Contents

Genetic loois	
Development of regulatable expression systems for cloned genes in cold-adapted bacteria E. Remaut et al	1
Enzyme Biotechnology	
Biotechnology of enzymes from cold-adapted microorganisms S. Ohgiya et al.	17
Low temperature organic phase biocatalysts using cold-adapted enzymes R. K. Owusu Apenten	25
K. K. Owusu Apenten	35
Lipases A and B from the yeast Candida antarctica T. B. Nielsen et al	49
Peptide hydrolases from antarctic krill – an important new tool with promising medical potential L. Hellgren et al	63
Heat-labile uracil-DNA glycosilase from a psychrophilic marine bacterium H. Sobek	75
Health Biotechnology	
Principle of cold-adaptation in the derivation of live-attenuated respiratory virus vaccines H. F. Maassab	87
Food Biotechnology	
Cold-adapted microorganisms for use in food biotechnology H. Okuyama et al.	101
Low temperature fermentation of wine and beer by cold-adapted and immobilized yeast cells	
M. Kanellaki and A. A. Koutinas	117

Agricultural Biotechnology
Cold-resistant plant development by genetic manipulation of membrane lipids O. Ishizaki-Nishizawa
The potential use of cold-adapted rhizobia to improve symbiotic nitrogen fixation in legumes cultivated in temperate regions
D. Prévost et al
Plant protection by cold-adapted fungi P. T. W. Wong and J. H. McBeath
Snow mold-crop-environment interactions D. A. Gaudet and A. Laroche
Environmental Biotechnology
Simulation analysis of operation conditions for a municipal wastewater treatment plant at low temperatures N. Funamizu and T. Takakuwa
The potentials of submesophilic and/or psychrophilic anaerobic treatment of low strength wastewaters G. Lettinga et al
Effectiveness of wastewater lagoons in cold regions D. W. Smith and K. Emde
Low temperature anaerobic treatment of swine manure D. I. Massé
Biodegradation of organic pollutants at low temperatures R. Margesin and F. Schinner
Bio-Mining
Biohydrometallurgical processes and temperature G. Rossi
Multidisciplinary Applications
Applications of biological ice nucleators R. Lundheim and K. E. Zachariassen
Applications of antifreeze proteins K. E. Zachariassen and R. Lundheim
Subject index