**Synthesis, structure and antimicrobial activity of**

**new derivatives of chloronitrobenzofuroxans**

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**Abstract:**

Demand for new antimicrobial agents is high because more microorganisms develop resistance to the present drugs available in the market. Pharmaceutical and organic chemists are trying to synthesize new drugs with better pharmacokinetic and dynamic properties. Chloro-nitro-substituted benzofuroxans exhibit a broad spectrum of biological activity due to their capability to release nitric oxide: antibacterial, antifungal, antiparasitic, anticancer, cytotoxic and herbicidal properties. In this report we investigated the reactions of substituted benzofuroxans with different amines. The most interesting results were obtained in the reactions of substituted chloronitrobenzofuroxanes with amines such as primary higher alkylamines, aminopyrimidine, adenine, aminoethylpiperazine, derivatives of alkyl isothiourea and others. The reactions proceed under mild conditions in alcohol-ether solution at room temperature and leading to the formation of uncommon products of di- and monosubstitution. The report will also present new potential anti-inflammatory antifungal drugs for animals.

**Biography of presenting author**

Dr. Irina Galkina is a full Professor of Department of Chemical Institute of Kazan Federal University. She graduated with honors from Kazan University in 1979 and in 1988 she defended her Ph.D. and in 2010 her doctoral dissertation at the same university. She has published more than 300 scientific articles in renowned journals and received 53 Russian patents for the treatment of humans, domestic and farm animals.. Disciplines for students: Chemistry of biologically active substances, Organoelement Medicines and Pharmaceutical chemistry.

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