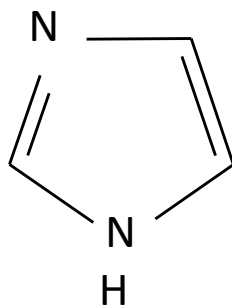


Pyrazole, Imidazole and Thiazole

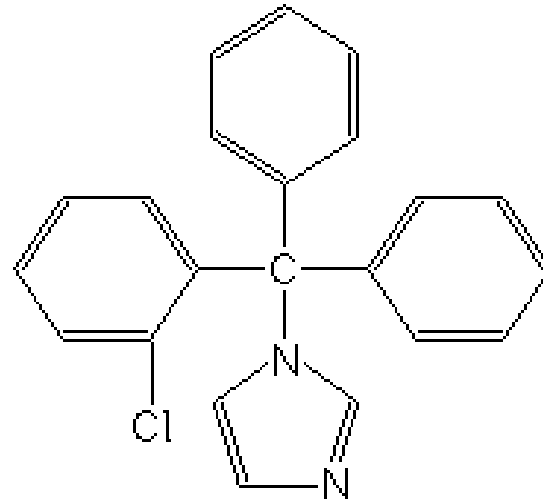
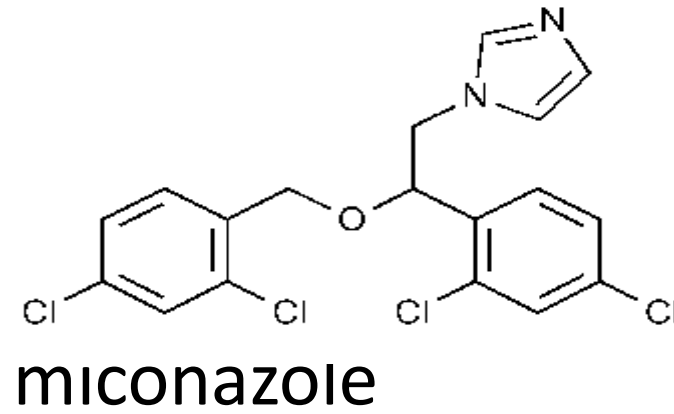
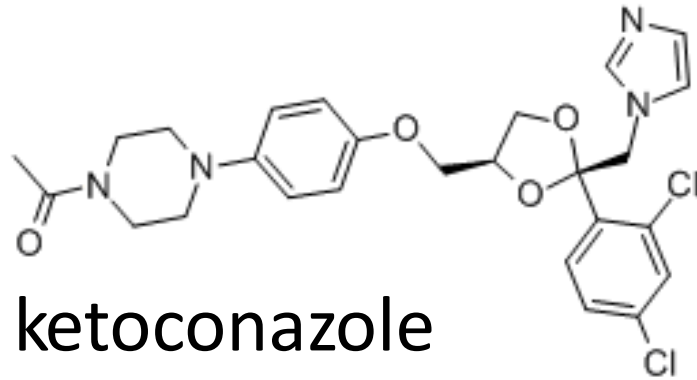
Imidazole

- Imidazole is an organic compound with the formula $(CH)_2N(NH)CH$. It is a colourless solid that dissolves in water to give mildly alkaline solution.



- Imidazole drug: Ketoconazole, Miconazole, Clotrimazole

- Structure:



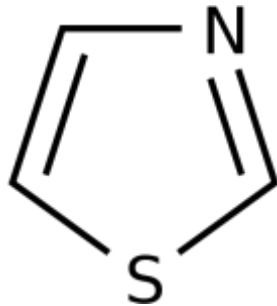
Clotrimazole

Pharmaceutical Importance

- Imidazole derivatives are potent antifungal agent.
- It is also used in the treatment of mycotic infection of skin.

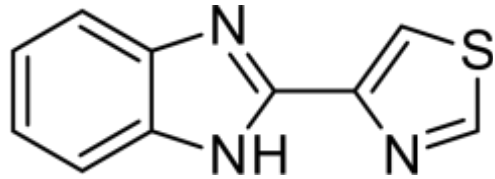
thiazole

- Thiazole is a heterocyclic compound that contains both sulfur and nitrogen; the term 'thiazole' also refers to a large family of derivatives.

