By occupational exposure to pesticides workers engaged in pest control operation, public health programmes and pesticide manufacturing units have often suffered from serious illness and at times met with fatal accidents. Pesticides impair the normal functioning of the biological system. The widespread use of chemicals have played a major role as an integral component of the 'Green Revolution' to alleviate the nutritional needs of the rapidly expanding population. Further, the pesticides are responsible for bringing about a remarkable, social and economic gain in the eradication of vector borne diseases. The use of organo chlorine pesticide plays a major role in the (1) efforts to control agricultural pests and health protection measures by elimination of insect vectors of diseases in most areas of developing world.

The introduction of organo chlorine insecticides are marked by the discovery of DDT in pest control and vector borne diseases. The outbreak of Handigodu syndrome in the agricultural labourers of the Handigodu village in the Karnataka state in India is a clear example of the biological uptake of pesticides and their consequent effects.
This thesis comprises of six chapters. The First Chapter pertains to the toxicity evaluation and ATPases activity. The Second Chapter is devoted to the study of organic constituents. The Third Chapter deals with oxidative enzyme profiles and Fourth Chapter deals with the detoxification enzymes. The Fifth and Sixth Chapters deal with haematological and histological changes respectively. The present investigation is only a humble attempt to elucidate the chlordane toxicity on a rat. This present study will be useful in making a mammalian model rat which would serve as a basis for further studies.

This investigation is by no means complete and comprehensive. It represents only a preliminary effort on the part of the author. The author may be excused for any other lacunae in this present investigation. As there has not been much research done in the toxic effects of the physiological as well as biochemical changes in the liver of rat, this aspect have been chosen for present investigation.