

## P R E F A C E

The Zoology Laboratory of Shivaji University is engaged in extensive researches on mucosubstances, lipids, proteins and a galaxy of highly active enzymes such as  $\beta$ -glucuronidase, acid phosphatase, non-specific esterases etc. in the alimentary tract of invertebrates and vertebrates. The studies incorporated in the present thesis form a part of this extensive research scheme and concern with the histochemical characterization of the mucosubstances in the various organs of the alimentary tract of the frog E. systoma.

The present thesis is divided into four chapters. The first chapter includes a brief review of the existing literature on mucosubstances in the various organs of the vertebrate alimentary tract, reasons that stimulated to undertake the present investigation and this chapter also outlines the plan of the proposed research work. The second chapter deals with the material and methods employed in the present investigation. Detailed histological and histochemical observations on mucosubstances in esophagus to large intestine of the frog under present investigation are recorded and described in chapter - three. The observations are supplemented with tabulated forms and photomicrographs. The chapter - four is devoted to the discussion on results obtained in the present investigation and the existing literature. The last chapter is followed by summary and concluding remarks. The thesis ends with the bibliography of the vast literature cited in the various chapters.