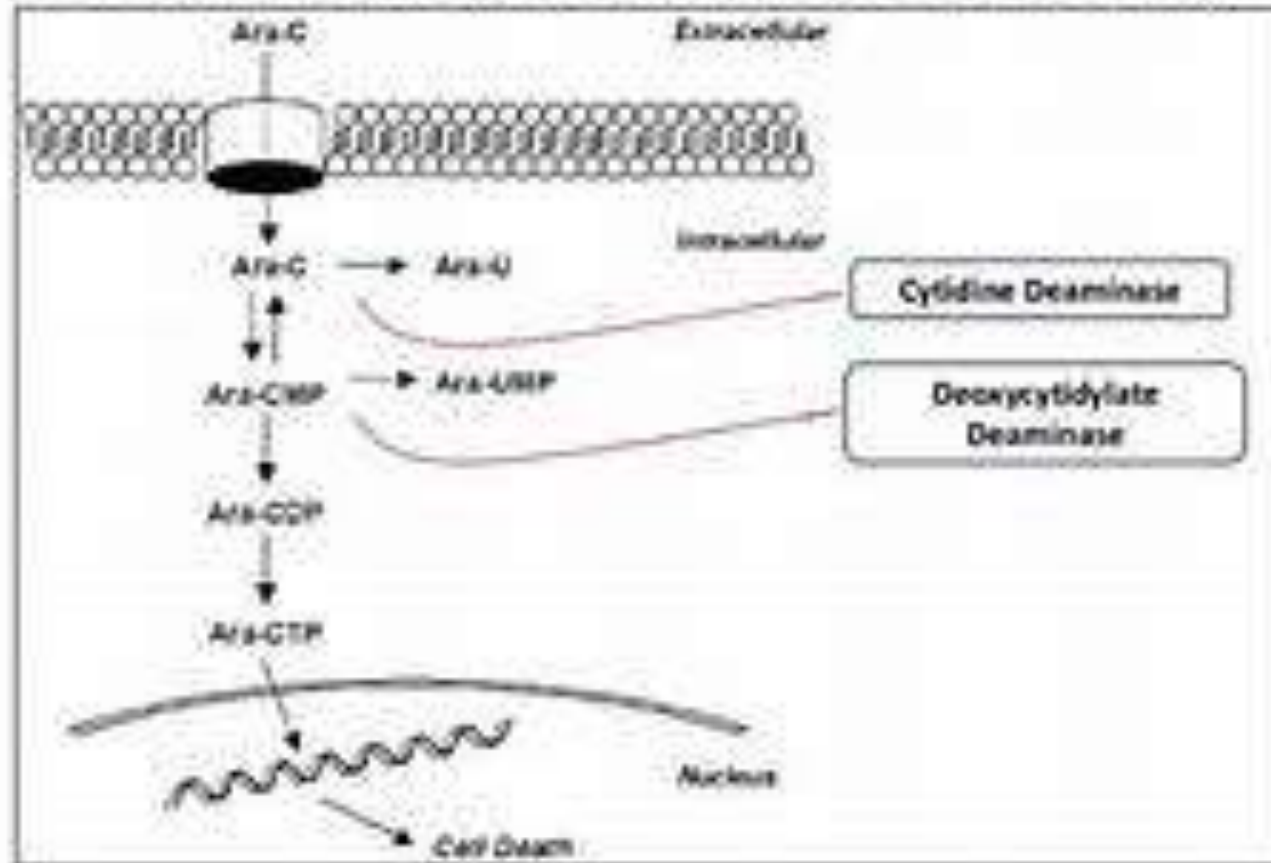
FLOXURIDINE MECHANISM



CYTARUBINE

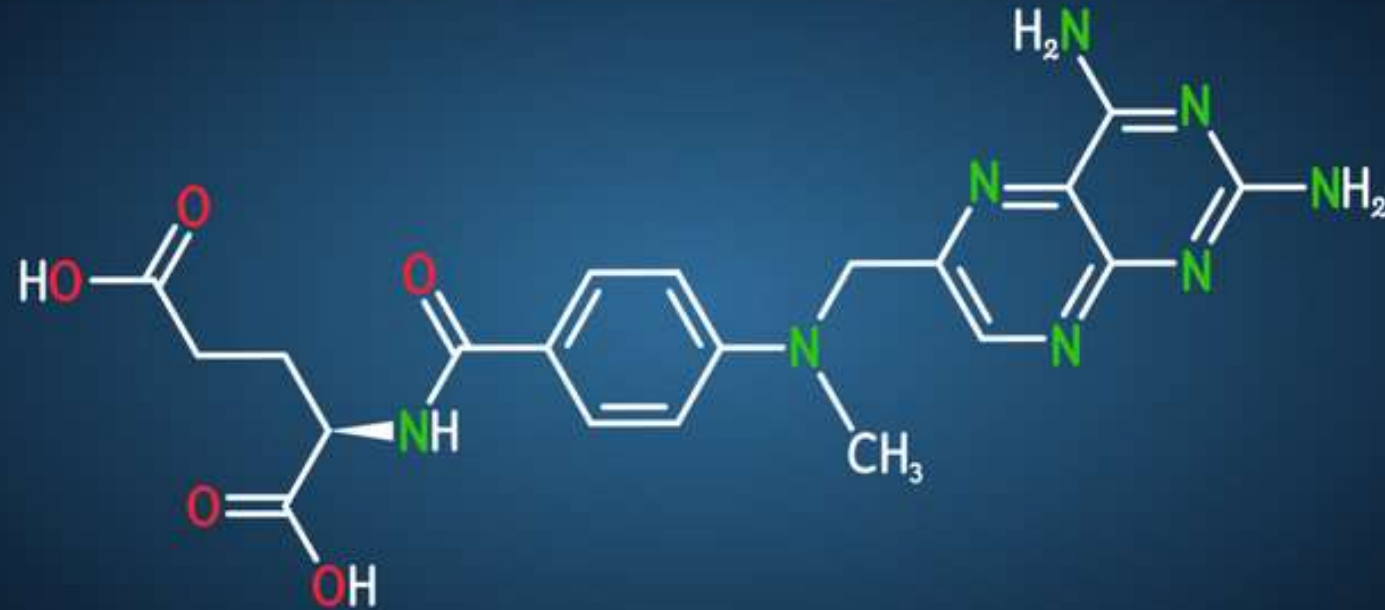


CYTARABINE (Mechanism of Action)

