against rust pathogens. Park and Wel- 
lings 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 mecha-
nisms 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 Phytophthera spp. has in-
creased rapidly in the past decade because 
of exploration of new habitats such as 
forest ecosystem, in which Phytophthera 
spp. are widespread and diverse.

Stuart et al. have illustrated well the 
biology of hessian fly (HF)–wheat inter-
action, a model plant–parasitic insect 
pathosystem. In this chapter, the biology of 
HF as well as information on its genome have been highlighted. Several 
potitive effector proteins are expressed in 
the salivary gland and these are recog-
nized 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 pathogene-
sis has been reviewed by Mitchum et al.

Nematodes are able to secrete mimics of 
plant peptide hormones, a kind of sophis-
ticated strategy promoting nematode 
parasitism. Nematode genome encodes a 
number of secreted peptide family mem-
bers, 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). Anto-
lin-Llobera et al. provide a comprehen-
sive review about RLK-mediated signal 
transduction pathways in plant–microbe 
interactions. Plant PRRs-typically con-
tain either leucine-rich repeats or lysine 
motif domain, through which they recog-
nize various microbes and in turn induce 
immune or symbiotic responses. Compo-
ents participating in the signalling path-
ways 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 bio-
technological transfer of PRRs into eco-
nomically 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 dedi-
cated to plant pathogen monitoring and 
disease control. Diagnosis of plant dis-
eases as well as rapid detection and iden-
tification 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 etio-
logy 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 mecha-
nism 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 in-
fected diseases in ecosystem; natural 
functions of antibiotics produced by 
beneficial and plant pathogenic bacteria 
and their diversification, and use of sys-
tem 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 bio-
logy and applied plant pathology.

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The Twilight of the Scientific Age. 
M. L. Corredoira. Brown Walker Press, 
Price not mentioned.

The basic premise of the book under re-
view is wrong. Science is well and kick-
ing 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, be-
cause it is driven by curiosity. And hu-
man 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 declin-
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 conclu-
sion is anybody’s guess. The book is full 
of such half-baked ideas which are with-
out 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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