

# Preface

The main goal of this book is to provide the reader with the recent developments in biotechnology for its application in the meat processing chain. To achieve this goal, the book is divided into four sections. The first part deals with the production systems towards an improved meat quality through the use of modern biotechnology applied to farm animals. This section includes chapters dealing with transgenic farm animals, genetic control of quality traits and traceability based on DNA. The second part is focused on the recent biotechnological developments in starter cultures to improve meat fermentation. The chapters cover the molecular identification of microorganisms, its characterization and the genetics of lactic acid bacteria, yeasts and molds. The third part presents the current approaches employed to improve the quality and nutritional properties of meat. This section includes chapters on flavor generation, probiotics and bioactive compounds. The final part deals with latest advances for the protection against foodborne pathogens and other recent trends in the field. The 9 chapters of this section cover biotechnological-based methods for the control of spoilage and detection of pathogens, GMOs, veterinary drugs, as well as recent developments in bioprotective cultures, bacteriocins, smart packaging and safety and regulatory aspects.

This book, which is written by distinguished international contributors with solid experience and reputation, brings together all the advances in such varied and different biotechnological topics related with meat. I thank the production team at Springer and wish to express my gratitude to Susan Safren (Editor) and David Parsons (Editorial assistant) for their kind assistance in this book.

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Editor



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