

Placozoa - Metazoa

Trichoplax adhaerens

>TAPP-1

MEMIIPITMTKRSIQYKQLFTGTLHIFALELVIFSIIIDFOATNKDFNAVLSTACKFNNINYQVGENRKAEDGCN
TCMCLKNGGWGCTRMACOPTGTNNLPRCPFNPDNRICPMMVTTFCRDNCSQCCENSNGCNPNEELLVRRDQCN
NGTKPTRPNGTDTICIFEEKLFRLGETVKQKCNQCKCLGQNKWACTRIACPDPNHPDTTKLCVHNTMLLKQNETK
RKDCNTCKCLGSNRWACTRMFCPPPEGRRDVCIFEGKMFKEETRADDNICRCFGNNRWGCTRKACPPREFTCN
YGGRRFRTGDYVARGCNVCRCTPTGKFMCTRNDCNDRPDTPPKTRKCIILNDREYNISAVTKIDCNYCRCLKGIWA
CTRMACQPTNQTNMLDNVCEKDGRRFFVRGELRREKCNLCRCSNSGRWMCITKMCPPPEFNLSNATVPQCQHKTRTF
FHGEIRKDQCNFCNCTRNETWACSNYSCGYPYSQEGCVHRGRRFNIGHIKKQSCNTCKCLTNGGWGCTRMCCPPN
RPNTTCQMGNEVSRVGETKFLDCNKCTCSSTGKWMCTEKCVCVEEKYKHISITFYLVIPSRFSNLSDVTRVCKF
NNQYFQKGEQIRNSCNLCKCGYTGWACTRMMCNPNYEKVELIGFTNDSPTMTVLMLESLPQCTYQNTTLYLGEV
RKFNCSYSCSRGNETVECMELPCAREESPVCYHMGTTYPTGFIKKDSNCKCKNKYGLWACTAFKCPKQPMATK
LCTHNNEIYRPSEIRMDDCNRCMCLKDGAWGCTRMMCPPRNETTPTCTFRGRTFAAGTIKKQGCNMCKCYTNGEW
NCTTKPCSNPHVKFICEMRGMFLFHGETIRKCNLCTCLPTGNMACTAKDCTENETLSETTCKHGKRLFYEGERS
KQDCNECQCLSNGSWNCTQNTCENKPERKCRMDRTFEVGHMRHRCHRCRCMEGGFWGCRHRPCRHENTTARV
CRHSGLKFNHGENRSLDCNTCICNNGSWACTMKMCPGSEICVHNNEYSHRETRKQDCNTCMCTNGKWACTRMM
CPPKRKSCFHENETFQHGATRQDCNTCKCIDGRWGCTRMMCPPKEEVCQYKDEMFOQGEITKQDCNTCKCIKGR
WACTRMLCPPREGVCEYEDTIYEHNETRKQDCNTCKCITGKWACTRMMCPPKEEREVCTFRDITLYEHGETRKQDC
NTCKCITGKWACTRMMCPPKEEVCQYKDTTFAHGETTKQDCNTCKCIKGRWACTRMLCPPREGVCEYEDTIYEHN
ETRKQDCNTCKCITGKWACTRMMCPPKEEREVCTFRDITLYEHGETRKQDCNTCKCITGKWACTRMMCPPKEEVCQ
YKDTTFAHGETTKQDCNTCKCIKGRWACTRMLCPPREGVCEYEDTIYEHNETRKQDCNTCKCITGKWACTRMMCP
PKEEREVCTYRDTLYEHGETRKQDCNTCKCITGKWACTRMMCPPKEEVCQYKDTTFAHGETTKQDCNTCKCIKGR
WACTRMLCPPREGVCEYEDTIYEHNETRKQDCNTCKCITGKWACTRMMCPPKEEREVCTYRDTLYEHGETRKQDC
NTCKCITGKWACTRMMCPPKEEVCQYKDTTFAHGETTKQDCNTCKCIKGRWACTRMLCPPREGVCEYEDTIYEHN
ETRKQDCNTCKCITGKWACTRMMCPPKEEVCQYKDTTFAHGETTKQDCNTCKCIKGRWACTRMLCPPREGVCEYE
DTIYEHNETRKQDCNTCKCITGKWACTRMMCPPKEEREVCTYRDTLYEHGETRKQDCNTCKCITGKWACTRMMCP
PNPLAPCVYEKKNYNITAVVEKDCQRCICGLFARWYCQKPNCTPTIPRNVTCALGSQQVPTGYKMEEKCRQCTC
MNDGQWKCNVNSECLPKPFQNTLTNGQIIIPHGHVEEKKCEKCKCNDGKYVCTNKPCPLETNTCEYQNKKFPVNT
VKLIGLCHRCCKSPAGNWRCLDLGCNSNNNANNLPNEHIIVRPDSIF

Onychophora -Meatzoa

Epiperipatus sp. - Peripatidae - Onychophora

>ESPP-1

MNSFIKSLCFLCVLGYAASEFECYPGALTFDDEFNRCFCITKNGLLACTLMYCFGVRVSVSEIASAAASLPDPHF
YEAAGNIIIAQMEDYTAAQQLAKTLEKNAGSDTVTRKSEFVSICYLKSGGNLATENLCKEIVYNGFCHIRNCFKH