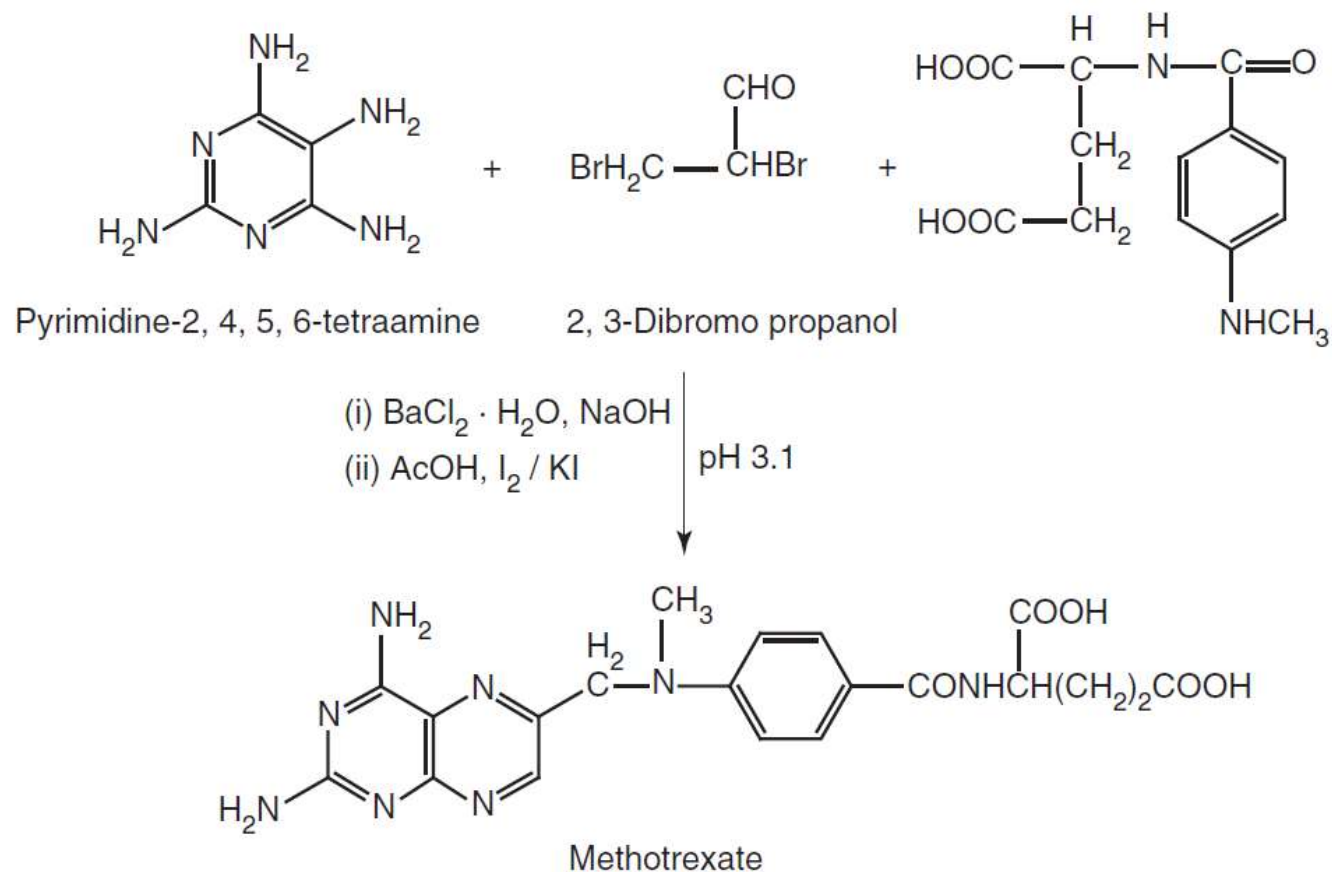


METHOTREXATE

Methotrexate



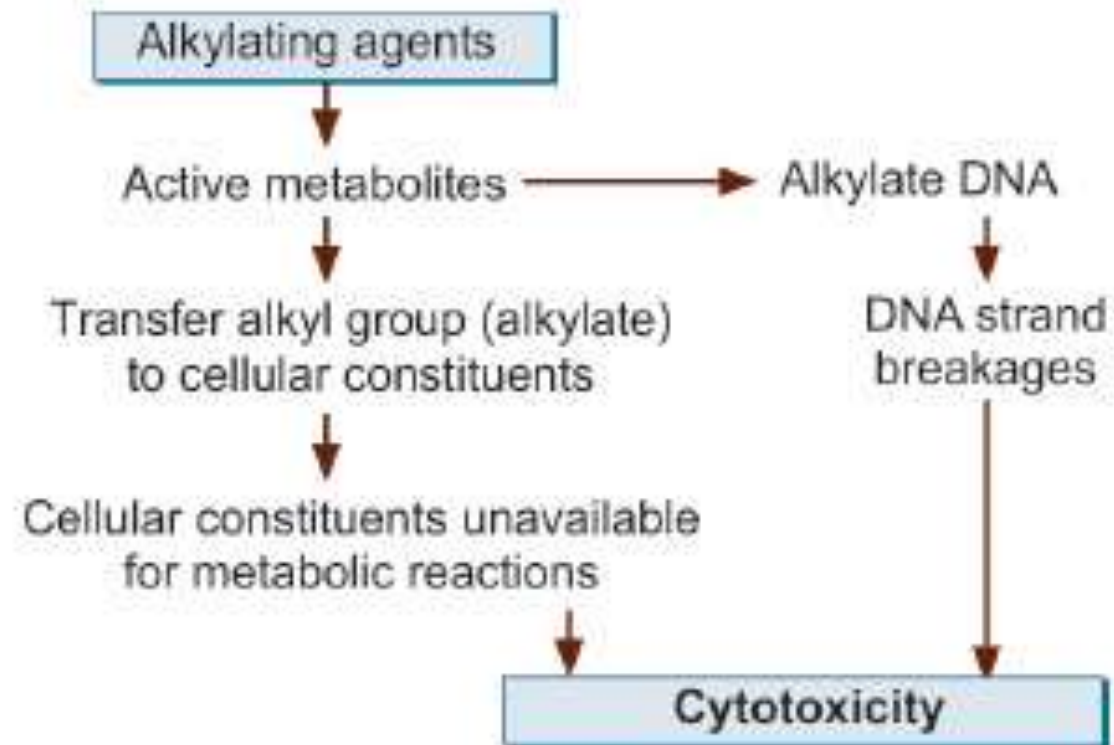
METHOTREXATE



ASSESSMENTS

Which class of antineoplastic agents works by cross-linking DNA strands, directly interfering with DNA replication and transcription, regardless of the cell cycle phase?

