

EXECUTIVE SUMMARY OF RESEARCH WORK

The object of this study is to synthesize novel complexes of amino salicylic acid derivatives. The biochemical and catalytic study is quite useful for that evolution and further development. Amino salicylic acids have occupied their place as regular medicines. However the need for better drug molecules is ever lasting and in the quest of better drug molecules. Esterification of amino salicylic acids will be prepared in this project. The complexes of these ester derivatives of amino salicylic acids will be used as ligand and then after they will be subjected to biochemical and catalytic application studies.

The ligand molecule is a derivative of 5 – amino salicylic acid. 5 – amino salicylic acid its self is useful as anti-inflammatory drug however there are certain reasons to prepare its modified structure in form of organic ester as well as, its coordination compounds. By this two way approach of molecular manipulation very useful biochemical information can be achieved. This information is highly beneficial to human society as well as, probably animal or plant kingdom.

The ligand 5 – amino salicylic acid derivatives coordinated with alkaline and transitions divalent metal ions. These complexes were also characterized by various spectral analysis method and Physico chemical measurement. It was possible to prepare complexes of 5 – ASA derivatives which initial seemed difficult to prepare because of steric crowding due to the bulky ester group. Further more it was possible to incorporate small ions like Mg^{+2} and Zn^{+2} keeping in mind then smaller ionic radii and comparatively lower coordination number. It was also possible to catalyze dies –alder reaction product using catalytic amount of the Complexes up to a level of 24%. It was also possible to achieve antimicrobial activity higher then the standard antibiotic streptomycin sulphate drug. Hence the complexes exhibited there potential to further exploration of, vivid biological activities.

The minor research project would provide an excellent opportunity to research works. This project work is presenting new experimental results, thoughts and other assepects. This works is also presented in the international, national and state level conference and

seminar. We also interaction this work with different types of scientist coming from deferent area in the field of chemistry.

PROPOSED STRUCTURE OF COMPLEXES

