Antimicrobial Activity of New Derivatives of Tartaric Acid against the Multidrug Resistant Soil Strains of *Pseudomonas* and *Stenotrophomonas*

Aram R. Mikaelyan,[a] Nona L. Asatryan,[a] Armen S. Sargsyan, [a] Samvel A. Bagdasaryan and **Bella Babayan**[a,b]

[a] Laboratory of Agrarian Chemical Creation And The Quality Control, Faculty of Chemical Technologies And Environmental Engineering, National Polytechnic University of Armenia (NPUA), https://polytech.am/en/general-2/, Republic of Armenia
[b] Laboratory of Ecological Safety, Scientific & Production Center (SPC) "Armbiotechnology", National Academy of Sciences (NAS) Republic of Armenia (RA), http://armbiotech.am/arm/indexeng.html , Republic of Armenia

The multidrug resistance of native and clinical strains of microorganisms is a very actual medical and ecological problem[1]. *Stenotrophomonas* and *Pseudomonas* are common, drug resistant and highly adaptive opportunistic pathogens of human, animals and plants[2]. One direction of combating against them is the usage of new ecologically safe antibacterial agents with enlarged functional efficiency, which might be elaborated by chemical modification of natural antimicrobial compound. Tartaric acid (TA) and tartrates are natural antimicrobial substances, which are being broadly used in food industry (E 334-337, 354)[3]. In current paper it was researched the antimicrobial activity of synthesized in our laboratory new derivatives – benzyl imide, cyclohexyl imide, and amino salts of benzyl and cyclohexyl amines of TA on different strains of native soil *Pseudomonas* and *Stenotrophomonas* from The National Microbe Collection of SPC "Armbiotechnology" NAS RA[4]. As the results of experiments on 36 strains of 7 species, it was found out that these substances are effective non selective inhibitors of growth for the majority of research strains. Besides, the amino salts of benzylamine and cyclohexyl amine of TA (figure 1) are biodegradable by some soil strains, such as like the test culture of soil non-pathogenic *P. aeruginosa 5249*. Thus, all the elaborated compounds can be recommended for further research of their activity as an effective alternative against the multidrug resistant microorganisms.

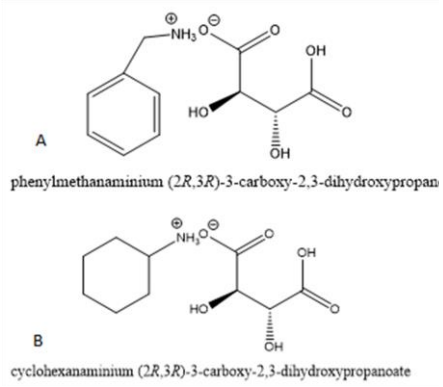

Figure 1. Ammino Salts of Benzylamine(A) & Cyclohexyl amine (B) of Tartaric Acid

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[4]N.A. Dashchyan, et al., Obtaining Bioactive Additives of Cyclic Structure on the Basis of Optically Active Tartaric Acid. Bulletin of NPUA. Coll. of scieent papers, **2014**, p II, pp. 682-686