

Contents

<i>Dedication</i>	v
<i>Preface</i>	vii
1. Mechanisms of Polyphenism in Insects <i>Stephen M. Rogers</i>	1
2. Toxins, Defensive Compounds and Drugs from Insects <i>Konrad Dettner</i>	39
3. Insect Bioluminescence in the Post-Molecular Biology Era <i>Yuichi Oba</i>	94
4. A Glance on the Role of miRNAs in Insect Life <i>Sassan Asgari and Mazhar Hussain</i>	121
5. Advances in Insect Physiology and Endocrinology Through Genomics and Peptidomics <i>Ian Orchard and Angela B. Lange</i>	160
6. Neuropeptide Signaling and RNA Interference <i>Klaus H. Hoffmann, Sandy Weidlich and Franziska Wende</i>	188
7. Insect Photoperiodism <i>Shin G. Goto and Hideharu Numata</i>	217
8. Insects in Winter: Metabolism and Regulation of Cold Hardiness <i>Kenneth B. Storey and Janet M. Storey</i>	245
9. Evolutionary Ecology of Insect Immunity <i>Gerrit Joop and Andreas Vilcinskas</i>	271
10. The Coleopteran Gut and Targets for Pest Control <i>Brenda Oppert, Asieh Rasoolizadeh and Dominique Michaud</i>	291

11. Trypsin Modulating Oostatic Factor (TMOF) and Insect Biotechnology	318
<i>Dov Borovsky</i>	
12. RNAi Based Functional Analysis of Biosynthetic Enzymes and Transport Proteins Involved in the Chemical Defense of Juvenile Leaf Beetles	350
<i>Antje Burse and Wilhelm Boland</i>	
13. Silks from Insects—From Natural Diversity to Applications	376
<i>M. Neuenfeldt and T. Scheibel</i>	
<i>Insect Index</i>	401
<i>Subject Index</i>	405
<i>Color Plate Section</i>	411