## Abstract

Nanotechnology plays an important role in the science and technology due to their advanced application in every field of science. Because of their extensive application there are many methods are used to synthesize the nanoparticles. In the past the conventional method for the synthesis of gold nanoparticles was used, by using this method there were some problem such as chemical contamination and usage of high energy, so that last from few decade there was work on the environmentally safe, simple, cost effective, clean, time consuming and nontoxic methods for the synthesis of nanoparticles. To achieve this protocol the biological method was suggest achieving the protocol of safe synthesis of nanoparticles. This type of methods is green approach, simple and single step method. In the biochemical method the reduction of metal ion reduced in the Nano metals. Different types of biological agents like bacteria, fungi and plant tissues were used to synthesize for the synthesis of metal nanoparticles. In this work the gold nanoparticles are synthesized from the salt of gold chloride with the reduction of metal ion. As that the gold nanoparticles are useful for the different fields their toxicity also studied. The Berberis Lycium plant is used to synthesize the small size of nanoparticles. After that their toxicity effect is checked in the albino mice by administrating of different doses of gold nanoparticles. The toxicity effect shown in the liver and kidney of the mice by study the histopathological study of mice organ.