SYNTHESIS AND ANTITUMOR PROPERTIES OF SOME β-LACTAMS

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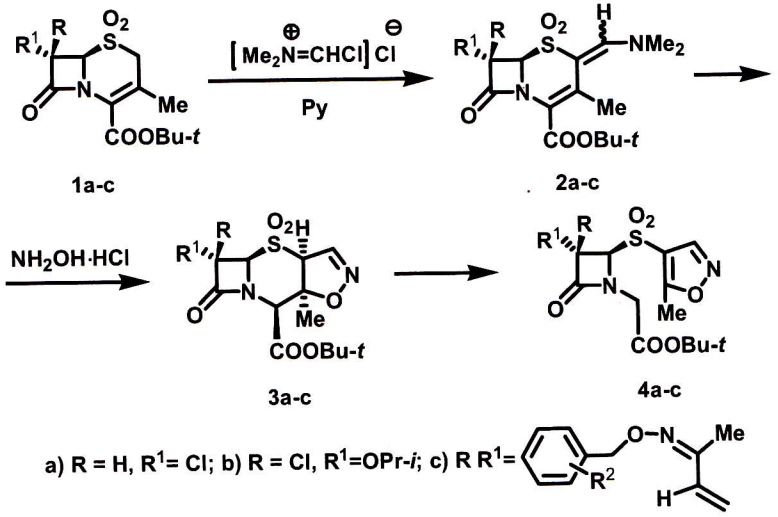
The discovery of the potent elastase inhibiting properties for structurally modified β-lactam antibiotics opened new perspectives for the application of their derivatives in the treatment of inflammation, immunological, respiratory, cardiovascular disorders, cancer and other diseases.

Our present research in this area was aimed on the conversion of 7α-chloro-, 7α-isopropoxy-7β-chloro and 7-benzyloxyiminopropylidene substituted *tert*-butyl 1,1-dioxoceph-3-em-4-carboxylates **1a-c** into tricyclic and monocyclic β-lactams **3,4a-c** after their treatment with Vilsmeier reagent and then with hydroxylamine.



1a-c **2a-c** **3a-c** **4a-c**

a) R = H, R^1= Cl; b) R = Cl, R^1=OPr-*i*; c) R R^1=

The *in vitro* screening of compounds **2-4a-c** against tumor HT-1080, MG-22A and normal NIH3T3 monolayer cell lines revealed new correlations between the structure and cytotoxic properties of tested compounds.

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