

Phenothiazine molecule provides the basic chemical structure for various classes of pharmacotherapeutic agents

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The chemical structure of phenothiazine provides a most valuable molecular template for the development of agents able to interact with a wide variety of biological processes. Synthetic phenothiazines (with aliphatic, methylpiperazine, piperazine-ethanol, piperazine-ethyl, or piperidine side-chain) and/or phenothiazine-derived agents e.g., thioxanthenes, benzepines, imonostilbenes, tricyclic antidepressants, dimethothiazine, and cyproheptadine have been effective in the treatment of a number of medical conditions with widely different etiology. These include various currently clinically used drugs for their significant antihistaminic, antipsychotic, anticholinergic (antiparkinson), antipruritic, and/or antiemetic properties. They are also employed, although to a minor extent, as antidepressants, antispasmodics, analgesics, and antiarrhythmics. Some of these agents are also useful as anti-inflammatory, coronary vasodilator, radioprotective, sedative, antitussive, and skeletal muscle-relax