FOREWORD

The toxic effects of phenylhydrazine is well known for a long time. Extensive studies have been made to understand the hemolytic and carcinogenic action of this compound. Being an environmental pollutant through industrial effluent in many ways, special attention had been paid to understand the role of phenylhydrazine in biological system, mostly in vertebrates. Such studies have been made using adult mammalian vertebrates in majority of the cases. No through, careful investigation has been pursued to understand the responsiveness of sexually immature, juveniles, to the toxic effects of phenylhydrazine. Moreover, very few attempts have been made to know the functions of endocrine organs during the phenylhydrazine toxicity.

The present thesis, therefore, is an attempt to evaluate the toxic effect of phenylhydrazine in hematological aspects in juvenile, sexually immature male rats and to compare the degree of such toxicity with adult male rats. Some important indications on the thyroid hormone playing a protective role against the phenylhydrazine toxicity in juvenile rats have been presented.

It is hoped that further work along this line of inquiry with bring forth interesting information on thyroid hormone physiology in favor of human health.