

Foreword

A multitude of fungi and funguslike organisms cause diseases in plants, resulting in significant crop losses and damage to natural ecosystems. Nevertheless, plants can withstand attacks by most fungal pathogens, resulting in one of the central tenets of plant pathology: Most plants are resistant to most plant pathogens. This book addresses in seven highly readable chapters the topic of how plants fend off fungal pathogens. Zamir Punja recruited an impressive team of experts on the subject, resulting in a well-balanced account of the molecular, cellular, and physiological aspects of plant resistance to fungal and oomycete pathogens. This book fulfills the need for a sound overview of the field and is an excellent springboard to the literature. It not only will serve as a beneficial reference to those familiar with the subject but will be equally useful to students and newcomers to the field. Many will appreciate the short historical perspectives included in most chapters, and a good balance between basic and applied aspects of fungal disease resistance research will make the book attractive to a wide range of readers.

This is a timely book. Despite the impressive advances made in understanding fungal-plant interactions, important scientific, social, and commercial challenges remain to be addressed before the humane hope of bringing genetic engineering of fungal resistance to the field can be achieved. The future looks bright though. The pace of basic discovery is accelerating mainly due to the application of novel genome technologies to this field. No one has grasped better the critical importance of a solid and broad knowledge base in the study of fungal pathology than E. C. Large, whose 1940 classic book *The Advent of the Fungi* was reprinted recently with great success (my own copy is a worn-out 1962 Dover edition I snatched years ago from a Berkeley bookstore). Large wrote:

The best that man could do at any time to defend the health of the hypertrophic agricultural plants that in his cunning he had

sought ought or made, was to apply to the work of rearing them the *whole* of his experience and the whole of his science. (p. 439)

Reading through the diverse chapters of the present book provides a clear view of the modern multifaceted investigations of fungal-plant interactions that expand the tradition defined by Large. It also reinforces a sense of excitement about the years to come and the discoveries to be made.

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