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PREFACE

Preface

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Just over 20 years ago Stephen Jay Gould observed that "Bacteria dwell in virtually every spot that can sustain any form of life" and went on to say "we have underestimated their global number because we, as members of a kingdom far more restricted in potential habitation, never appreciated the full range of places that might be searched". Given this context it is perhaps not surprising that the extreme environmental conditions that prevail in much of the Atacama Desert were seen to endorse the popular view that this hyper-arid biome was virtually devoid of life. However, in the intervening years it has been conclusively shown that the Atacama Desert is "teeming with life, much of it microbial." This dramatic turn of events is due to the collective efforts of members of the scientific community within and out with Chile. In this special issue of *Antonie van Leeuwenhoek* we take stock of the progress that has been achieved in recent years by addressing three interrelated themes: (a) the physical end chemical environmental conditions that prevail in much of the Desert and the adjacent Altiplano and Central Andes; (b) the microbial diversity in selected habitats, including pioneering studies designed to understand the functional ecology of selected taxa and ecosystems and (c) the natural product chemistry of Atacama actinobacteria, including the application of systems biology and metabolic engineering techniques designed to define and moderate product biosynthesis. In so doing we hope to inspire the next generation of scientists to study one of the most fascinating biomes on the planet.

The Guest Editors are indebted to the contributors, all of whom have written state-of-the-art despite having many calls upon their time. We are also grateful to colleagues for help at various stages of the endeavour, notably those who refereed articles.

The Atacama region comprises an increasingly fragile environment and those of us who have had the privilege of exploring and collecting there are greatly indebted to indigenous peoples, National Reserve and ALMA staff for permissions and assistance in the field.

Our final words of thanks go to Editor-in-Chief Iain Sutcliffe, and to Adittya Iyer and other staff at Springer for seeing this Special Issue through from inception to press.

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