Crustacea - Arthropoda - Metazoa

Calanus finmarchicus - Calanidae - Calanoida - Maxillipoda - Crustaeca

>CFPP-1

MKTLVLVLSGLVLSAWAAPQVTFGANDEAVPSCGLVNGEEKYVGDTWADDNKCICRETGIATCTKRF CGNIPVIR
NPTESVVS CGLNGEERNVGDTWADDNNCICRETGIATCTKRF CGNIPVLKPGCTDS

>CFPP-2

MKSLFCLSVLIVWASAFPQAENGCLDSLGNTRQEGEKWEEESADM*

Gammarus pulex - Gammaridae - Peracarida - Malacostraca - Crustacea

>GPPP-1

PRPGALESAPVVAVALGGGRGRSADQLSDHMQCRPGSRFRQKCNWCTCSSQGLKLCSSKMKCRPGADMSSEPWC
DAMFKDEENCNWC SCHNGVAAC TLRLCISGGHARALSASPQEPQPNTEAECVEGTSWLDECNRCRCTNGLKIC
TRRMCFSETAVTPEASEPQSDQDRCLPVDSGPCFASFRVFRFNSETNRCEAFLYGGCQ

Litopenaeus vannamei - Penaeidae - Decapoda - Malacostrace - Crustacea

>LVPP-1

MFRMKS^LCV^LLL^LFG^VLV^VAV^VESS^ALL^LGV^VQ^RTV^SLP^PRF^TCA^PGS^RWK^DDN^TCT^CSD^TGI^SAC^TLM^ACF^GDA^QQS^S
SDE^SVC^DEG^SRW^KIDE^CNW^CK^CIR^GSP^AC^SSR^POD^DH^QPL^RVD^GGG^DDI^PPG^GIC^KPG^SAW^KPD^CNW^CT^CQ^DGM^M
SAS^CNL^RAC^LPD^YV^QD^PRE^KVC^ENG^SKW^KLD^CNT^CVC^VDER^AR^CTR^KAC^DVS^RTE^LPP^DAV^CK^PGS^FW^KEGL^QH^V

Homarus americanus - Nephropidae- Decapoda - Malacostraca -Crustacea

>HAPP-1

MKV^MLV^LAA^VLA^SCLA^IPLE^DPV^AGL^SEG^ANC^VPG^SRW^KND^CNW^CSC^TET^GIG^MCT^LMA^CVP^EFN^VEP^EEL^VCE^G
DAR^WK^FDH^CNW^CSC^VNG^TGV^CSK^KICE^QE^CK^GDP^NTS^RWR^VEC^NWC^RCIS^GY^GV^CTR^KGC^PK^VIM^DRL^DNT^NE^CE^V
GT^PEW^KK^DCN^TCN^CV^SGR^AVC^TTK^YC^GAST^DTP^NTT^GIE^VN^QE^ERT^CT

Carcinus maenas - Portunidae - Decapoda - Malacostraca -Crustacea

>CMPP-1

MKG^HLLLL^LLL^LW^VAI^SGV^VCG^LPD^GPD^APE^CEG^QSR^NDR^RWK^DCN^WCS^RDG^KAR^CSR^RLC^AEG^QK^DAE^PPC^EGN^P
AW^KDD^CNS^CRC^VD^GRA^VCT^SK^FCG^QLG^PQ^VET^HT^VEV^QSV^QGE^CENG^SRW^RVE^CNW^CSC^QGG^KSH^CTE^AAC^VNW^N
NES^QAEE^QGI^LE^CHG^ASR^WKK^DCN^WCS^VNG^RGR^CTR^KGC^IPA^ERD^SFH^XL^PEY^AQC^VPG^SRW^LV^DCN^WSC^ADN^N
GLY^SAC^TLM^ACV^P

Petrolisthes cinctipes - Porcellanidae - Decapoda - Malacostraca -Crustacea

>PCPP-1

MK^PTP^VILL^VLM^AVL^GMA^AA^QGS^CVP^GTS^WK^QDN^TCF^CTET^GVG^VCT^LKL^CAT^RGK^RET^PCE^RGS^TWM^DDC^NRC^N
RC^ANG^VGV^CTK^KAC^SV^VL^HD^VAE^AE^AEC^QGEE^GRW^REAC^NWC^RCV^EGK^GV^CTR^RGC^PSD^LT^LFD^GTP^DCE^GTAS^W
KD^NCN^TCH^CSD^GRA^VCT^AKL^CLS^ND^QRI^Q

Pacifastacus leniusculus - Astacidae - Decapoda - Malacostraca -Crustacea

>PLPP-1

MK^ALL^ILV^MTVA^AHG^ASL^EQ^PD^PT^PAS^DLP^DKS^LCA^PGS^RWK^NEC^NWC^SCA^DHG^LAL^CTL^MGC^FPG^YKAA^QGES^V
C^SEG^SRW^KAD^DCN^WCR^ID^GSP^SCT^KRL^CRT^KLAK^GMF^ASQ^TE^TE^CY^GDP^DTN^RW^RIE^CNW^CRC^VNG^KGS^CTR^K
GC^PQ^VING^IGL^ANT^NEC^EGT^PTW^TKG^CNT^CSC^VNG^SAQ^CT^TEE^CDK^LV^QSP^SV^PAV^AFR^SGG^RTG^KCR^PDA^HDD^S
LP^DYG^QCV^PGS^RWK^KDN^WCS^TETA^IGM^CTL^IG^LNY^EPK^PGE^AVC^TDG^SKW^KDD^CNW^CT^CNN^GSA^SCTE^KLC^Q
YK^PDG^SLP^DND^MCV^PGS^RWK^DEC^NWC^EANG^AAP^CTR^MGC^SED^YKP^QGE^AVC^IDG^SRW^KV^DCN^WT^CNN^GSS^A
CTE^KL^CLK^PGG^QCTE^GES^WR^QDC^NMC^SCS^TGL^RIC^SV^KGC^PPT^PT

