

TRIACETIC ACID LACTONE
IN THE SYNTHESIS OF HETEROCYCLIC COMPOUNDS

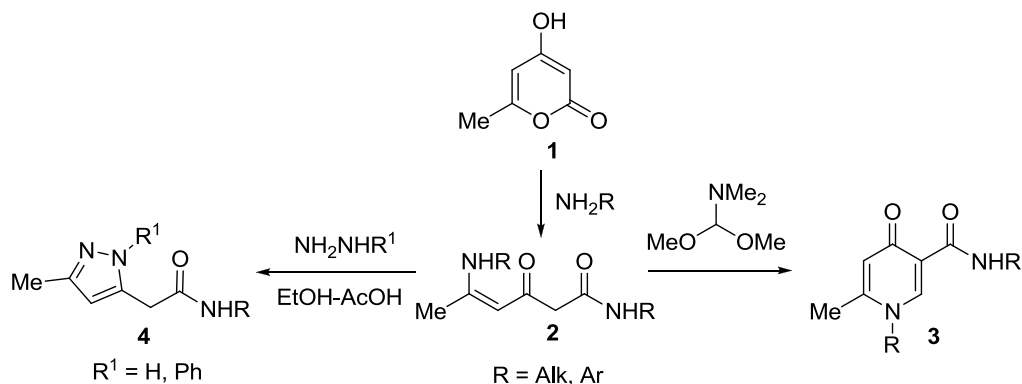
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Triacetic acid lactone (TAL, **1**) is a privileged biomass-derived compound as it may serve as a valuable building block for the production of biorenewable chemicals.

We found that TAL underwent a ring opening transformation with aliphatic and aromatic amines to give carbamoylated enaminones **2**. Compounds **2** reacted with DMA-DMF to form 4-pyridone-3-carboxamides **3** in high yields. The transformation of enaminones **2** with hydrazines in EtOH–AcOH gave amides of pyrazolylacetic acids **4** as the result of a hydrazine attack at the C-5 position of enaminones **2**.



TAL (**1**) in the synthesis of heterocycles **3** and **4**

Thus, it has been shown that enaminones **2** are highly reactive and versatile building blocks for reactions with electrophiles and nucleophiles. This strategy allows to realize the conversion of TAL to a variety of heterocyclic systems.

This work was financially supported by the Russian Science Foundation (Grant no. 17-73-20070).