**Predicted Crinoid Neuropeptide 1**

**Amed\_PCNP\_1 1 MYVTFALILILVPNGILSAESVIGTEPEKVL--VKPVNTKCDNE---------KATD-TTTTKSSGCVVSGDTKDSD--EKRGNYFQRLQKDTKEISD--
Fser\_PCNP\_1 1 MFVAFALILILVPNGILSAESVIAT-AEKVLTNIAPEDNKCNDKAGKGDGTYVASPD-TPTGSPPGCATSGDEKDSATVDKRANFFQRLRKNAEDISE--
Anjap\_PCNP\_1 1 MFVAFALILIIAPNEIFSAENVIAT-AENGLKNIKP-DVKCEDK------QFAANPTGTTVGTPAGCVVSGDSNDATSIDKRGNYFQRPRKDAEDINEKR
consensus \*.\*.\*\*\*\*\*\*..\*\*.\*.\*\*\*.\*\*.\* .\*..\* ...\* . \*\*... . . .. \*..... \*\*..\*\*\*..\*. ...\*\*.\*.\*\*\*..\*....\*..

Amed\_PCNP\_1 85 ---------DKEDD-KRANYHRRLRSDGDDVEKE--------------------------------------PEKRGNFHRRLRMDETDMAANKRANDF-
Fser\_PCNP\_1 97 ---------DSVDEVKRANYFRRPRADETDLVAD----------------------------------------KKANYHRRPRAEEMDMTEDKRANYYR
Anjap\_PCNP\_1 93 GNYYLHPRSDEADE-KRANYFQRPRKDETGMALDDKRANWHYYRPPRADETDDTEEKRANYWRQHPRKRDSEEEKRANYFMRPRKDEDYLSEDKRANYWR
consensus \* \*. \*\*\*\*\*..\*.\* \*.... . .\*..\*...\*.\* .\* .....\*\*\*\*...

Amed\_PCNP\_1 136 ----DESEMTEEEK--------------------------------------------------------------------------------------
Fser\_PCNP\_1 148 RPRADESDMTEEKKSAPIIIAANYRPRADESYMTEEEKRANYHRRPRADESDMTEEEKRANYHRRPRADDSYMT-----------------EEEKRANYH
Anjap\_PCNP\_1 192 QPRADETDETEEKR-------ANYWRQHPRKRDSEEEKRANYFMRPRKDEDDIS-EDKRANYWRQPRADETDETDEKRANYWRQRPRKRDSEEEKRANYF
consensus ...\*\*...\*\*\*.. ... ......... ... .. ... ....... . ...... . ........

Amed\_PCNP\_1 ----------------------------------------------------------------------------------------------------
Fser\_PCNP\_1 231 RRPRADESDMTEEEKRANYHRRPRADESDMTEEEKRANYFR-RPRADEMYMTEEEKRANYFRRPRADEMYMTEEEKRANYYRRPRADESDMTEEEKRAN-
Anjap\_PCNP\_1 284 MRPRKDESDFS-EDKRANYWRQPRADESDET-EEKRANYWRQRPRKRD---SEEEKRANYFMRPRKDESDIY-EDKRANYWRQPRADETDES-EEKRANY
consensus ... .... . ....... . ....... . ......... ... . .......... ... .. . ......... ....... . ......

Amed\_PCNP\_1 -----------------------------------
Fser\_PCNP\_1 -----------------------------------
Anjap\_PCNP\_1 377 WRQRPRKRDSEEEKRANYFMRPRKDVKETDDAEGN
consensus**

**Predicted Crinoid Neuropeptide 2**

**Amed\_PCNP\_2 1 MYREIFTCLVIAAVLASSTQAQKRRIHKGTQWGKRTSLFDLNDDRNLSAFPDSSKQIDLGNLVRAWINFEMQRQENSKTFPTFDQALGYETSNFEKEIK
Fser\_PCNP\_2 1 MYREILTCLVIAAVL-TSTHAQKRRIHKGTQWGKRTSLYDLNDERNPSGYPEPSKQMDLGKLVRAWINFEMQRQGNTKTFQTFDQALGYETSNFEKEMK
consensus \*\*\*\*\* \*\*\*\*\*\*\*\*\*. \*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\* \*\* \* \* \*\*\* \*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\* \* \*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \***

