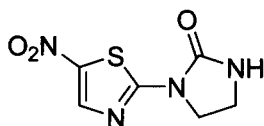
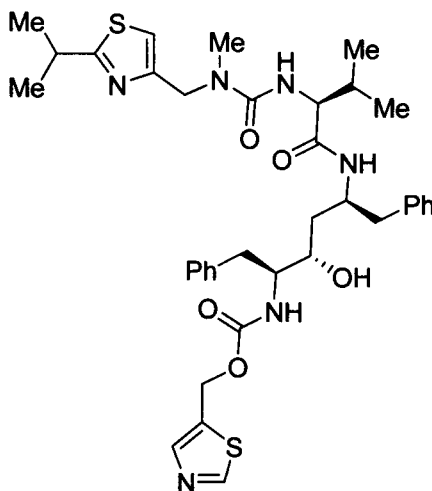


febuxostat: Xanthine oxidase inhibitor (gout)

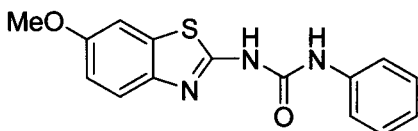


niridazole: schistosomicide

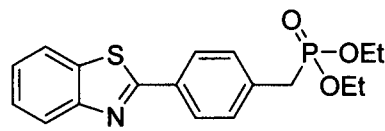


ritonavir: HIV-1 protease inhibitor

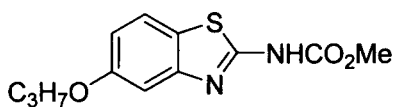
The benzothiazole heterocycle is also found in a variety of pharmaceutical agents. For example, anthelmintic activity is exhibited by tioxidazole²² and frentizole, both possessing benzothiazole.²³ Fostedil is a calcium channel blocker that shows vasodilator activity.²⁴ Riluzole is another benzothiazole-containing molecule that has found use in the treatment of amyotrophic lateral sclerosis, where it delays progression of the disease thereby prolonging life.²⁵



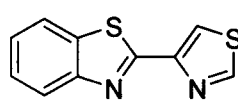
frentizole: anthelmintic



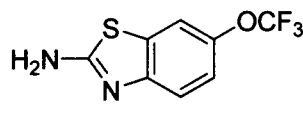
fostedil: calcium channel blocker



tioxidazole:
anthelmintic



thiabendazole:
fungicide



riluzole: amyotrophic
lateral sclerosis

The above examples of thiazole- and benzothiazole-containing molecules demonstrate that these substructures are important heterocyclic components responsible for various types of biological activities, justifying the need to understand their reactivity and syntheses.