

## Preface

Pathogenic microorganisms can cause crop diseases in various plants, leading to a decline in the quality and yield of crops. To more sustainably mitigate the impact of crop diseases on plant health and productivity, there is a need for more safe and eco-friendly strategies as compared to chemical prevention. As an alternative, biocontrol has received increasing attention in pathogen management. The use of microorganisms or their metabolites to prevent plant diseases is eco-friendly, and usually safe for food products. In recent years, quorum quenching based on quorum sensing has been adopted as a potential biocontrol approach for controlling plant diseases due to its relationship with pathogenic multi-antibiotic-resistant microorganisms. Quorum quenching is a novel, promising strategy that opens up a new perspective for controlling quorum sensing-mediated microbial pathogens. Quorum quenching is performed by interfering with population-sensing systems, such as by the inhibition of signal synthesis, catalysis of degrading enzymes, and modification of signals. This book aims to collect research dealing with the biocontrol of plant diseases via quorum quenching that has relevance in phytopathology, microbiology, biochemistry, molecular biology, genetics, chemistry, and all omics-based sciences. Reaching a great combination of the recent studies on quorum quenching and its use for biocontrol of plant diseases, this book is one of the most practical and up-to-date references available on the subject. This allows the knowledge of quorum quenching accessible to a wider range of audiences, and also

introduce new thoughts and new methods for researchers, practitioners in dealing with biocontrol or related issues. The fundamental concepts, experimental process, statistical analyses, and comprehensive discussions are covered in detail, providing the readers a systematic understanding of the field.