

Preface

In the 21st century, I think the heroes will be the people who will improve the quality of life, fight poverty and introduce more sustainability.

—Bertrand Piccard, solar airplane ‘Solar Impulse’ pilot

With finite resources and the pressure of the growing global population, we need a plan to stimulate action in areas of critical importance for humanity and the planet. In September 2015, the United Nations adopted an aspirational set of 17 Sustainable Development Goals with 169 targets to tackle these challenges; the ‘Transforming Our World: the 2030 Agenda for Sustainable Development’ (also known as the Sustainable Development Goals, SDG) was launched. As fungal biotechnologists, our research has direct applications that contribute towards many of these goals.

Fungi are an extremely diverse, versatile and robust group of organisms with complex interactions within the ecosystem. For instance, whilst they can cause devastating and costly damage to their hosts as pathogens, their host specificity can be harnessed to provide a sustainable solution for biological pest control. This book aims to provide a timely examination of fungal biotechnology and its potential applications. The collection presented herein includes outstanding research reports and reviews drawing on international expertise to elucidate key cross-disciplinary advances in environmental fungal biotechnology.

Without doubt fungi offer numerous applications in sustainable environmental biotechnology, however, many of the processes still have not found industrial applications or received the attention they deserve. It is clear that despite the advances, more research is required to realise the potential of sustainable fungal environmental biotechnology. I sincerely hope this book contributes to the body of knowledge of sustainable biotechnological applications of fungi and serves as a useful reference for any ‘hero’ who works with this fascinating group of organisms to improve the welfare of our planet and mankind.

London, UK

Diane Purchase

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