**Predicted Crinoid Neuropeptide 3**

**Amed\_PCNP\_3a 1 MDVRITVLCV-LLALVFVGVQAQPPPGYCSGITGNRPPECTSLIGKKSLLNALLQRLLERQE--EEEEKEEKEERNAQ-------VNERHYHAQDTREYD
Amed\_PCNP\_3b 1 MDFSIIVLCVGLLALVFVGVEAPPPPGWCGGIAGHRRPGCTSQWGKKSTLDALIEQLMARKEVLEEDEKEAAAAKDRDVVNERKGLNEPNY--QDTREYD
Fser\_PCNP\_3 1 MDLRITVLFV--LALVFLCIEAQLPPGCNTGVNGKRPPGCGSQVGRKDLLNSLLERLLERELQLDETAQEERTV-------EKKAMEEYKV--PETRRFE
Anjap\_PCNP\_3 1 MHLRFMVLLLSVLVLI-TCTEAPPPPECMSPVAQNRPSHCQVVWGRKAL--NTLERLLKKELIDEEMNTEERNLGD---------MEEAEG--QETRNLD
consensus \*.....\*\*.. .\*.\*... ..\* .\*\*..... ...\*...\*....\* \*.........\*.... ...\*...\*.. ... ..... \* .. . \*\*...

Amed\_PCNP\_3a 91 IEQEQ---E-IRLLDFLL----------
Amed\_PCNP\_3b 99 VEQEK---E-IRLLDFLL----------
Fser\_PCNP\_3 90 GEERE---ETVRLLDLLLDLEGEHGIKK
Anjap\_PCNP\_3 87 DENQNLYDE-VRFLELLLDLKGENNIKK
consensus .\*... \* \*.\*. \*\*.. .. ...**

**Predicted Crinoid Neuropeptide 5**

**Amed\_PCNP\_5 1 MASIAKAVSCLVAMTVLLALLHVESVSARRGHPKSNFILMPGRRSPFDDLLQQENTRRDNILESATPDLLSEEDDSTKIDLELLREIEKWLKAQTSSKTY
Fser\_PCNP\_5 1 MASTAKAVSCLVAMTVLLALLHMDSVSARRGHPKSQFILMPGRRSPFD--LLQENQRREDILESATPDLLADEDDSTQIDLELLREIEKWLKAQSSSKTY
consensus \*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*..\* \*\*\* \*\* \*\*\*\*\*\*\*\*\*\* \*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*

Amed\_PCNP\_5 101 KKPFMQDAGENGEY
Fser\_PCNP\_5 99 MKPFMQEAGDNGEY
consensus \*\*\*\*\* \*\* \*\*\*\***

**Predicted Crinoid Neuropeptide 7**

**Amed\_PCNP\_7 1 MEVRHLTYVVIVILGISTLSTVAYAG--CANICIEHRLSGSQCAKLCGKPLGKR----SEISGLMEN-QEKIDETASSSIQSALVQHFNKLRPELQRIVL
Fser\_PCNP\_7 1 MEVRHITCVIMVLIGISSLTSTVSSTSACTRFCIDNNYSGRECAKTCGRLFGKREPALTENIGWINDRDDEFANKPSESMQSTLVEHFNQLRPEMQRIVF
Anjap\_PCNP\_7 1 MEVRHIMYLLIVVIGLSSFKSAASAT--CSDRCNKRRLTGDACAKLCGRIYGKRQTTLSENSRWMDKIEEVASEVPEEIEESSLLQHFYQLRPQLQRIVY
consensus \*\*\*\*\*......\*..\*.\*.... .... \*. \*......\* \*\*\*.\*\*...\*\*\* ..\*...... .. . ......\*.\*..\*\*..\*\*\*..\*\*\*\*.

Amed\_PCNP\_7 94 ELIVDLEIKEQIEG
Fser\_PCNP\_7 101 ELILDLELSSEMEG
Anjap\_PCNP\_7 99 QVILELEI-SQMEG
consensus ..\*..\*\*. ...\*\***

**Predicted Crinoid Neuropeptide 9**

**Amed\_PCNP\_9 1 -------------VVVLGVVFLAS--SVTCCKRAAITTSEDKPSLETENTQIKPENMPNEWPSLVGKKGEEAQKFISKERPELKIVILNKDDMMTMDFRE
Fser\_PCNP\_9 1 MQM------KSVLLVVVGVVFFAS--SVTCCKRSAPSASGGENVEESEKQNIEDNKMETQWPALVGKKGEEAEKLILKARPDLKIFILPQDAMMTMDFRE
Anjap\_PCNP\_9 1 MCIWCPSLHRSIIACAVGTAVFVYFWSIIASKQDIP----------------------------LDKKAEEAKKFILEESPELQIYILPEDSMMTMDYRT
consensus . . ........\*...... \*....\*. ... . ... .. . .. ...\*\*.\*\*\* \*.\*....\*.\*.\*.\*\*. \* \*\*\*\*\*.\*.

