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P64. ANTIMICROBIAL ACTIVITY, GENOTOXICITY AND DNA INTERACTIONS STUDIES OF SOME IMINE COMPOUNDS

Pınar GÖK, Neslihan DEMIR, Mustafa YILDIZ, Bahar GÖK

Çanakkale Onsekiz Mart University, Graduate School, Department of Biology 17100 Çanakkale
Çanakkale Onsekiz Mart University, Faculty of Arts and Sciences, Department of Biology, 17100 Çanakkale
Çanakkale Onsekiz Mart University, Faculty of Arts and Sciences, Department of Chemistry, 17100 Çanakkale

Today, the research and designing of new molecules which can interact with nucleic acids, development of new anticancer drugs that can bind to DNA in chemotherapy is one of the most studied topic. Although these genetic and cancer diseases are caused by spontaneous mutations, the contribution of the surrounding external chemical and physical agents is quite large. Therefore, studies on eliminatig the effects of mutagenic subtances, preventing diseases and synthesis of the novel antimutagenic agent which can be used intreatment of these diaseses has been increased. Imine compounds have been found to be excellent inhibitors. We have synthesized and characterized of the 3-aminopyridine Imine compounds. We investigated of their antimicrobial activity, genotoxicity and DNA interactions.

In this study, Imine compounds synthesized from the reaction of substitue-2-hydroxybenzaldehyde with 3-aminopyridine. We prepared solutions of 3-aminopyridine Imine compounds at 500, 50, 5 and 0.5 ppm concentrations. For Ames test, Salmonella thyphimurium TA98 and TA100 mutant srains were used. The interactions of the Schiff bases to calf tymus DNA (CT-DNA) and pBR322 DNA were characterized by UV-vis spectroscopy and by agarose gel electrophoresis. Escherichia coli, Pseudomonas aerouginosa, Proteus vulgaris, Staphylococcus aureus, Enterococcus faecalis, Bacillus subtilis Candida albicans ve Candida tropicalis were used as microorganisms for antimicrobial activity. Gentamicin, ampicillin and fluconasol were used as controls in this study.

Consequently, the Imine compounds have antimutagenic effects. The compounds have intercalative binding. They were active against of yeasts and as well as active against bacteries.

*p-nar-gk2@hotmail.com