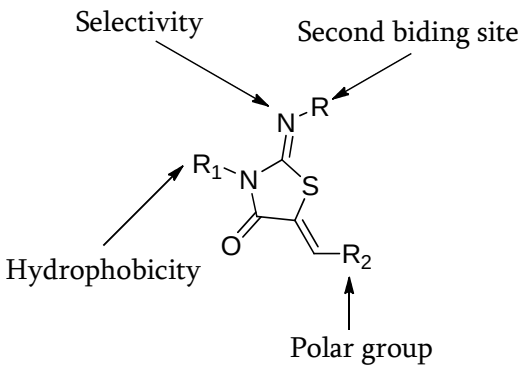
Aims and Objectives

3. AIMS AND OBJECTIVES

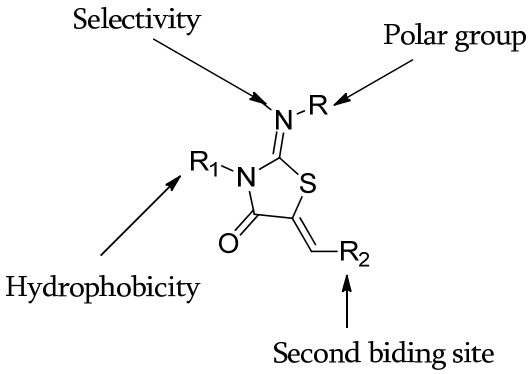
In view of the literature given in Chapter 2 it is observed that the ligands binding to the Protein Tyrosine Phosphatase 1B (PTP1B) should possess the following characteristics for selective inhibition and bioavailability:

1. A bidentate non phosphate polar group substituted heterocyclic ligand that binds to both the active site and a unique adjacent peripheral site.
2. Substituents to target the unique PTP1B subpockets that border the active site to enhance inhibitor affinity and selectivity.
3. Appropriate substituents to target allosteric sites and increase hydrophobicity of the molecule for the development of orally bioavailable PTP1B inhibitors.

In light of the above observations it was planned to synthesize the following structural motif **I** and **II** by incorporating necessary substitutions at appropriate positions for providing interaction with the amino acids at the receptor site.



(**I**)



(**II**)