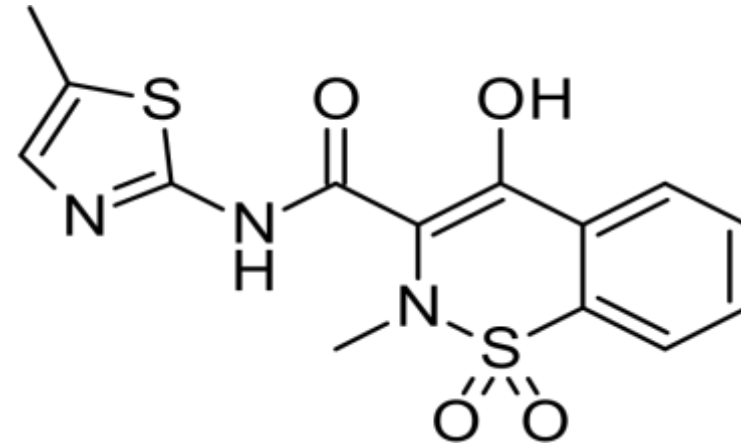


- Thiazole itself is a pale yellow liquid with a pyridine-like odor and the molecular formula C_3H_3NS . The thiazole ring is notable as a component of the vitamin thiamine(B_1).

- Thiazole drug:



Thiabendazole



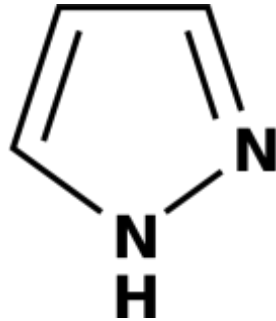
meloxicam

Pharmaceutical Importance

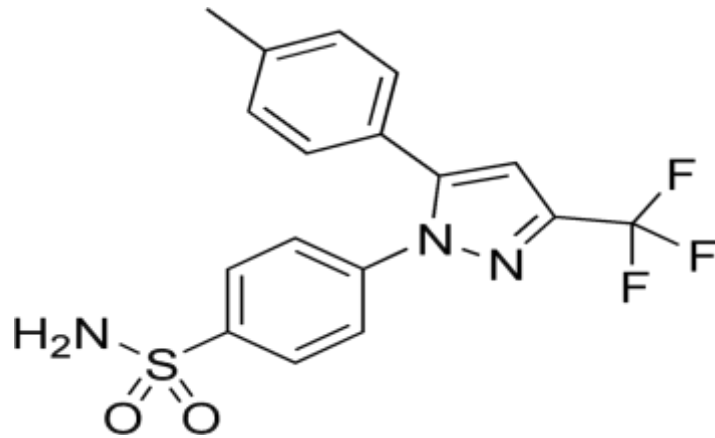
- Used in the disease of dutch elm disease
- Used as paraciticide
- Angiogenesis Inhibitor
- Used as anti microbial agent-sulfathiazole
- Used as antidepressant drug-pramipexole

pyrazole

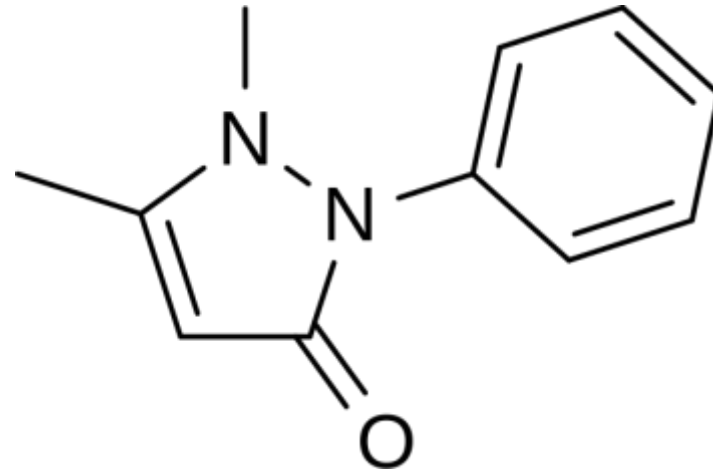
- Pyrazole is the organic compound with the formula $C_3H_3N_2H$.
- It is a heterocycle characterized by a 5-membered ring of three carbon atoms and two adjacent nitrogen centres.



- Pyrazole derivative drug:



celecoxib



Phenazone

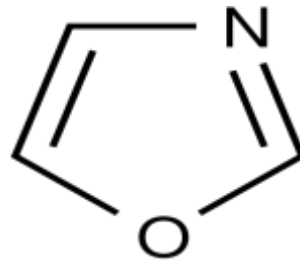
Pharmaceutical Importance

- In medicine, derivatives of pyrazoles are used for their analgesic, anti-inflammatory, antipyretic, antiarrhythmic, tranquilizing, muscle relaxing, anticonvulsant, monoamineoxidase inhibiting, antidiabetic and antibacterial activities.

Oxazol

e

- Oxazoles are heterocyclic aromatic compounds containing an oxygen atom and a nitrogen atom separated by one carbon atom.
- Oxazole derivatives have become increasingly important because of their use as intermediates for the preparation of new biological materials.



Pharmaceutical Importance

The wide range of biological activities of oxazoles includes anti-inflammatory, analgesic, antibacterial, antifungal, hypoglycemic, antiproliferative, anti-tuberculosis, muscle relaxant and HIV inhibitor activity.