Ellipura - Arthropoda - Metazoa

Folsomia candida - Isotomidae - Collembola -Ellipura

>FCPP-1

AA^QK^VQ^QVGN^STDL^ETG^STAN^STTT^FI^ISE^VD^SSO^CID^GRT^KP^VDC^NQ^VCA^IGK^WACT^KMS^CIAL^TLRE^KAS^YS^S
GD^TFL^NSV^GTL^KEHAN^IDG^DCME^GEAK^PIG^CNQ^VCH^MNS^WAC^SD^FTC^PST^PAPP^KPET^VQES^CQ^TEED^VK^SK^DC^C
NI^CSC^RRG^VW^VCTEN^DCK^KFG^NRY^FN^PVS^QKH^QDNE^KDQES

Insecta - Arthropoda - Metazoa

Orthoptera

Gryllus bimaculatus - Gryllacrididae - Orthoptera

>GBPP-1

MT^MSA^VLV^LLLMA^VAL^TAA^HH^VPG^HLTDD^LAH^APP^VPEN^KCV^PGT^TWK^LDN^TCH^CTD^SGIS^ICTAL^GLD^NIP^KL^T

Schistocerca gregaria - Acrididae - Orthoptera

>SGPP-1

MK^LLAL^ACA^AFL^LV^VLV^QAE^QECT^PG^QT^KK^QDN^TCN^CT^PTG^VW^ACT^RK^GPP^HK^REV^TCE^PGT^TFK^DK^NT^CRC^C
GSD^GKS^AACT^LKAC^PQ^K

>SGPP-2

MA^KLLA^VFL^VLLIA^ALV^CE^QALACT^PGS^RK^YDG^CNW^CT^CSS^GGA^WICT^LK^YCP^SSG^GGL^TFA

>SGPP-3a

MNTAASVLVLFLLALGPLVDAEKECTPGETKKLDCNTCFCSDSGIWGCTLMGCRITYTLQPAPTPGEEATRVRRSE
GHCTPNNTTFKKDCNTCSNDRDGTAAVCTLKACLSRSKREVSCTPGATYKEGONICRCSRSDGKSGACTRKICPVDS
N>SGPP-4a

MKVTLAIAAAVLVFMATTVDAASECTPGDTKKEDCNTCRCTPTGVWVCTRKGCVTKREVNCTPGATFKNKCNTC
RCGSNGRSASCTLMACPPGSY

>SGPP-5

MKVTPAIAAAMALFVIMATTVAAASGCTPGEKKKEDCNTCTCTATGVWACTRRGCITKREAEESPIVKREAQKCTP
NSTFFKKDCNTCTCNSSGTSIACTQLGCLSRGRQVNCTPGTTFKDKCNTCRCSSNGRSAACTLKACPPGSY

Locusta migratoria - Acrididae - Orthoptera

>LMPP-1

MKFALALCAAVLLVVLVQAEKCTPGQVKQDCNTCTCTPTGVWVCTRKGCQPAKREISCEPGKTFKDKCNTCRC
GADGKSAACTLKACPNQ

>LMPP-2

MKVTLAIAAAALLVVMATTVDAAGECTPGQTKKQDCNTCTCTPTGIWGCTRKACRTTREAEPAIVKRAQQCTP
NKSFFKKDCNTCTCNKDGTAAICTQIACLNRGRQVNCTPGTTFQDRCNTCRCSSNGRSAACTLKACPGFG

>LMPP-3

MNVAVSVLALLLVAVGSAEFEKECTPGETKKLDCNTCFCTKAGIWGCTLMACRTINIELTPGQNATRVRRSEEQ
CTPGTTFFKKDCNTCSGNDGTAAVCTLKACRELTTDQAGSRAARSASHCTPNNTTFQKDCNTCTCNKDGTAAVCTL
KACLKRSTREVSCTPGATYKEDCNICRCSRSDGKSGACTKKSCPVVED

Blattaria

Blatella germanica - Blattellinae - Blattaria

>BGPP-1

MVRLQIVTVTLLAVIATVLADCVPNSTFRQDCNTCHCSADGKTAACQKGCVHLPLPLERSKRETCTPGSTFKRD
CNTCRCSNDGTAACTLKACPPPPQSRRKRETESCVPGSTFKQDCNTCTCSADGRSAACTLKLCLGRQKRETCTP
GTTFKRDCNTCRCSADGQSAACTLKSCLTPGTIQA

Isoptera

Hodotermopsis sjoestedti - Termopsinae - Isoptera

>HSPP-1

MSRFFILVLLVAAAASAYAEISCEPGSVFKKDCNTCRCSDNHAAACTRNICKPSPROKRDTCIPGTNWKQDCNT
CSCTSSGVPACTLKACFNRPPRETPTYCTPGTNWKQDCNTCSCTSSGVPACTLKACFNRPPRETPSAQTCEPGSV
FKKECNTCTCSADGRSACTEKACLPQNKRKRQVQKCVPGTTYKKDCNTCRCSADGQSEACTLKFCVPNPGTSVF
YSEP

