

Contents

<i>List of contributors</i>	page x
<i>Preface</i>	xv
<i>Table of three- and single-letter abbreviations for amino acids</i>	xvii
Part I: Moulting, metamorphosis and reproduction	1
Structures, functions and occurrences of insect allatostatic peptides ROBERT J. WEAVER, JOHN P. EDWARDS, WILLIAM G. BENDENA and STEPHEN S. TOBE	3
Neuropeptides inhibiting growth and reproduction in crustaceans SIMON G. WEBSTER	33
Molecular, cytological and physiological aspects of the crustacean hyperglycemic hormone family FRANÇOIS VAN HERP	53
Endocrine effectors in insect vitellogenesis XAVIER BELLÉS	71
Endocrine regulation of development and reproduction in acarines LEE O. LOMAS and HUW H. REES	91

viii *Contents*

- Ecdysteroid synthesis in the crustacean Y-organ: role of cyclic nucleotides and Ca²⁺** 125
DIETRICH SEDLMEIER
and ALEXANDRA SEINSCHÉ
- Regulation of steroidogenesis: role of transaldolase in crab moulting glands** 138
FABIENNE LACHAISE and GHISLAINE SOMMÉ
- Part II: Control of intermediary metabolism, and ion and water balance** 147
- New perspectives on the structures, assays and actions of locust adipokinetic hormones** 149
MICHAEL J. LEE
and GRAHAM J. GOLDSWORTHY
- Signal transduction of adipokinetic hormone** 172
WIL J. A. VAN MARREWIJK
and DICK J. VAN DER HORST
- The regulation of primary urine production in insects** 189
GEOFFREY M. COAST
- Locust ion transport peptide (ITP): function, structure, cDNA and expression** 210
JOHN E. PHILLIPS, JOAN MEREDITH,
NIEL AUDSLEY, MARK RING,
ANDRIS MACINS, HUGH BROCK,
DAVID THEILMANN and DWIGHT LITTLEFORD
- Part III: ‘Myotropic and myoinhibitory’ arthropod neuropeptides: structures and functions?** 227

<i>Contents</i>	ix
The dipteran Leu-callatostatins: structural and functional diversity in an insect neuroendocrine peptide family	229
HANNE DUVE, ALAN THORPE, ANDERS H. JOHNSEN, JOSÉ-LUIS MAESTRO, ALAN G. SCOTT and PETER D. EAST	
An insect peptide family in search of functions: the tachykinin-related peptides	248
DICK R. NÄSSEL, C. TOMAS LUNDQUIST, J. ERIC MUREN and ÅSA M.E. WINTHER	
The distribution, biological activity, and pharmacology of SchistoFLRFamide and related peptides in insects	278
IAN ORCHARD and ANGELA B. LANGE	
Conserved crustacean cardioactive peptide (CCAP) neuronal networks and functions in arthropod evolution	302
HEINRICH DIRCKSEN	
Control of the insect oviduct: the role of the neuropeptide CCAP in the tobacco hornworm, <i>Manduca sexta</i>	334
ANNA K. MARSHALL and STUART E. REYNOLDS	
Part IV: Peptidases, peptide and pseudopeptide mimetics: towards new strategies of insect pest control?	355
Insect angiotensin-converting enzyme: comparative biochemistry and evolution	357
R. ELWYN ISAAC, DAVID COATES, TRACY A. WILLIAMS and LILIANE SCHOOFS	
Mimetic analogues of the myotropic/diuretic insect kinin neuropeptide family	379
RONALD J. NACHMAN, G. MARK HOLMAN and GEOFFREY M. COAST	
<i>Index</i>	392