

1. Record Nr.	UNINA9910139125603321
Titolo	Insect-plant interactions / / edited by Claudia Voelckel, Georg Jander ; contributors Gustavo Bonaventure [and twenty six others]
Pubbl/distr/stampa	Chichester, England : , : Wiley Blackwell, , 2014 ©2014
ISBN	1-118-82978-6 1-118-82981-6
Descrizione fisica	1 online resource (437 p.)
Collana	Annual Plant Reviews ; ; Volume 47
Disciplina	577.85
Soggetti	Insect-plant relationships Entomology Plant cells and tissues
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Annual Plant Reviews Volume 47; Contents; List of Contributors; Preface; References; 1 Plants Recognize Herbivorous Insects by Complex Signalling Networks; 1.1 Introduction; 1.1.1 The feeding behaviour of insects is an important determinant of the plants defence response; 1.1.2 insect-associated elicitors are specific elicitors of plant responses to insect feeding or egg deposition; 1.2 Resistance (R) genes in the perception of piercing-sucking insects; 1.3 Modification of elicitors by plant enzymes 1.4 Changes in Vm, Ca2+ influx and reactive oxygen intermediate generation are early cellular events induced in plants by insect feeding 1.5 Shared signal transduction components in microbe and insect elicitor perception; 1.6 Regulation of phytohormone accumulation and signalling during insect feeding; 1.6.1 Jasmonic acid; 1.6.2 Ethylene; 1.6.3 Salicylic acid; 1.7 Interconnection of the phytohormone system in plants; 1.8 Conclusions and perspectives; Acknowledgements; References; 2 Herbivore Oral Secretions are the First Line of Protection Against Plant-Induced Defences; 2.1 Introduction 2.2 Origin of herbivore secretions and initiation of contact with the host

plant2.2.1 Piercing-sucking herbivores; 2.2.2 Chewing herbivores; 2.3 How do herbivores deliver effectors to the host plant?; 2.4 Examples of HAMPs and effectors; 2.4.1 Piercing-sucking herbivores; 2.4.2 Chewing herbivores; 2.5 Effectors and host targets; 2.6 Effectors and the host plant diet; 2.7 Metagenomes: The interkingdom crossroads of the host plant, herbivore, and microbiome; Acknowledgements; References; 3 Insect Detoxification and Sequestration Strategies; 3.1 Introduction 3.2 Diverse roles of insect cytochromes P4503.2.1 Furanocoumarin detoxification by *Papilio* spp. and others; 3.2.2 Monoterpene detoxification and pheromone biosynthesis in pine bark beetles; 3.2.3 Gossypol and CYP6AE14 in *Helicoverpa armigera*; 3.2.4 Cactophilic *Drosophila* and alkaloid detoxification; 3.3 Cyanogenic glucosides; 3.4 Glucosinolates; 3.5 O-glucosides and leaf beetles; 3.6 Pyrrolizidine alkaloids; 3.7 Glycosylation of host plant compounds; 3.8 Non-protein amino acids; 3.9 Iridoid glucosides; 3.10 Cardenolides; 3.11 Conclusions; Acknowledgements; References

4 Plant Semiochemicals - Perception and Behavioural Responses By Insects4.1 Introduction; 4.2 A semiochemicals route to the neuron; 4.2.1 Surfing the surface - A matter of chemo-physical interaction; 4.2.2 Odorant binding proteins, chemosensory proteins; 4.2.3 Eliciting signals - Odorant receptors and sensory neuron responses to odorants; 4.2.4 The clean-up company - Odorant-degrading enzymes; 4.2.5 Odour perception - Summary; 4.3 Behavioural responses of insects to plant volatiles; 4.3.1 Biotic habitat factors influencing plant odour dispersal and insect orientation

4.3.2 Biotic factors affecting plant odour emission

Sommario/riassunto

This latest volume in Wiley Blackwell's prestigious Annual Plant Reviews brings together articles that describe the biochemical, genetic, and ecological aspects of plant interactions with insect herbivores.. The biochemistry section of this outstanding volume includes reviews highlighting significant findings in the area of plant signalling cascades, recognition of herbivore-associated molecular patterns, sequestration of plant defensive metabolites and perception of plant semiochemicals by insects. Chapters in the genetics section are focused on genetic mapping of herbivore resistance traits.
