Parasitic diseases are inherent ecological problems and their endemicity or suppression is dependent upon man's ability to control his environment. A variety of parasitic helminths are known to infest animals, birds or man. The ravages caused by them were recognized long ago; none the same they continue to sap the vitality of our race. Undoubtedly, epidemiological measures to improve environmental sanitation have led to dramatic successes in the eradication of many infectious diseases in continental Europe and America. In countries like India, only in recent years have control and prevention programmes been initiated and as such, helminthiasis and filariasis continue to be among the biggest public health problems.

Due to the lack of effective immunotherapeutic remedies, the only available treatment of helminthic infections is by synthetic drugs designed on piperazines and other naturally occurring compounds. Chemotherapy of the ailments caused by the filarial worms or the intestinal round worms has not been successful so far on account of the fact that the meagre information on the biochemical activities of these parasites do not permit a rational design of new drugs.
Information available on the morphology, anatomy and nutritional requirements of many helminth species suggests that a specific biological interaction between the host and the parasite is a pre-requisite for the manifestation of the pathological symptoms. These advances notwithstanding, in vitro cultivation of parasitic helminths in a medium independent of the host has not yet been achieved. Naturally, progress in the chemotherapy of helminthiasis has been slow.

The work presented in this dissertation was carried out with the aim of gaining some understanding of the carbohydrate metabolism of Setaria cervi, the filarial parasite of buffaloes and Ascaridia galli, the intestinal nematode of domestic fowls, and proteinase inhibitors present in A. galli. These test organisms were used as models in the absence of the human parasite Brugia malayi. The work presented, is not claimed to be complete nor does it throw light on all unillumined areas of parasitic metabolism. The author is conscious of the fact that he has touched only the fringe of the vast uncharted area of helminth carbohydrate biochemistry. The questions that have been left unanswered are many; but the efforts have been fruitful in enabling the identification of some aspects of the energy metabolism of these parasites which need more intensive investigation.