Coleoptera

Tribolium castaneum - Tenebrionidae - Coleoptera

>TCPP-1a

MKTLILCCLVLSVLIASVVSEEAECNNGDTKKVDCNSCRCTNGLWSCTKKVCLERKTRNAFSCKPGETFKRDCNS
CTCTLDGKNAVCTLKS CVGPKA

>TCPP-1b

MKTLILCCLVLSVLIASVVSEEAECNNGDTKKVDCNSCRCTNGLWSCTKKVCLERKTRNTVCQPGTTFKKDCNTC
VCNKDGTNAACTLKACL

>TCPP-2a

MNSFVWVLLLVGVAVASASNSDSEVSDPHTEQCKVGDTKFKDCNFCCKTNGAFECTEKKCPDRGKRDDFS
CTPGQTFKKDCNTCTCTPDGKNAVCTLKKCAEAVANATRPN

>TCPP-2b

MNSFVWVLLLVGVAVASASNSDSEVSDPHTEQCKVGDTKFKDCNFCCKTNGAFECTEKKCPDRGKRGVPVAADLK
NTPCAPNDYFKIDCNTCYNIEKTGYLCTENICPLTEPPATDAPPNNATIALNDTVTESTVANFFNTTESISNHS
DTGGGTTPSLNVTL

Dascillus cervinus - Hydrophiloidae -Coleoptera

>DCPP-1

MNILKLITSIFLVILGSKFIDAAEQSCTPGTTWKNDNTCSCGPNGAPFTFKACIGKREAFTPKNVGS DGTSS
ASACEPGTTWKQDCNSCSCLNGSPVCTLKACINLRKREAEQCSQGEQKNDDNTCRC SQGWACTKKKNTKREA
EVCSQGQTKNEDNTCRCANGKWACTKKKCI EKREAEDCSQGQTKNDGNTCRCVQGOWACTRKKNTXRETQXC
IQGDTKQEVCTLVSV

Georissus sp. - Colymbetinae - Coleoptera

>GSPP-1

MKWFVFLFVVVSIIGIALADEVKA KSGERCEQNGLTGKDDC NNCRCVDNKWACSRKLCPPVNRQKREPQRNQOCT
PGSVVKRDCNTCTCTPDGRIGACTLRA CLP

Meladema coriacea - Colymbetinae - Coleoptera

>MCP-1

PGFSCTPGKSFLNSDGNCTCTCAK DGVNAYCTLMACQSHHLDKRQSGDDKNCEPGTIIQRDCNSCNCVPGIGYAC
TKRACIKMPMQIIQKRDVGY

Cicindela campestris - Cicindelidae - Coleoptera

>CCPP-1

AACTYMACPRNKRQAEQCS PGQTKMQDCNSCRCVNGGWACTRKA CPHTLQKRGNN

Pyrocoelia rufa - Lampyridae - Coleoptera

>PRPP-1

ARGQTEATICAPLSSFKIDDDCQ SEDGTQYSCQVGVC GSAVYLNKNAQDDNSERQSRDADIPYGNDEIPPPGE
NIVADGIDSDDNSDSED RGYNFYVVDKENDAEPNYANADEKR SVDDYEDAPIPYRLRRSYVE

Agriotes lineatus - Elateridae - Coleoptera

>ALPP-1

MKLLLLLATVLLCVSAQNYRKCTSKFAC TPGQSLTINNCQT CGCASDGQGLGICTLIECKLLQ

Diabrotica virgifera virgifera - Chrysomelidae - Coleoptera

>DVPP-1

MSRLVILLIVTVFVEYSLGGTDDSAC PPLVKFRKGCNICICSPNGYDYTCQNKCHPTKRNDNLERLLSDEDYYK
DDMSNAIDSESTTESESGTENEITDGKDVRSRHNNEFESNDMSDDDDDKDDDPDFDPDSFYDDDDDDDEDDSEDD
DHNAGKKRPASRRKYKNSKSTSDSSEIDEDESDEEY

Mecoptera

Panorpa vulgaris - Panorpidae

>PVPP-1

MNKFYVIFVFGVVCVTAASAAGGYPQGPCEPNTITKYE CNDRC AKDGS GYMCTRQVCXGPPROKREGYPQGP CQ
PGSKTKYECNDCTCQSGTSYMC TRRGCGFTVDS PRNKRATGYPQGPCEPNSQTRYECNSCRCTADGSGYQCTRR
ACSPAENROKRQAEVNTPGFSCTPGSHFKHQ CNDCTCMANGQFAACTLKACPPGSY

Siphonaptera

Ctenocephalides felis - Pulicidae

>CFPP-1

MKSLLLFVAVFAAAHALPTAEPTTTAVPCTPGETKQEDCNECICKADGTGYQCTERECKHDPESKADDHGKICE
PGSTKKEDCNTCTCTPDGKNYMC TLMMCGHHHEKRETEIEEVKEVTIQSLALPMSLAKTRLDXILQ CAGXDRSLT
AS

>CFPP-2

PGQETRLDCNTCKCASDGTGYFCTRQACAPVHHHKRS AEVKEVTTTXLATTPCTPG EKTQIDCNTCTXARDXSG
YACTRKMCLPATHDRRRREAEETEEVKEVTTDTLATTPCKAGEQRQVDCNTCTCAADGTGYQCTRQACEFA

Diptera

Culex quinquefasciatus - Culicidae - Diptera

>CPPP-1

MVECNKCRCSSDGKLMSC TRKFCVPDSFQSDDPAPAVAQLPTIAVDDASVASKGDEEQVHTNGQVCTPNETKQED
CNRCCKAANGIGWFC TRKACPPREKRHASRQNPLQCTPGTSFKSSDGCNDCTETGTGIAACTMKFCFNDVAKVKR

