Summary
Intestinal parasitic infection are distributed throughout the world with high prevalence rate in many regions and particularly in the underdeveloped and developing countries. Although the impact of parasitic infestations on public health has been considerably underestimated, its vital role on the growth and development of people in the developing countries has been universally accepted. Of all various intestinal parasitic infections, ascariasis, amoebiasis trichuriasis and hookworm infection are included in the list of the ten most common infections of the world.

In Manipur, a large section of the people are suffering from various intestinal parasitic infections. However in most cases, excepting the acute problem arising due to these infections, little importance is given to those with apparently healthy asymptomatic population of the community. Visualizing the importance of impact of gastrointestinal parasitic infection on the health of the people of the state, the present work has been carried out with particular emphasis on the prevalence and epidemiology of the some common parasitic infection prevalent in Manipur.
The first chapter deals with the prevalence of intestinal parasitic infection in 10 different areas of the Imphal district. The parasites associated with general population of Manipur are *Ascaris lumbricoides, Enterobius vermicularis, Ancylostoma duodenale* etc. This study reveals that intestinal parasitic infections are more prevalent in Majorkhul, a tribal dominated area in the heart of Imphal city and least prevalence is recorded in Basikhong, an area located at outskirts of the Imphal city. The cross sectional or indepth study of these 10 different areas/localities reveals that in almost all the areas excepting a few, children belonging to the age group (5-10 yrs) are the most heavily infected group while the least infected group belonged to these group > 15 yrs. Statistical analysis is studied for each area/community individually and the data obtained is more or less similar in case of some areas and contradictory in case of other areas.

Cross sectional study in the highly parasite infected area, in Majorkhul reveals that there is a slight increase in the no. of infected females compared to the no. of infected males, however, the sex difference is found to be statistically significant (P < 0.01) Correlation analysis also shows that there is positive correlation between the two diseases ascariasis and trichuriasis (+ 0.86) and ascariasis and enterobiasis (+ 1.05) and trichuriasis and enterobiasis (+ 0.96) respectively. The age group of (10-15 yrs) which is the most heavily infected group in this area is independent of the various parasitic diseases studied so far (P < 0.05).

In case of Meetei dominated area viz., in Ningomthong, the age group of (5-10 yrs) is the heavily infected group however, this age group is independent of the diseases trichuriasis, enterobiasis and ascariasis (P < 0.05). Further correlational analysis shows that there is positive correlation between the disease ascariasis and
enterobiasis & trichuriasis ( = 0.07). The difference in sex is not statistically significant (P < 0.05) as far as this particular area is concerned. Similar studies are also carried out for the remaining areas.

The second chapter deals with the seasonal prevalence (longitudinal study) of parasitic infections in Imphal district of Manipur. The present study, which is largely based on the hospital study/survey shows that during the 2 years study period from January 1996 to December 1996 and January 1997 to December 1997; the Parasites prevalence is maximum during the month of June to July and least during the month of December.

The third chapter deals with the prevalence of intestinal parasitic infections in the seven districts of Manipur, Districtwise prevalence of intestinal parasites, based on a two years hospital based study (1996-1997) shows that there was a marked increase in the prevalence of gastrointestinal parasites amongst the patients coming from the Ukhrul district of Manipur, as far as study in 1996 is concerned while highest prevalence was recorded in Churachandpur in 1997.

The fourth chapter deals with the intestinal parasitic infections associated with the HIV positive patients in Manipur. During the present investigation, it has been revealed that 56.51 % of the asymptomatic HIV patients and 46.6 % of the symptomatic HIV patients are found to be infected with various opportunistic and non-opportunistic parasites. In case of symptomatic patients, only the protozoan Cryptosporidium sp. alone is detected, while in case of a asymptomatic group, parasites like Ascaris lumbricoides (6.45 %) Trichuris trichiuria (0.92 %) Hookworm (0.92%), Entamoeba histolytica (5.52 %) and Isospora (11.05 %) are detected. The fungus Candida sp. Cladosporium sp. and Humicola sp. are also detected in 13.82 % of the asymptomatic patients.
The present study reveals that *Cryptosporidium* is more prevalent during winter and post winter seasons (March and February) while less/lower prevalence is observed during summer (May and June), in case of the asymptomatic patients however, the prevalence is almost unchanged during the study period as far as asymptomatic patients are concerned. The present study also shows that the age group 23-28 yrs is the most commonly encountered highly parasitized patients group.

The fifth chapter deals with the physiological study i.e., the haemoglobin level and blood group of the parasite infected patients.

The present study shows that Hb level is somewhat less or slightly lower in case of patients with hookworm infection but is almost within the normal range in case of patients with ascariasis, enterobiasis, trichuriasis and other parasitic infections. Blood group analysis of the parasite infected patients shows that in case of ascariasis, the prevalence of the parasite is maximum in patients with blood group A (45 %) and least in AB (10 %); in case of trichuriasis, more prevalent in A (39 %) and least in AB (14 %); in case of hookworm infection, more prevalent in A (36 %) and least in AB (11 %) and in amoebiasis more prevalent in A (38 %) and least prevalent in AB (5 %).

The sixth chapter deals with the epidemiology & symptomatology of some common parasitic diseases/infections endemic in the state and a comparative analysis on the prevalence of the various intestinal parasitic infectious in the seven north eastern states of India.
1. Male *Ascaris lumbricoides*
2. Female *Ascaris lumbricoides*
3. *Enterobius vermicularis*
4. Fertilized corticated egg of *A. lumbricoides* ($10 \times$)
5. Egg of *Trichuris trichiura* (40x)
6. Egg containing juvenile stage of *A. lumbricoides* (40x)
7. Oocysts of *Cryptosporidium sp* (100x)
8. Cyst of *Entamoeba histolytica* (40x)
9. Anterior end of *E. vermicularis* showing cephalic nice (15x)
10. Egg of *E. vermicularis* (40x)