Amed\_PCNP\_9 86 DRVRIFVDDNQVVVRPPKTG
Fser\_PCNP\_9 93 DRVRILVDENQIVVRPPKVG
Anjap\_PCNP\_9 73 DRVRIFIDENQIVVKPPKVG
consensus \*\*\*\*\*..\*.\*\*.\*\*.\*\*\*.\***

**Predicted Crinoid Neuropeptide 10**

**Amed\_PCNP\_10 1 MY--SILFTVMVTITMVGCGSTEDIAEYESGPIQNTLGLGIPQIWPEEGDIAEL-EEQIAKHEAIIKYLNHLRNQYLQGSQSKRSGFFNRRSGKNAYDV-
Fser\_PCNP\_10 1 MY--SILFTVMIAITMVGVGSTDEMGEYETGQIQNTIGLGIPQIWPEEGDIAEL-DEQIAKHEAVIKYLNHLRNQYLQGSQTKRSGFFNRRSGNSMYDV-
Anjap\_PCNP\_10 1 MYRPTILFALMISAMMAGVGNTEDIGEFEAGQIQNTVGLGIPKIWPDEGDIAELAEEQIAQHEEIINYLNHLRNEYLQGSQTKRSGFFNRRSGSPMYDVP
consensus \*\* .\*\*\*..\*....\*.\*.\*.\*....\*.\*.\*.\*\*\*\*.\*\*\*\*\*.\*\*\*.\*\*\*\*\*\*\* .\*\*\*\*.\*\*..\*.\*\*\*\*\*\*\*.\*\*\*\*\*\*.\*\*\*\*\*\*\*\*\*\*\* .\*\*\*

Amed\_PCNP\_10 97 --DWQKIGDY-AAKRSGFFNRKRNAYEERK
Fser\_PCNP\_10 97 --DWHKIGDY-AAKRSGFFNRKRSGYDERK
Anjap\_PCNP\_10 101 SQDWNKRGDFTSAKRSGFFNRKRSGYEQRK
consensus \*\*.\*.\*\*. .\*\*\*\*\*\*\*\*\*\*\*..\*..\*\***

**Predicted Crinoid Neuropeptide 11**

**Amed\_PCNP\_11 1 MDITMTTRNTLKIITFLLIGCCCLTQSVPVLKFSGQISLEGDEESGLALPWILMSKMIDSDRPMNIDTDNSSEYYSGEQNDVGDIAKRGNGRSDLMR-YL
Fser\_PCNP\_11 1 MDITMTTSNTLKIITFLLIGCLCLTESVPVLKFSGQITLETDE--GVALPWMLMSKMIDSDRLMNTDIDNSSEYYSGEQNDVADVTKRGNNRSDLLR-YL
Anjap\_PCNP\_11 1 MD-TMTTSNTLKIITVLLLGCICLTESVPVLRFSGQISLETDGESGAVLPWVLMSKMLESDRFMNTDLDGQSEYYSGEENNL-DVTKRGSNRETAIKQQL
consensus \*\*.\*\*\*\*.\*\*\*\*\*\*\*.\*\*.\*\*.\*\*\*.\*\*\*\*\*.\*\*\*\*\*.\*\*.\*...\*..\*\*\*.\*\*\*\*\*..\*\*\* \*\*.\*.\*..\*\*\*\*\*\*\*.\*...\*..\*\*\*..\*..... .\*

Amed\_PCNP\_11 100 YSGKIGKAAS-TMGR-QPGRR
Fser\_PCNP\_11 98 YSGKLNKAAS-TMARKQTGRR
Anjap\_PCNP\_11 99 FGGRLRKVAGINLGR-KPGGR
consensus ..\*.. \*.\*. ...\* ..\*.\***

