Preface

This thesis is the upshot of my Ph.D. study at Zydus Research Centre and the department of Chemistry, The Maharaja Sayajirao University of Baroda, Vadodara, India. This study has been also a part of my job as senior scientist at Zydus Research Centre, Ahmedabad, India to which I have been associated since November 2000.

The thesis consists of four major sections which cover the development of PPAR-pan agonists for the treatment of the metabolic syndrome and the development of PPARδ partial agonists as anti-inflammatory agents. A part of the thesis has been published in an international journal.

The various therapeutic aspects of PPARs and recent updates in the development of PPAR agonists are discussed in details in the 'Introduction' section. The second and third sections are containing the detail research work on 'Identification of PPAR-pan agonist' and 'Discovery of a selective PPARδ agonist' respectively. In these sections the strategies and rationale for designing novel PPAR agonists, their synthesis, biological activities and molecular modeling studies are discussed. The 'Experimental' is the section where the detailed procedures for the synthesis of the compounds as well as the characterization data are presented. The details of biological experiments are also described in this section. Copy of spectra of selected final compounds & crucial intermediates and copy of publication are incorporated at the end of the thesis.

It was a very learning and joyful experience while working for this thesis. Reviewing literature provided a platform to understand the role of PPARs in controlling various aspects of metabolic syndrome. Presenting the work in form of publication and thesis was also a good learning experience. Although this work is a part of my job as a medicinal chemist, it gives me a great level of satisfaction, as findings from this research work may be useful to obtain a solution for unmet need for the treatment of metabolic syndrome. Being a medicinal chemist my goal is to find out novel therapies in view of alleviating human suffering.

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