against rust pathogens. Park and Wellings describe the mechanisms that are responsible for genetic diversity in rust fungi. The single-step mutation, somatic hybridization and periodic introduction of exotic isolates are the major ways that have led to genetic diversity. The mechanisms involved in somatic hybridization have been discussed in detail. The authors have concluded the chapter by discussing resistance breeding in controlling rust. Hansen *et al.* point out that the number of described *Phytopthera* spp. has increased rapidly in the past decade because of exploration of new habitats such as forest ecosystem, in which *Phytopthera* spp. are widespread and diverse.

Stuart *et al.* have illustrated well the biology of hessian fly (HF)–wheat interaction, a model plant–parasitic insect pathosystem. In this chapter, the biology of HF as well as information on its genome have been highlighted. Several putative effector proteins are expressed in the salivary gland and these are recognized by wheat in the gene-for-gene manner, in which wheat *R*-genes provide resistance against HF. Overall, these indicate evidence for the presence of effector triggered immunity against HF in wheat. The role of nematode peptides and small molecules in plant pathogenesis has been reviewed by Mitchum *et al.* Nematodes are able to secrete mimics of plant peptide hormones, a kind of sophisticated strategy promoting nematode parasitism. Nematode genome encodes a number of secreted peptide family members, some of which are essential for parasitism. The best-studied class of nematode-secreted peptides is the CLE-like class, which is the main focus of this chapter. The authors have emphasized on the fact that this information would be useful in generating new strategies to achieve resistance against nematodes.

Plants have the ability to recognize and provide appropriate responses in the form of elaborate signalling events, against either pathogens or symbionts. This is achieved via cell surface plant pattern recognition receptors (PRRs) comprising receptor-like kinases (RLKs) and receptor-like proteins (RLPs). Antolin-Llovera *et al.* provide a comprehensive review about RLK-mediated signal transduction pathways in plant–microbe interactions. Plant PRRs-typically contain either leucine-rich repeats or lysine motif domain, through which they recognize various microbes and in turn induce immune or symbiotic responses. Components participating in the signalling pathways of RLKs leading to symbiotic or defensive responses are largely distinct. Similarity in early signalling events and differences in late signalling events lead to either defence or symbiosis. A biotechnological transfer of PRRs into economically important crops has been shown providing broad spectrum disease resistance. In a related area, Mengiste has given detailed account on plant immune responses against necrotrophs and has elaborated how these responses are different when plants encounter biotrophs.

Few chapters in this volume are dedicated to plant pathogen monitoring and disease control. Diagnosis of plant diseases as well as rapid detection and identification of plant pathogens are essential steps towards controlling plant diseases. De Boer and Lopez have highlighted the technology advancement and plant pathogen monitoring systems, while Mazzola and Manici describe the etiology of apple replant disease and its management. Various approaches that may suppress this disease in effective ways have been discussed. Hadar and Popadopoulou have reviewed the mechanism involved in plant disease reduction using compost. Suppressive compost provides a kind of environment in which plant disease is reduced. Plant disease suppression takes place because of action of antagonistic microbial consortia which naturally recolonize the compost.

Other topics included in this volume are: variation and selection of quantitative traits of pathogenesis in plant pathogens; landscape epidemiology of emerging infectious diseases in ecosystem; natural functions of antibiotics produced by beneficial and plant pathogenic bacteria and their diversification, and use of system biology in the study of plant defence compounds. Overall, this volume is highly informative and is a must read for all those interested in molecular plant pathology, microbiology, molecular biology and applied plant pathology.

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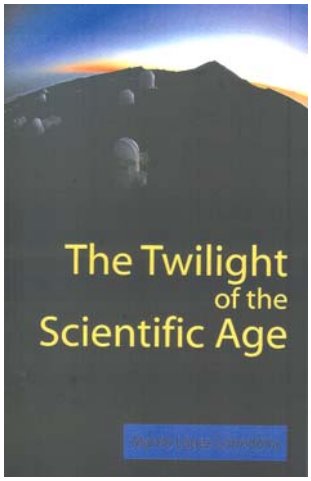

The Twilight of the Scientific Age. M. L. Corredoira. Brown Walker Press, Boca Raton, Florida, USA. 2013. 208 pp. Price not mentioned.

The basic premise of the book under review is wrong. Science is well and kicking and all the modern-day inventions are a direct result of scientific discoveries that are happening almost every day. As long as human beings are on this planet, science will continue to grow, because it is driven by curiosity. And human beings are inherently curious!

The book contains many clichés, half truths and unsupported statements, that one does not know where to start. For example, in the first paragraph itself, the author writes that the central theme of the book is, 'Our era of science is declining because our society is becoming saturated with knowledge which does not offer people any sense of their lives.' How the author came to such a conclusion is anybody's guess. The book is full of such half-baked ideas which are without any foundation.

In my opinion a book, especially one based on the author's belief rather than hard facts does not find a place in the library of scientists.

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