EAPKLAQCEPGSSFKSADGCNDCFCFTETGIAACTMKFCFNNKV[KREAPAGTQCVKGTSFRSSDDCNTCFGGENG
VIACTRKFCVCPKVKRDVQQQCVPGSTFKDAEGCNDCFCTADGRAACTEKLCLKPQKT[KRDAPQPEKQCEPGTSFK
SADGCNNCFCTENGIAACTQKFCFPTKT[KRQVAIGQAVPKVDCKPGTSFKHSDGCNNCYCGENGIAACTQMFCFT
KEKRDVDELPSKSLAPGTEGFECKPNSRFKYQCNQCRCDNTGKFAACTYKFCIEGEY

Armigeres subalbatu - Culicidae - Diptera

>ASPP-1

MPSQKRSLKRRRSRCTQSGQVCTPNEVKMEDCNRC[KCAANGIGWFCTRKACPPRERRSASKPASQCVPGTSFKAA
DGCNNCFCGPNGIAACTQMFCFNTKT[KRDTAVQPSKQQCVPGTSYKSADGCNDCFCFTENGIAACTLKFCFNPRTK
RDTAVQPSKQQCVPGTSYKSADGXNDCFCFTENGIAACTXKFCFNSKT[KRDTAVQPPKQECVPGTSFKSADGCNDC
FCSDNGIAACTLKFCFNTKT[KRDTAVQPPKQECVPGTSFKSADGCNDCFCSDNGIAACTLKFCFNTKT[KRDTAVQPPKQECVPGTSFKSADGCNDC
QVKDELPSVDVAPGAPGFSNCPGKSFKFQCNTRCDTSGQTAACTFKFCIPGEY

>ASPP-2

MRSLLLIAAVLVTGALSGLVGQQCAPGSTFKLECNTRCSADGKLMSCTRKFCIPDEQSD

Aedes aegypti - Culicidae - Diptera

>AAP-1

MRSLLLIAAVLVAGALSLEAGKQCEPGSTFKLDNTRC[KGADGKVMSCTRKFCVPDVQDDPKAQPMVDEVSDXL
QPDASAAAAAEKEEEEVHTNGQVCTPNEVKMEDCNRC[KCAANGIGWFCTRKACPPRERRSASEFLTKE[KRQVAQP
APPKKECEPGTNFKSADGCNDCFCFTATGIAACTQKFCFNTKT[KRDTAALAPEQECVPGTSFRSADDNTRCFCFTET
GIAACTQKFCYDPKTFNTKT[KRDTAALAPEQECVPGTSFRSADDNTRCFCFTETGIAACTQKFCYDPKTFNTKT[KRDTAALAPEQECVPGTSFRSADDNTRCFCFTET
SNSKDTQCVPGTSFKSADGCNDCFC[SANGMAACTLRF[CFFEDQPIKS[KRQANDELPSAVAPGAPGFS[SPGK
SFKYQCNTRCDTSGQTAACTFKFCIPGEY

Anopheles gambiae - Culicidae - Diptera

>AGPP-1

MKILMLIVATCVV[GALCEEKCEPGTTFMEDCNRC[KGPDGQKACTRKMCPNELSDDSQVRLDVQNGESLSSADE
KDEIHVQTNQVQ[SPNEIKMKDCNRC[KANGIGWFCTRRAC[PQRA[KRSEPAPE[KKCTPGTTFQSDGNTCFCT
ETGHAAC[TLKACLPPGFFDQQLKQ[KRSVPADDLPQSAIAPGAPGFSCTPRSSFKYQCNTRC[CLSDDGKMAGCTFK
FCVPGEW

Belgica antarctica - Chironomidae - Diptera

>BAPP-1

KTKCIPRVPARAAARAGTTMHCVEIPHFPDPAQTVQIRSDNCEGESYFDGNTCTCKNGAYS[TLKACYTG
PLLPTATEAVEAESTTLHPGCDKGQSYFDGNTCVCGNGVYACTLKAC[FNGPLLLDTHPAPEQDKATIHNSDG
CDKGASYNDGNTCT[CSNGNYS

Phlebotomus papatasi - Psychododae - Diptera

>PPPP-1

MKYVIFSLLLCGVSLSMGQRLNDPDKACVPGSSFMDKDCNRCVCTKD[GARYACTKRFCGTMDIQGDQPQNEQ
NCVPGSRFKSSDGC[NWCT[SEDGKHSFCTLMACVKGPEYVATPY[RRKRDEGCVPKSSFTAPDGCNTRC[SDDGKH
SFCTRMECPPKAQEATPY[RRRRDLTCTPGQTF[TASDGCNTRC[HCNEEGTNAVCTLKACISNPNPNYAATTY[RRKR
DEGCTPKSTFTAPDGCNTRC[SDDGKTSFCTRMECPPTPQEATPY[RRKRDLKCTPWECLYG

Lutzomyia longipalpis - Psychododae - Diptera

>LLPP-1

MKFLILITILILGVSLSMGQILNDPQGRACVPRSTFMDKEGCNRCCTNDGARYACTKKFCTSLDMQGDPEQRCT
PGSTFKAADGCNTRC[SDDGKNSMCTLMACIGNPTAENAPLPY[RRKRDDSECVPKSTFTAADGCNTRC[SENGKY
AFCTRMECPPKQVATPY[RRRRDLGN

