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Nota di contenuto	CONTENTS; FOREWORD ; PREFACE ; List of Contributors ; Introductory Overview of Biotechnological Additives ; INTRODUCTION; HISTORICAL ASPECTS OF BIOTECHNOLOGY FOR MODERN DEVELOPMENTS; Enzymes; Genetic Engineering; MAIN BIOTECHNOLOGICAL INGREDIENTS: FROM RESEARCH TO INDUSTRY; CONCLUDING REMARKS; CONFLICT OF INTEREST; ACKNOWLEDGMENTS; REFERENCES; Alternative Sweeteners: Current Scenario and Future Innovations for Value Addition ; INTRODUCTION; NATURAL SWEETENERS; GLOBAL SWEETENERS MARKET; USES OF SWEETENERS IN FOOD INDUSTRY; NATURAL SWEETENERS OF PLANT ORIGIN; Non-Saccharide Natural Sweeteners ECONOMICAL IMPORTANCE AND COMMERCIAL RELEVANCE OF BIOTECHNOLOGICALLY PRODUCED SWEETENERS NATURAL SACCHARIDE-DERIVED SWEETENERS; Polyols; Mannitol; Sorbitol; Xylitol; Erythritol; Isomalt; Maltitol; Industrial Relevance; RESEARCH ADVANCES IN PLANT DERIVED NON-SACCHARIDE SWEETENERS; IMPENDING AREAS OF RESEARCH; THE FUTURE OF INNOVATION IN ALTERNATIVE SWEETENERS ; CONFLICT OF INTEREST; ACKNOWLEDGEMENTS; REFERENCES; Biotechnological Production of Amino Acids and Nucleotides ; INTRODUCTION; GLUTAMIC ACID, ITS SALTS AND 5'-NUCLEOTIDES AS FLAVOR ENHANCERS ; FOOD AND FEED USES OF

## AMINO ACIDS

Feed use of amino acids  
Food Use of Amino Acids; ECONOMIC IMPORTANCE AND COMMERCIAL RELEVANCE OF MICROBIAL AMINO ACIDS AND NUCLEOTIDES; MICROBIAL PRODUCTION OF L-GLUTAMATE AND OTHER L-GLUTAMATE FAMILY AMINO ACIDS; Glutamate Production; Eliciting Glutamate Production by *C. glutamicum*; De-Bottlenecking Glutamate Biosynthesis; Precursor Supply for Glutamate Production; Cofactor Supply for Glutamate Production; Glutamate Export; Avoidance of Glutamate Re-import and Degradation; L-Glutamine Production; De-bottlenecking Glutamine Biosynthesis; Avoidance of Glutamine Degradation  
Precursor Supply for Glutamine Production and Avoiding by-Products  
Export and Avoidance of Re-import; L-Arginine Production; De-bottlenecking L-Arginine Biosynthesis; Avoidance of By-products of L-Arginine Production; Precursor Supply for L-Arginine Production; Cofactor Supply for L-Arginine Production; L-Arginine Export; Avoidance of L-Arginine Re-import and Degradation; Industrial Production Strains and Processes, and Improvement of the Fermentation Quality of Strains; L-Proline Production; L-Proline Producing Strains; MICROBIAL PRODUCTION OF L-LYSINE AND OTHER ASPARTATE FAMILY AMINO ACIDS  
L-Lysine Production  
L-lysine Biosynthesis; Strain Development for Microbial Production of L-lysine; De-bottlenecking and L-lysine Export ; Reduction of By-products and Competing Pathways of L-lysine Production; Precursor Supply for L-lysine Production and Redirection of Carbon Metabolism; NADPH Supply for L-lysine Production; Strains and Industrial Processes of L-lysine Production; L-Threonine Production; L-Threonine Biosynthesis; Strain Construction Strategies for L-threonine Production; Transport Engineering for L-threonine Production; Alternative Substrates for L-threonine Production  
Enzyme Proximity for L-threonine Production

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