Preface

Enzymes are among the most important products required for human needs. Although these can be obtained through several sources, such as plants, animals and microorganisms, microbial sources are the most important ones to meet the industrial requirements. Enzymes are substances that make life possible. They are needed for every chemical reaction that takes place in the human body. No mineral, vitamin or hormone can do any work without enzymes. They are the manual workers that build our bodies from proteins, carbohydrates, and fats. Enzymes have varied applications in the areas of food, feed, textile, leather, pharmaceutical industries and waste management. The global market for industrial and specialty enzymes is estimated at $3.6 billion in revenue for 2000. Fewer than 30 enzymes account for more than 90 % of the industrial enzymes currently in use. The food applications segment has increased 3.5 % from 1997 to 2002 (average growth rate). Major applications are in the manufacture of starch-derived syrups, alcoholic beverages, dairy products and animal feed and also in baked goods, fruit and vegetable processing, protein processing, vegetable oil extraction, *etc*. While the food market for enzymes is relatively mature, use of molecular biology and genetic tools have not only revolutionized the industrial production of many of these enzymes, they are also yielding new applications for them.

Organic acids and food additives, including aroma compounds, vitamins, *etc.* are very significant components of food. Food additives are generally used to improve the quality and maintain the nutritional value of food. They provide texture, consistency and stability to food and maintain or improve sensory properties, such as aroma, taste, and colour. Use of food additives is increasing in view of the demand of the consumers to provide food with specific nutritional requirements. It must be, however, noted that only those additives shown to be safe at the use levels proposed are allowed in food.

Thus, it was a very timely and thoughtful idea to bring out a special issue of the *Food Technology and Biotechnology* on Food Enzymes and Additives. Accordingly, leading international experts were invited to contribute articles on various topics. Furthermore, contributory research articles were also invited. It was indeed heartening to see the overwhelming response from invitees as well as from other authors. All the articles were subjected to peer-review following the standard of the journal and overall 35 manuscripts were accepted for publication, which have been put in two parts of the journal; Part 1 on Enzymes and Organic Acids for Food Application, and Part 2 on Food Additives and Other Products.

Part 1 of the special issue has 21 articles, most of which deal with food enzymes. These include five articles on phytase, inulinase, alpha amylase, protease, and pectinase, providing state-of-art information on their production and application by reputed experts. There is one article dealing with safety issues and regulations of food enzymes. In addition to these, there are three other review articles which deal with production and application of organic acids, *viz.* citric acid, lactic acid and gluconic acid. Apart from these nine invited articles, there are 12 other research papers on invertase, lipase, alpha amylase, pectinase, protease, pullulanase, gamma linoleic acid and lactic acid.

Part 2 of the special issue has 14 articles, which include nine review articles on production of mushrooms, food grade pigments, oligosaccharides, food aroma compounds, probiotics, vitamins, and food grade yeasts. There is one article on healthy polysaccharides and another one on food enzyme production in solid-state fermentation. All of these articles provide state-of-art information on the topic. Out of the remaining five articles (which are contributory research papers), two deal with the production of soy cheese and bacteriocin. Other three are on miscellaneous topics.

We would like to take this opportunity to thank all the reviewers for evaluating the manuscripts sent to them and returning the reviews in a timely manner. We are thankful to all the international experts who readily agreed to contribute the articles on the topic of their expertise and submitted the manuscript again in a time-bound manner. We also thank to the contributory authors for their interest in publishing their work in this special issue. We are indeed thankful to Professor Mildner, Editor-in-Chief of the journal of *Food Technology and Biotechnology*, for conceiving the idea to bring out the special issue and inviting us to act as Guest Editors. Our very special thanks and high appreciation for Zrinka and Iva and the entire editorial team of the journal for their strong efforts in keeping constant touch leaving no communication gap between editorial office and us and in bringing out this issue in impressive manner.

Guest Editors:

Prof. Dr. Ashok Pandey

Prof. Dr. Christian Larroche

Prof. Dr. Carlos Ricardo Soccol