Lepidoptera

Spodoptera frugiperda - Noctuidae - Lepidoptera

>SFPP-1

MKWSIFVCLLVCLASYCDGLAIKCSPGVIDPSCTEE[KKEVDRHESQPRDPTEVQCLVGSEWESNCHYCRCSDEGV
AECLRQDTCDKGVFAEPVLCKPNTTFQRDCNTRC[ICLNLGLCTLEFCRRSGSIDSFPEILIADTELNSKDEASQ
PFKTEIVVPTTKSAKNKTSRVCEANRMFIKDNTCWCNEDGTSYYCTRRVCVPLLPEDQPDIGGIPAEIFA

Bombyx mori - Bombycidae - Lepidoptera

>BMPP-1

MRCLIAICFIVLARHCESGALKCSPGTEGPCAAEQESKDKPSQIITDDASAVQEMQSEVECLAGTEWESNCHFRC
CSDSGVAECLRQDSQDIIFTEPVRCQPGTSFQORDCNTCVCLDNLGLGLSLDACRRSSSTPKKFELIQGRECAPGS
SWSNQCNCRCNADGYGICSDAEATEHIIEPKKECAPKTMWKNECNTCWCTSDGKPMCTRMECITNNTPEKSELI
QGRECAPGSTWSNQCNSCRCNADGYAICSDAECAEHINEPKKDCVPNTTWKNECYTCWCTSDGKPMCTRVECITN
NTPKKSELIQGRDCAPGSTWSNQCNSCRCNADGYAICSDAECAEHIDEPKKDCAPKTMWKNECNTCWCTSDGKPM
CTKMGCISYNNFGSGVTEKLETKGTEIPELRSSQNTTKAIVCVANRMFIKDCNTCWCNEDGTTFYCTRVRVPMPL
PEDGDEDPENLNQKPATPKECKPNETFQIGCNRCRNSSEGLYSCTRIGCLESEEKNHTLSRKVRASQOETVKTC
QPGQEFRLLDCNKCLCDKEGKDFSCTRMDNALNSNHNAEPFNGDRTKREVSQKPATCVPGSVYNQGCNVCRCTDE
GRHATCTLMRCPQEKEETHAHDQDPGFRCPNPGEQFTRDCNDCTCSADGKSVFCTLRLCDQDITPHINA

Antheraea mylitta - Saturniidae - Lepidoptera

>AMPP-1

MRCLLIFGLFVLAVHGAESSLRSAVRSKLTCEPGTHWKEGNCFCYVEAGIPACTTLLCHGLEKIRDLPELQLPS
GVDCLPGTTWKSQCNCLCLGDGYPACTFKECPWNSHEPEKTCAAHTIWRDECIVCRCTIYGEASCMLACNYPL
DEDLISKLKNEI

Samia cynthia ricini - Saturniidae - Lepidoptera

>SCPP-1

SNVDAECLPRSKWESNCHSCESESAGAAKCVKQKDCLDHVLAEPIRCKPNTTFNKGCCNTCLCLENGLGLCTLQN
CWRSSIPKSELPLGKDCAPGSSWRSQCNDVCVNDQGISLCTLALCPDQEQEPIMNCAPNTMWKNDNTCRCTTA
GKAMCTRIGCIS

Heliconius erato - Nymphalidae - Lepidoptera

>HEPP-1nostop

MKWIVIASFMVYLAASFEGSALRCSRGTDNDCHTDNTEKEAESSVDSKKPECLAGSEWESLCHSCRCSEDGQPEC
ARLGSCRDETKSEPMVCKPLTEFRDNCNICIFESGLGSSCTSMECAPKTDISNGKECKVGTKWQSQNNCSCSD
DGMPMCTDMACPGQEEPEMLCALGTSWKLDONTCYCPPTGRAACTRIGC

>HEPP-2 no signal yes stop

QKRKKRKRTEVCGIAPREENEDETESLQEIKKRCRPDEVFEVDNCMCRCSVDGMSFSCTRRACVPEDDGKDASLL
RKARATSQGRKACQPGQFTMDCNKCLCNNEGQDYSCTRINCAELNSNGNNGARAKREVATQVKADCVPGSVFK
QGCNTCQCTEDGNHATCTIKRCKEDNPDENEVNLPESDPSFRCPNPGEQFKRGCCNDACCSADGKSVFCALRLCDQD
ITLTI

Danaus plexippus - Nymphalidae - Lepidoptera

>DPPP-1

QEFRMDCNKCLCDNEGQNFSCSTRIDCAALNSNGNGGTRVRREVSTREESGCTPGSVFTQDCNTCRCTEDGGHATC
TLKQCVRKHDGTGYELNQFESDPNFRCPNPGEQFKRCCNDCTCSANGRGVFTLRICDFEI

>DPPP-2

MKCSVVAFILCLATFCRGVVIKCTPGSKDETCTVDNFGKESLVRQKRQDSIVEECSPRTEWKSCHRCICSDSGQ
ALCFKIEGCRSDSGEPIRCKPESKFSRDNSCLCTNNGNVICTLKACLPSLVKEQARNVDSEDTRFRRSVAPSKP
VVCAANRMFIKDCNTCWCNEDGTSFFCTRKVCVEELPEEVSEPVKFMKLTARAGLMKCL

