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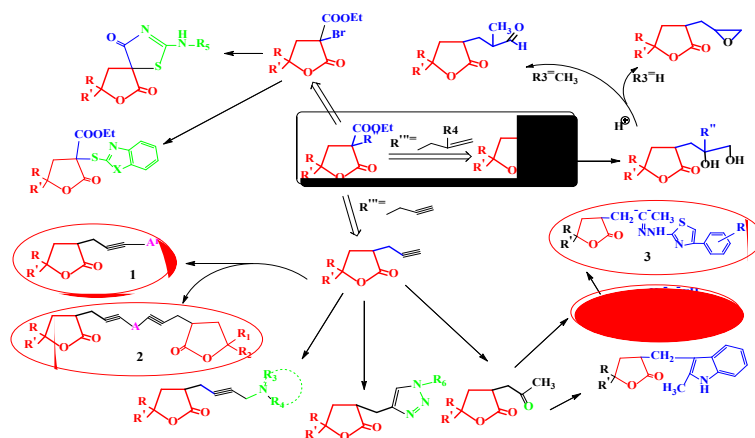
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New syntheses in the field of τ -lactones and biological studies of the obtained compounds

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A wide range of biological action and prevalence of lactone-containing compounds in the nature become attractive objects for research by both specialists in fine organic synthesis and pharmacologists. There are numerous drugs used in medicine that contain active aglycones derivatives of γ -lactones. The relevance of research in the field of γ -lactones is confirmed by numerous recent publications. In continuation of our research in this field, we have developed a number of methods for the synthesis of new, earlier not described in literature lactone-containing compounds that can be of certain practical interest. Below there is a graphical scheme of our research. Screening of compounds 1,2 revealed that they displayed inhibitory activity in relation to major phosphatases. It is shown that the inhibitory activity of the main part of studied compounds exceeded similar properties of the known inhibitors levamisil and L-phenylalanine by 17-80 times. Compounds 3 are of certain interest. Their studies have shown that representatives of this class have mainly antibacterial properties were used Gram-positive staphylococci (209P, 93) and gram-negative rods (Sh. Flexner 6858, E coli 0-55), all compounds had moderate anti-bacterial activity. Screening has revealed antimutagenic properties in a series of γ -lactones for the first time (compounds 3, 4). The experiments were carried out on *Salmonella tiphimurium* TA-100. It was established that with these compounds the number of revertants decreased by 55-60% and mutagenicity factor was 2.58-2.7. The same compounds exhibited algicidal activity against filamentous green algae *Cladophora*. The mentioned compounds in 1 mg/ml concentration destroy cells for 51-60% against 14% of the control preparation monuron. Undoubtedly, compounds 3, 4 can be used in solution of some ecological problems.



Biography

Tariel V Ghochikyan has completed his Doctor of Sciences degree from Supreme Certifying Commission of the Republic of Armenia (Yerevan State University). He is Dean of the Department of Pharmacology and Chemistry, YSU. He is Supervisor and Master Researcher of Research Laboratory, "Chemistry of N-, S-, O-containing heterocyclic compounds". He has published more than 225 articles, international thesis and patents in the reputed journals. He is the member of the Council of YSU, member of special soviet unions. He is an Editorial Board Member of *Chemical Journal of Armenia*, and also for the proceedings of YSU Chemical and Biological Sciences.

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