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Nota di contenuto	EXTREMOPHILES; Contents; Contributors; Introduction; 1 MOLECULAR EVOLUTION OF EXTREMOPHILES; 1.1 Introduction; 1.2 Molecular Evolution of Thermophiles; 1.2.1 Habitat; 1.2.2 Cellular Organization; 1.2.3 Genome; 1.2.4 Proteome; 1.3 Molecular Evolution of Psychrophiles; 1.3.1 Habitat; 1.3.2 Cellular Organization; 1.3.3 Genome; 1.3.4 Proteome; 1.4 Molecular Evolution of Halophiles; 1.4.1 Habitat; 1.4.2 Cellular Organization; 1.4.3 Genome; 1.4.4 Proteome; 1.5 Molecular Evolution of Alkaliphiles; 1.5.1 Habitat; 1.5.2 Cellular Organization; 1.5.3 Genome; 1.5.4 Proteome 1.6 Molecular Evolution of Acidophiles1.6.1 Habitat; 1.6.2 Cellular Organization; 1.6.3 Genome; 1.6.4 Proteome; 1.7 Molecular Evolution of Barophiles; 1.7.1 Habitat; 1.7.2 Cellular Organization; 1.7.3 Genome; 1.7.4 Proteome; 1.8 Engineering Extremophiles; 1.8.1 Microbiology; 1.8.2 Molecular Biology; 1.8.3 Bioinformatics; 1.9 Case Studies; 1.9.1 Biofuel Production; 1.9.2 Bioremediation; 1.9.3 Pesticide

Biodegradation; 1.9.4 Escherichia coli: A Candidate Extremophile; 1.9.5 Oil-Spill-Cleaning Bacteria; 1.9.6 Potential Applications and Benefits  
 1.10 Implications of Engineered Extremophiles on Ecology, Environment, and Health  
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 4.6 Soluble Expression of Recombinant Proteins

## Sommario/riassunto

Explores the utility and potential of extremophiles in sustainability and biotechnology Many extremophilic bio-products are already used as life-saving drugs. Until recently, however, the difficulty of working with these microbes has discouraged efforts to develop extremophilic microbes as potential drug reservoirs of the future. Recent technological advances have opened the door to exploring these organisms anew as sources of products that might prove useful in clinical and environmental biotechnology and drug development. Extremophiles features outstanding article