

P62. SYNTHESIS, CHARACTERIZATION, ANTIMICROBIAL ACTIVITY, ANTIMUTAGENIC EFFECT AND DNA BINDING STUDIES OF 2-HYDROXY SCHIFF BASES

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Schiff bases have been reported for their biological activities. They have been widely used ligands, due to their metal complexes having variety of applications in anticancer, antibacterial drugs, catalysis, functional materials, and optical resolution. The DNA binding, cytotoxicity and apoptosis induction activity were studied for Schiff bases. They have been widely used in the pharmaceutical industry, biological research in the medical field, and agriculture. In this study, synthesis, characterization, antimicrobial activity, antimutagenic, DNA cleavage and DNA binding properties of 2-hydroxy Schiff Bases.

The Schiff bases prepared from the reaction of 2-hydroxybenzaldehyde with substitute anilines. To determine the antimicrobial activity of 2-hydroxy schiff bases *Escherichia coli*, *Pseudomonas aeruginosa*, *Proteus vulgaris*, *Staphylococcus aureus*, *Enterococcus faecalis*, *Bacillus subtilis*, *Candida albicans* ve *Candida tropicalis*. Gentamicin, ampicillin and fluconazol were used as controls in this study. We prepared solutions of 2-hydroxy Schiff bases at 500, 50, 5 and 0.5 ppm concentrations. For Ames test, *Salmonella thyphimurium* TA98 and TA100 mutant strains were used. The potential binding ability of the Schiff base to calf thymus DNA (CT-DNA) was characterized by UV-vis spectroscopy. Also, DNA cleavage activity of the compounds were studied by agarose gel electrophoresis.

As a result, the Schiff bases were active against of yeasts and as well as active against bacteria. The compounds have intercalative binding, and antimutagenic effects.

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