Three Ways of Reactions of 5-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-2-phenyl-1,3-oxazole-4-carbonitrile and Its Analogs with Nitrogen-containing Bases

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Abstract—Substituted 5-(3,5-dimethyl-1*H*-pyrazol-1-yl)-1,3-oxazole-4-carbonitrile differently react with nitrogen bases having different numbers of labile hydrogen atoms. Treatment of the title compounds with secondary amines or morpholine results in nucleophilic replacement of the pyrazolyl substituent at C^5, the ozaxole ring remaining unchanged. Their reactions with primary amines are accompanied by cleavage of the oxazole ring with formation of the corresponding enamino nitriles. Hydrazine hydrate acts in a similar way, but enehydrazino nitriles thus formed undergo fast cyclization to give new 4,5-diaminopyrazole derivatives. The latter can be converted into substituted pyrazolo[1,5-*a*]pyrimidines whose structure has been proved by X-ray analysis.

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