Enaminouraciles as Precursors for Synthesis of Pyrimido[4,5-*d*]pyrimidine-2,4-diones

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6-Aminouracil, Mannich Reaction, Pyrimido[4,5-*d*]pyrimidine

The reaction of 6-aminouracil **1** with formaldehyde and secondary amines in ethanol at room temperature gave the corresponding 5-alkylaminomethyl derivatives (**2**a-c) and bis(4-pyrimidyl)methane (**4**). Also, Mannich reaction with primary aliphatic and aromatic amines at room temperature afforded pyrimido[4,5-*d*]pyrimidine (**5** and **6**).

Treatment of **1** with *o*-phenylenediamine through transamination gave compound **7** which cyclized through intramolecular Mannich reaction with formalin to yield pyrimido[4,5-*e*]-[1,4]diazepine (**8**).