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LIST OF ABBREVIATIONS

AG	Abdominal ganglia
AGPC	Acid guanidinium thiocyanate phenol chloroform
ANOVA	One-way analysis of variance
bHLH-PAS	Basic-helix-loop-helix/Per-Arnt-Sim
Br	Brain
Br-C	Broad-complex
CA	Corpora allatum
$CaCl_2$	Calcium chloride
CDL	Critical day length
CNL	Critical night length
C_T	Cycle threshold
ΔC_T	Delta cycle threshold
cDNA	Complementary deoxyribonucleic acid
COI	Cytochrome C oxidase subunit 1
DBD	Deoxyribonucleic acid-binding domain
DD	Continuous darkness
DH	Diapause hormone
DH-PBAN	Diapause hormone and pheromone biosynthesis activating neuropeptide
DHPC	Diapause hormone and pheromone biosynthesis activating neuropeptide producing neurosecretory cell
DNA	Deoxyribonucleic acid
DW	Distilled water
20E	20-hydroxyecdysone
EcR	Ecdysone receptor
EcRE	Ecdysone response element
FISC	Ftz-F1-interacting steroid receptor coactivator
Ft	Fat body

GCE	Germ-cell express
GCNF	Germ-cell nuclear factor
Inm	Integument
JH	Juvenile hormone
JHA	Juvenile hormone analogue
JHBP	Juvenile hormone binding protein
JHRE	Juvenile hormone response element
KCl	Potassium chloride
Kr-h1	Krüppel homolog 1
LBD	Ligand-binding domain
LL	Continuous light
MET	Methoprene-tolerant
Mt	Malpighian tubules
mRNA	Messenger ribonucleic acid
NaCl	Sodium chloride
OfBr-C	*O. fuscidentalis* broad-complex
OfDH-PBAN	*O. fuscidentalis* diapause hormone and pheromone biosynthesis activating neuropeptide
OfEcR-A	*O. fuscidentalis* ecdysone receptor A
OfEcR-B1	*O. fuscidentalis* ecdysone receptor B1
OfE75A	*O. fuscidentalis* orphan nuclear receptor A
OfE75B	*O. fuscidentalis* orphan nuclear receptor B
OfE75C	*O. fuscidentalis* orphan nuclear receptor C
OfHR3	*O. fuscidentalis* hormone receptor 3
OfMet	*O. fuscidentalis* methoprene-tolerant
OfRpL3	*O. fuscidentalis* ribosomal protein L3
PCR	Polymerase chain reaction
PG	Prothoracic gland
PTTH	Prothoracicotropic hormone
Q-RT-PCR	Quantitative real-time polymerase chain reaction
5’ RACE	5’ rapid amplification of cDNA ends

3’ RACE	3’ rapid amplification of cDNA ends
ROR	Vertebrate retinoid-related orphan receptor
RT-PCR	Reverse transcriptase polymerase chain reaction
SEM	Standard error of mean
SG	Subesophageal ganglion
SGNP	Subesophageal ganglion neuropeptide
SL	Subesophageal ganglion lateral cell
SLb	Subesophageal ganglion labial cell
SMd	Subesophageal ganglion mandibular cell
SMx	Subesophageal ganglion maxillary cell
SRC-1	Steroid receptor coactivator-1
Tai	Taiman
TG	Thoracic ganglia
USP	Ultraspiracle

LIST OF SYMBOLS

bp	base pair
ºC	degree Celsius
g	gram
h	hour
M	molar
mg	milligram
min	minute
ml	millilitre
mM	millimolar
µg	microgram
µl	microlitre
µM	micromolar
nM	nanomolar
s	second

STATEMENTS OF ORIGINALITY

1. A new knowledge in the field of insect physiology is helpful in understanding biological function, evolution, and insect development regulation.

2. The bamboo borer can be promoted as economically important insect.

ข้อความแห่งการริเริ่ม

1) วิทยานิพนธ์นี้ถือว่าเป็นองค์ความรู้ใหม่ทางด้านสรีรวิทยาของแมลงและช่วยให้เข้าใจการทำงานของร่างกาย วิวัฒนาการ และการควบคุมการเจริญเติบโตของแมลง

2) หนอนเยื่อไผ่สามารถนำไปพัฒนาให้เป็นแมลงที่มีความสำคัญทางเศรษฐกิจได้