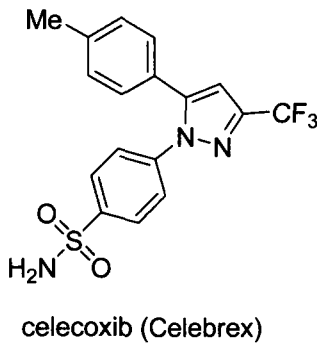


Anti-inflammatory cyclooxygenase-2 (COX-2) selective inhibitor celecoxib (Celebrex) has the tri-substituted pyrazole as its core structure.



1.4.3 Six-Membered Heterocycles with One Heteroatom

As we mentioned in Section 1.2, pyridine has an additional lone pair of electrons at the nitrogen atom after it contributes a pair of two electrons to make up the 6 π -electrons for aromaticity. These lone pair electrons are responsible for much of pyridine's unique physical and chemical properties.

One prominent example is AstraZeneca's H⁺/K⁺-ATPase inhibitor, pyridine-containing omeprazole (Prilosec) and its enantiomerically pure follow-up esomeprazole (Nexium).

