No doubt the usage of pesticides in agriculture are implemented to improve the yield and quality of the crop, but sometimes these chemical are considered as one of the environmental stressor which exert their toxic effect by interfering with fundamental developing mechanism of an organism. These chemicals act as teratogen and are responsible for causing various development anomalies in children and unborn babies of exposed organisms. The studies should be therefore employed in different experiment animals for examining the mechanisms of teratogenicity as similar patterns of human teratogenesis can also be suspected from these toxic chemicals.

The present thesis entitled “Teratological evaluation of formulated dicofol and deltamethrin in chick embryo” tries to investigate the possible teratogenic propensity of the commercial formulations of the insecticides; dicofol and deltamethrin in developing embryo of Gallus domesticus. The properties such as small size, well known embryonic development, ease of accessibility, short gestation period (21- days), minimal expenditure of time and money and possibility of experimenting on large scale for statistically valid results has proved chick embryo to be a promising experimental model for preliminary teratological screening of various toxicants in biomedical research.

The results of the investigative study reported in this thesis are carried out by the author in the Department of Zoology, The IIS University, Jaipur, Rajasthan, India. The thesis consists of seven chapters. Chapter 1 deals with the detailed description of the selected insecticides and justification of taking chick embryo as an experimental model with aims and objectives of present work. Information regarding toxic effect of selected insecticides on different animals and a review on teratological studies done by other workers on various xenobiotics using chick embryo is detailed out in Chapter 2. Experimental design, plans, procedure and techniques employed for obtaining appropriate
results are described in Chapter 3. Chapter 4 deals with the results which include observed teratological effects (structural, functional and biochemical abnormalities) in the developing chick embryo exposed with different dose concentrations of each insecticide on three different “critical periods” of embryogenesis. The results are exhibited in the forms of tables, graphs and photographic plates. The results of the present study have being discussed and compared with concurrent results reported by other authors in Chapter 5. A brief and summarized description of all the previous chapters and important conclusions drawn from present observations are highlighted in Chapter 6. All the references which are followed in the text are alphabetized in the bibliography section. Last section present the list of papers published and presented from the research work carried out under the thesis.