INTRODUCTION

This thesis was assembled for workshop on some molecular biology techniques applicable to the study one of the most wide spread bacterial disease in tropical area which is typhoid fever that caused by ***Salmonella typhi*** .

Tropical disease , in aggregate , are responsible for a continning and heavy burden of morbidity and mortality . These problems have not , by and large , received as much research effort at the cellular and molecular levels as they deserve .

The clinical problems associated with infections caused by the ***Salmonella*** species is referred to the increased frequency of antibiotic resistance of their isolates, so that most cases show no response to specific measure for treatment as chloramphenicol or ampicillin or both ***(Platt et al, 1986).***

Resistance to antimicrobial agents may be mediated by genes that are encoded on the bacterial chromosomes or on extrachromosomal plasmids.

or on transposons which are capable of integrating into the plasmid or into chromosomes ***(Sambrook et al, 1989).***

Chromosomally-mediated resistance is a more stable property which will be difficult or impossible to eradicate while the

extrachromosomally-mediated resistance is due to resistance factors (R Factors), which are a class of plasmids that carry genes for resistance to one and often several antimicrobial drugs.

It is hoped that this thesis , in a very small way , helped to bridge the gap for understanding the global signficanice of controlling the rational use of antibiotics .

Plasmids are small genetic elements capable of independent replication in the bacteria and can be transferred to other bacteria by conjugation, transformation and transduction ***(Barnes, 1977).***