CHAPTER 2. AIM AND HYPOTHESIS OF PRESENT WORK

The goal of present work was to design fast dissolving tablets, which would produce rapid disintegration, rapid drug release and possesses high mechanical strength. In addition:

- To obtain better patient compliance.
- To improve ease of drug administration.
- To formulate fast dissolving tablets with taste masking of selected drug.
- To achieve faster onset of action.

The specific research objectives of present work include:

- **For domperidone FDT**
  - Enhancement of dissolution of domperidone by solid dispersion technique.
  - Design and optimization of FDT by using different superdisintegrants.
  - Design and optimization of FDT by effervescent technique.

- **For ondansetron HCl**
  - Taste masking of ondansetron HCl.
  - Design and optimization of FDT by direct compression technique.
  - Design and optimization of FDT by sublimation technique.

- **Comparison with market product**
  - To compare optimized formulations of both the drug with market products.

- **Stability study**
  - To perform short term stability study for all optimized formulations as per ICH guidelines.

- **In- Vivo study**
  - To perform pharmacokinetic and pharmacodynamic studies for best formulations of both the drugs.
HYPOTHESIS

Domperidone has less solubility and hence need dissolution enhancement, solid dispersion has been reported as suitable technique, further faster disintegration should help in increasing the dissolution rate, this should speed up the onset of action.

Ondansetron HCl is water soluble drug but very bitter in taste, taste masking using extrusion technique has been reported as suitable technique, further rapid disintegration and adequate hardness provides better patient compliance.

Based on the physiochemical properties, pharmacokinetics parameters and clinical need of both the drugs it was hypothesized to achieve rapid disintegration, fast dissolution and high mechanical strength from the developed formulation.