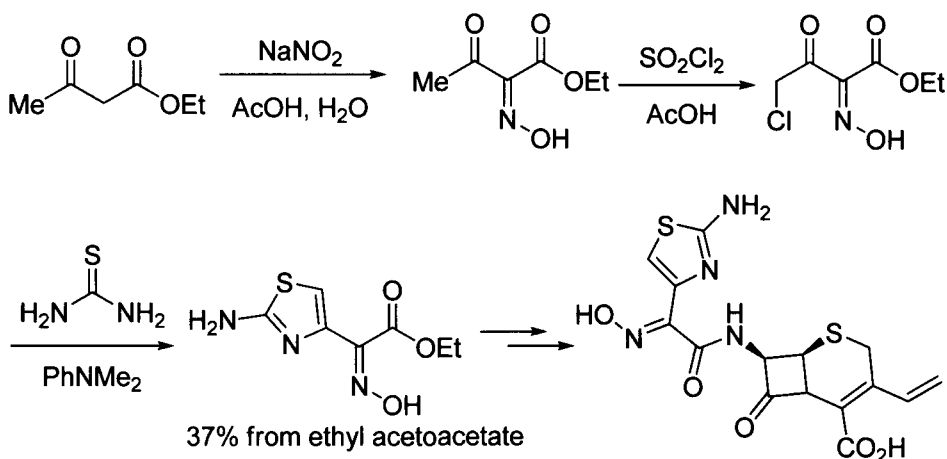


Another application of the Hantzsch method is in the synthesis of the aminothiazole coupling partner in the synthesis of the antibiotic cefdinir. The reactive methylene carbon of ethyl acetoacetate is first functionalized to the oxime after which α -chlorination is brought about to furnish the chloro-oxime substrate for Hantzsch synthesis with thiourea. *N,N'*-Dimethyl aniline is used as a base in the thiazole formation.⁸¹



Famotidine, the orally administered H_2 receptor antihistamine drug for ulcer, possesses an interesting structure with a guanidine substituent on the 2-position of the thiazole ring. The thiazole is constructed in the early stages of the synthesis *via* a Hantzsch reaction in 84% yield wherein dichloroacetone and thiourea are condensed.