Manduca sexta - Sphingidae - Lepidoptera

MSPP-1

MMWLLFAALLVFARHADCGALRCPEGSSCTAEESKAPPLPVPNNPSPREAECQPGSEWESNCHSCKCSEAGIAE
CLKQAACDKEISADPIRCKPNTNVAEGLPHLHLSGRRIRLCTLKNCAKNHPELPSAKTAPQETSWMNECHHCWCT
SKGYRACTLKGCFFHDPEPTILRSQHFLKEEKCYICPLFYSGAAFCPLMECRENTRPSLAEIYEDNSEHEQRSQKLP
LTDIKVEKRRATRCEPRAEFKSECNVCKCSADGRSFSCTQNECLEGDSVDSDEVFQETDGPDHVERNSVCQPNTI
FVYACNACQCNNGTDFACTLKICPLPRDVEVFHEFRDMSPVVPMMGVSDAG

Epiphyas postvittana - Tortricidae - Lepidoptera

>EPPP-1

NSCTCLENGLGLCTLKNCHIIIPARAPSKEDLRMGQDCAPGSEWKSGCNDVCCTPEGLRSCSSAGCSEAQESEPLL
RCALHSLWNKESNTCWCTSDGRAMCTKIGCVGIPSDMHFSDEEDESQTQEVVESGTISKVPKADSDSEPENTDWN
SDIDDADIELDEDNVTGLALRDLEDFFDN

Hymenoptera

Apis mellifera - Apidae - Hymenoptera

>AMPP-1

MSFKSFLILYAIAIDLAIQKPMCVPGKSFFDGCNTCTCTDDGNFICTMTACEDYDPETDTSVPVKILEPPPDFW
QNS

Nasonia vitripennis - Pteromalidae - Hymenoptera

>NVPP-1

MGESILILTIITLIGIVARANCITFRDPTPTLECVNRLFTYDHNICYCNRDGTELTCKRKMYSTLTLPDLYLVQLQ
NLTMECIPKRHFQFSNQDCICHESGRFASCVRNQDNGLDSRENCFPGAVFQDDCNGCICGSDGKATCTNMDCNM
LDNINSDGKPKPSDLQCVPGSELIHRCNQCFCTDSGTAMMCFKMGCALSLIHEHVLNVTMNCQADKIFDYNCHQ
CICDAKGNAMCSGKECPRSDVFKEVKDTEKCNPGMIFASDCNVCI CSKNGKGVCTTFSCDTTYRFKYFDQLSL
QKPRMTLHDLRIFV

>NVPP-2

MKSQFVLLAIVSAASARNIFSCLPGSVFLQDCNACTCSNDGLSAACTDMACPGDLNRLTVFQPVLLQPAKVCEP
STVFKVYCNCTCGSSDGSSFSCTRMACNQDIWNVDGSLKFQSTAVRTKRS LAPQEKVCEPRTQFKEYCNTCGCAD
DGLSYICTRMCDENIWNKDGSLKIDITKDVVKRSAPKQICKPHSNFKDYCNTCFNNDGSEFACTRMSCPPEVW
NKDGSLKIRDVRLKREAKQVCEPRSHFKDYCNTCACESDGTTYGCTMMMDES VWNKDGTRKTVDGETN

>NVPP-3

MRSFLCFVTFLALVLAVSASPIDIKRNDDFGSGTGCTPGQVFFMSCNLCKCSSDGNYAACTFMQCFDFNFEEEQR
SKRSTNEVVAKLSSDIPRISGYTQGDQCPSKSFYNDCNMVCVGPDDASAACTMMMCMGETQQPSKIVPAKLNDI
ARIDEYSQGQACPAGEFFHDKCNVCHCSANGFSAACTLMGCPSEDTTQPRQVTEIYNWPRIGNHRANIC

>NVPP-4

MKTLILFVSTIALVSSEFHCPTPGSTFQMDNSCTCSNDGKTAMCTGIACIQENKSDVTDPEKGENLAPIQTQG
VGQAEFHCPTPGSNFHQDCNSCICLKDGQSAMCTGIACPTKVKRDLGTGPQQVCVPKSKFNDYCNCTCGSSDGSSF
ICTRRLCDPEVWNKDGTMKISPKSLQRAARISPEHKCKPRHLFKKDNHVCNAGGETAQCTVLDCKSLDLSQF
HNNPLYIKPAQNPRK

>NVPP-5

MASKTTCLLLLGLLIIATLYVSVAEAKKQCVPGKSYFDGCNTCF CSEAHSVQCTRRLCPDPWKRLSPPADFYQ

>NVPP-6

MSKVLKVGLLLLLLVAVAASAYAAEENGAPKENKQLPQIDYGVTNKCPANQPFKWNCNYCTCGPEGKDASC TRM
ACPQH

>NVPP-7

MHSSTLIVVINSIFLYFCTDNANDLPHIDNYGETNECPPNESFMDKCNYCRCGPEGKDAAC TKMNC P

>NVPP-8a

MRSLFIIILVAVAVASANQVCTPGTYFKTECNTVC AKDG SASICTQKQCP PGLFNWDGSLKVPLDIIQQIIPDVS
QIEIFESQLVAVGEVTYVQTCTPNSFFHINCNRQCSKHGIQYECENACPVQPHF

>NVPP-8b

MRSLFIIILVAVAVASANQVCTPGTYFKTECNTVC AKDG SASICTQKQCP PGLFNWDGSLKVPLDIIQQIIPDVS
QIEIFESLKKVCEPNQVFQNNCNTCACNKDSTAAACTLKECN

Nasonia Giraulti - Pteromalidae - Hymenoptera

>NGPP-1 (NVPP-5)

