# CARBAMOYLATED ENAMINONES AS VERSATILE BUILDING BLOCKS FOR THE SYNTHESIS OF AZAHETEROCYCLES

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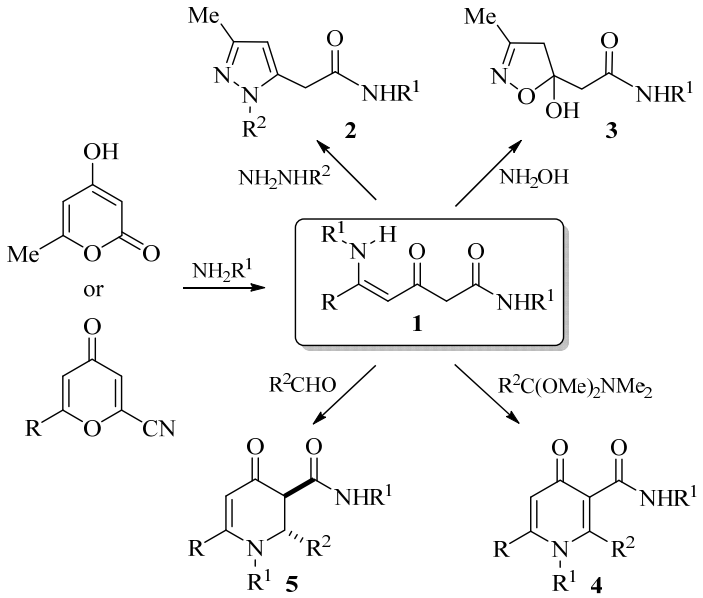
Carbamoylated enaminones 1 are highly reactive polyfunctional substrates bearing several electrophilic and nucleophilic centers, which make it possible to consider these compounds as attractive building blocks for designing various heterocyclic structures. We have shown that enaminones 1 can easily be obtained by the ring-opening transformation of triacetic acid lactone [1] or 2-cyano-4-pyrones [2] with amines.

It was found that enaminones 1 reacted with binucleophiles, such as hydrazines and hydroxylamine, to form (hetaryl)acetamides 2 and 3. Enamination of substrates 1 with DMA-DMA or DMA-DMF led to the formation of 4-pyridone-3-carboxamides 4. Enaminones 1 underwent cyclization with aldehydes as electrophilic reagents resulting in dihydropyridones 5 [3].

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[1] Obydennov, D.L.; El-Tantawy, A.I.; Sosnovskikh, V.Y. *New J. Chem.* **2018**, *42*, 8943.

[2] Obydennov, D.L.; Sidorova, E.S.; Usachev, B.I.; Sosnovskikh, V.Y. *Tetrahedron Lett.* **2013**, *54*, 3085.

[3] Obydennov, D.L.; El-Tantawy, A.I.; Sosnovskikh, V.Y. *J. Org. Chem.* **2018**, *83*, 13776.