

Preface

Patagonia is a vast and heterogeneous territory that extends along the southernmost part of the Americas (approximately from 40°S to 56°S). This region occupies part of Chilean and Argentinean territories. Argentinean Patagonia, in which this book is focused, extends east of the Andes and south of the Colorado River, having an area of about 790,000 km². This region includes large extents of arid plains, forests, mountains and glaciers, fertile valleys, and wide seashores. These ecosystems offer a great diversity of selective environments scarcely explored that are suitable for the bioprospection of biotechnologically relevant microorganisms.

The aim of *Biology and Biotechnology of Patagonian Microorganisms* is to provide readers from the academic and biotechnological communities with a concise and clearly illustrated treatment of outstanding topics of Patagonian microbiology and biotechnology. The investigations included in this book represent interesting examples of the microbial world as a highly significant source of valuable technology that can modify and boost regional economy and progress.

The book is subdivided into three parts, preceded by a geo-historical introduction to Patagonia. The first part introduces the reader to the field of environmental microbiology, including insights into microbial communities from hydrocarbon- and heavy metal-polluted sites and lands degraded by natural events and human economic activities. The second part gives an overview of the biotechnological potential of Patagonian microorganisms. Bioprospection of antimicrobials, enzymes, and other bioactive compounds produced by extremophilic microorganisms is discussed. Important aspects of Patagonian microorganism application in biomining, winery, brewing, and aquaculture are also addressed. Moreover, included is a discussion on antibiotic-resistant isolates. The third part of this book describes Patagonian yeasts with biotechnological potential, particularly their application in industrial fermentations (e.g., wine and beer industry) and food biopreservation.

The editors wish to thank all the authors for their willingness to participate in this book and for their excellent contributions. We also acknowledge the Associate Editor João Victor Pildervasser (Life Sciences, Springer-SBM), who invited us to be editors of this book, and the Springer International Publishing AG staff for their outstanding assistance and guidance. Finally, we extend our gratitude to the funding sources Ministerio de Educación y Deportes, Ministerio de Ciencia, Tecnología e Innovación Productiva and CONICET, Argentina.

Argentina
Argentina
La Plata, Argentina

Nelda Lila Olivera
Diego Libkind
Edgardo Donati

Biology and Biotechnology of Patagonian
Microorganisms

Olivera, N.L.; Libkind, D.; Donati, E. (Eds.)

2016, XVII, 360 p. 73 illus., 37 illus. in color., Hardcover

ISBN: 978-3-319-42799-7