MASKTTCLLLLGLLIIATLYVSVAEAKKQCVPGKSYSDGCNTCF CSEAHSVQCTRRLCPDPWKPLSPPADFYQ

>NGPP-2 (NVPP-6)

MSKVLKVGLLLLLLVAVATSAYAAEENAAPEDSVVEVEAEKGTDNQTQNKQLPQIDYGVTNKCPANQSFKWNCN
YCTCGPEGKDASC TRMAC P

>NGPP-3 (NVPP-7)

MHSSTLIVVINSIFLYFCTIDDANNLPHIDNYGETNECPPNESFIHKCNYCRCGPEGKDAAC TKMNC P

>NGPP-4

MYFTSTFSLMLAIFSVSYADDVEMQCKPKTRFKFYCNTCWCSEEGTTRICTKKYCPDNIFNKDGSLKTPPNVHQ
KLKILPKGVS PD

>NGPP-5

MYFTSTFSLMLAIFSVSYADDVEMQCKPKTRFKFYCNTCWCSEEGTTRICTKKYCPDNIFNKDGSLKTPPNVHQ
KLKILPKGVS PD

Pimpla hypochondriaca - Ichneumonidae - Hymenoptera

>PHPP-1

MGFLACALLVATAHAATAIVNPETCEIGSNFKNYCNNCYCFDGVMDHALCTRESCDRNVWNEDGTRKFPKPGKW
ISEKENKKNDEPCTPGENFKYYCNDCCLDGLRAHAMCTRMRCDRNVFNEDGTRKYPEPEKWNSEKBRKKSDESC
APGASFKEYYCNSTCGAEGKVAEAQCTSQECDRYKWKKDGSKRPFTLDPVLHD

Solenopsis invicta - Formicidae - Hymenoptera

>SIPP-1
AGPYQYFSFRGPSSVCI PGSSYFDGCNNCFQND AHTVGCTTNWCMYATKIPPPDDFWQ

Hemiptera

Myzus persicae - Aphididae - Hemiptera

>MPPP-1
MRAFCDCACDESPGPFKMRIGGRITYYQLQFLIVVFSAVAATSVHGLRNVRPDGP CDPGELVFVGFCNLCLCNSQG
IPNQLCARSWCPVQTTSPPRNGILYSNTNKPFT

Acyrtosiphon pisum - Aphididae - Hemiptera

>APPP-1
MRVEGRTEFCQLQLLLIVVFSAAATSVHCLRNVKPDGP CDPGELVFVGFCNLCMCNSQGM PNQLCARSWCPVQTTLP
PRNSILYSIPNKPFT

Nilaparvata lugens - Delphacidae - Hemiptera

>NLPP-1
MAFTKQWKGRGLIVCMVLISIFQMASPYKISR DVETCLPGELVWVKCNLCLCNLEGQPN AVCAKMWCQPTPKYHY
DGDDVDTREIVN

Rhodnius prolixus - Reduviidae - Hemiptera

>RPPP-1
GRPGQVLIMIVLITNGRSKNLRTRRD TGEKKCKPGSVWKEDCNTCFCTETGHVGC TLMHCGPISSQQTRVKREKQ
CTPGTTWKEDCNTCFCSSTGQIGCTLMACHHYQLPTKQORFKRDFEDEEQSEVSRQEETGKNCEI
GTTVKLDCNICHGTSAAATLI

Triatoma infestans - Reduviidae - Hemiptera

>TIPP-1
MKTSAVFLFLVATMAIGTTALYCEPNTRFKQECNWCTCSANGEYATCTLLYCGP RRARAVSSGIYCGFGGTV PAG
DGCNFCFCTPLGTIGCTMRRCDLS

Oncopeltus fasciatus - Lygaeinae - Hemiptera

>OFPP-1
SRARTVCCVAGCTPGSSWREKCKSCVCSKNGTPSC TRILCTGQGGLDLQLPDLKESADEESELND SLRICYF

Oncometopia nigricans - Cicadellidae - Hemiptera

>ONPP-1
MNNKAMFGLASLAFLLSSVKAGASELT TASGIGSYDNCVPGTTWMDDNTCHCNVNGLAAC TRMLCFPGGIPKH
CTPGSSWTENCQTCTCSDQGAVTCTGDSCSTPPTPSVI

Graphocephala atropunctata - Cicadellidae - Hemiptera

>GAPP-1
MKSLLVVALGVFLIGSIMADTSAESPESPEIVQECVPGTTWKND CNSCFSETGVAACTLMGCI PHNIQVPSTCT
PGSTWTDNCQSCTCSEEGKASC TGAPCTLLST

Phthiraptera

Pediculus humanus - Pediculidae - Phthiraptera

>PHPP-1
MKYALVFAFFAVFAIASAFPSSENSEKEEETKSDLKKLLDDAKVEETGAQAKSSVSDEERCEPGQSFAKECNTCTCP
DSGLKSLAGCTLKLCL
>PHPP-2
MKFQMILMAALS CFLIMEIQAKPSNVCEPGSTFKMECNSCKCTDDGTD MVCTKKLCVPENGGEHKEGEHKEQPQG
DQPKETQSVTDDEHKDKPQSDQAAEETHAETEEHKEQTEDGKPKEGGDAAKTETHEDEKKEETEEKPHTETET
KTEEKTKEAEHTEEHVQNDEAKAEDVEDKKEETEEKKEEAEEKKEEKAEDKD EDSCTPGETFKKLNDCTCPPTG
HKSAATCTLLTGEEAH