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Poster Presentation

New T-Reactions in the Synthesis of Spiroheterocycles

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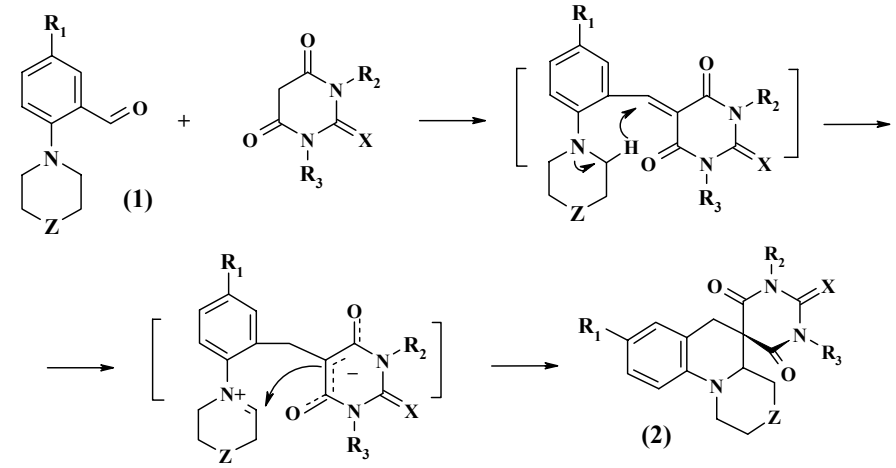
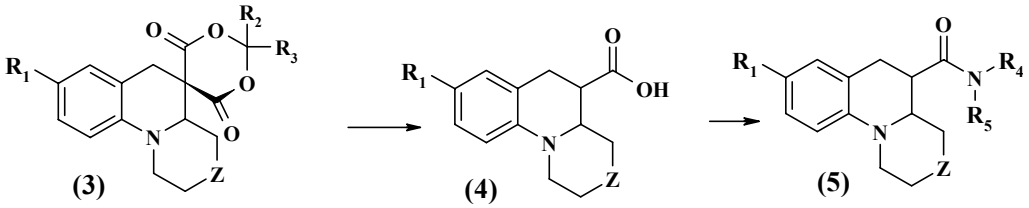
Recently, we have discovered new readily occurring spiro-heterocyclization of some cyclic CH acids with aromatic (1) and heterocyclic *o*-aminoaldehydes termed as T-reactions (the term suggested by the authors in 2004 for the reactions occurring due to the "*o-tert*-amino effect" [1]). In some cases, the reaction proceeds at r.t. and affords respective heterocycles (2) (conventionally termed T-products) in 85–90% yield. For barbituric and thiobarbituric acids , we have demonstrated the feasibility of synthesizing new heterocyclic spiro-compounds and their derivatives through the T-reaction.



(1) **(2)**

R_1 = H, NO_2, Cl, NAc; R_2, R_3 = H, Alk, Ar, Het; X = O, S; Z = NAlk, NAr, O, S, $(CH_2)_{0, 1, 2}$

Besides spiro-products (3), we managed to synthesize - by using Meldrum's acids hard-to-access amino acids (4), unique building blocks for physiologically active derivatives (5):



(3) **(4)** **(5)**

R_1=H, NO_2, NAc; R_2, R_3=Alk, Ar, $(CH_2)_{4-5}$; R_4, R_5= H, Alk, Ar, Het; Z= $(CH_2)_n$, NR_4, O, S

The structure of synthesized compounds was confirmed by NMR(^{1}H,^{13}C) and mass spectra.

[1] Krasnov K.A., Kartsev V.G., *J.Org.Synth.*, 2004 (submitted).