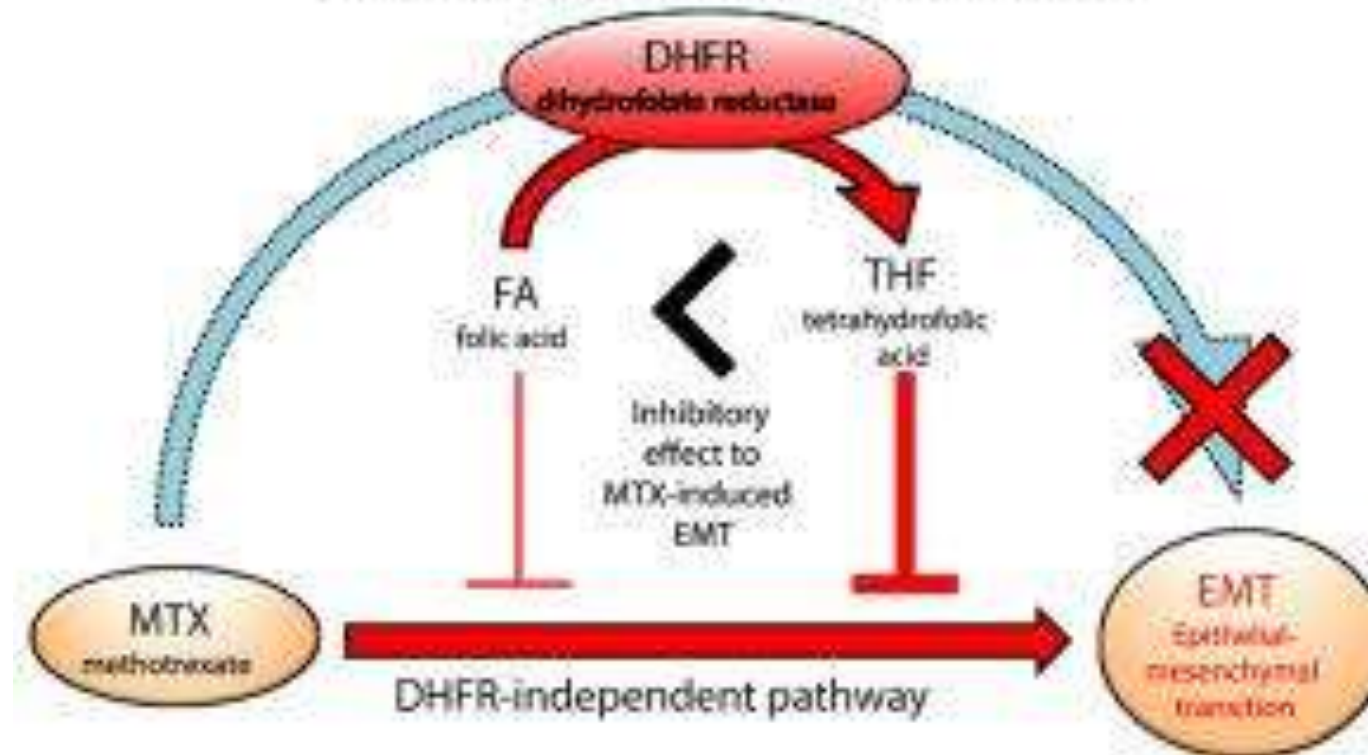




The dose-limiting toxicity for the antimetabolite drug Methotrexate, which inhibits dihydrofolate reductase, is typically which of the following?



In A549 cells, { DHFR may play an important role in prevention to MTX-induced EMT via conversion of FA into THF
DHFR may not be involved in MTX-induced EMT



REFERENCES

1. Goodman & Gilman's: The Pharmacological Basis of Therapeutics

- Edition:** 14th edition (2021)
- Details:** Comprehensive coverage of antineoplastic agents, mechanisms of action, uses, and adverse effects.
- Chapters:** “Antineoplastic Drugs” and “Hormones and Related Drugs.”

2. Katzung & Trevor's Basic and Clinical Pharmacology

- Edition:** 16th edition (2021)
- Details:** Simplified explanations of drug classes, mechanisms, clinical uses, and toxicity.
- Chapters:** “Antineoplastic Drugs.”

THANK YOU!