**Predicted Crinoid Neuropeptide 12**

**Amed\_PCNP\_12 1 MVSPMSMLNIGAALFLCMCLQQCFLTVSSEYDNPDTNTFEQDTEPENAAWRLSNGALRNKRPWLGGRKRDSTAYFIKREPIRMGGYRENLDVKRAFQEWL
Fser\_PCNP\_12 1 MVSSMSMLNIGAALFLFMCLQQCFSTVSSEYDSPDTNTFDQDTEQENAAW-LTHGGLINKRPWLGG-KRSSTGFFIKRDPIRMGGYRE-MDVKRAFQEWL
Anjap\_PCNP\_12 1 MVSSMSMMNMGAALFLFMCLQQCFLTVSSEYDAPDTNTFDQDTEQEKAAW-LTHGGLINKRPWLGG-KRSSTSYFTKRDPIRMGGYRE-MEAKRAFEEWL
consensus \*\*\*.\*\*\*.\*.\*\*\*\*\*\*.\*\*\*\*\*\*\*.\*\*\*\*\*\*\* \*\*\*\*\*\*.\*\*\*\*.\*.\*\*\* \*..\*.\*.\*\*\*\*\*\*\*\* \*\*.\*\*..\*.\*\*.\*\*\*\*\*\*\*\*\* ...\*\*\*\*.\*\*\*

Amed\_PCNP\_12 101 SE-QRRNFEDETPYEQEYYQY-KRPMMNGKRNMINGGV
Fser\_PCNP\_12 98 TEQQRRSYE-ETPYQQEYYEY-KRPMMNGKRNMINGGV
Anjap\_PCNP\_12 98 SE-QRRNYE-EIPFEQEYYELRKRPMMNGKRNMVNGGP
consensus .\* \*\*\*..\* \*.\*..\*\*\*\*.. \*\*\*\*\*\*\*\*\*\*\*.\*\*\*.**

**Predicted Crinoid Neuropeptide 13**

**Amed\_PCNP\_13 1 MEYKRMVTVCVVLVLCVCVSSERADNKTPED----KTLHKEGMSIVQKVYRILETITNMERNQEREAERKKEQDRYTPKRK-GGEFKTQGWRKKRSTFGH
Fser\_PCNP\_13 1 MGYKDLFIILIVCVFFVCANSQRSDNQTPEEVSEAETIHEEGMRIVQRIYSILETITNMQRNQEMEEKRSEEQAIYDAKRRRGGDFKSQAWRKKRSTFGK
Anjap\_PCNP\_13 1 MGFKVLCILSLAGFFVFVSSQNVETNRTPEDVSKSETVREEGMRIVQRIYSILDTIKNMERNKKNEERRKTEITEYNPKRRPGGDFSTQAWRKKRSTIGK
consensus \*..\* . .. .. .. .. .... .\*.\*\*\*... .\*...\*\*\*.\*\*\*..\*.\*\*.\*\*.\*\*.\*\*.. \*..\*. \*. \* .\*\*. \*\*.\*..\*.\*\*\*\*\*\*\*.\*.

Amed\_PCNP\_13 96 NLMDITFIQQLDSDVNELKLDVKDFLEDLGKVM------------------FYLIFNTVKCILKLR
Fser\_PCNP\_13 101 NLMDITFVQQLDSETKDLKTDVIDFLEDLRQFREL----------------FFQWL----------
Anjap\_PCNP\_13 101 NLMEITFVQRLDSETMELRIEVKEFLQTIGQWLRKALNKSHIDVGDTGTRGFFAELASNEEVF-VE
consensus \*\*\*.\*\*\*.\*.\*\*\*.. .\*...\*..\*\*....... \*. . . . .**

**Predicted Crinoid Neuropeptide 17**

**Amed\_PCNP\_17 1 MASVI-TTAVLVSVLTFVLQIVSSIPVEINGSGDVD--IQLLGEITTSQHTFQRGKRAMKVSGSQSCSSHNQCNRGQCCAFSFGRKICKDSQKTRKLGET
Anjap\_PCNP\_17 1 MASFIATTAVFISVMTFVLQLVSSIPIEVNGGGDGEEYTQLFGEITT-HDTFQRGKRAMKVSSSRSCSSNADCRRDQCCAFDFGRKVCKASQRVRNLGET
consensus \*\*\* \*.\*\*\*\* \*\* \*\*\*\*\* \*\*\*\*\* \* \*\* \*\* .. \*\* \*\*\*\*\*. \*\*\*\*\*\*\*\*\*\*\*\* \* \*\*\*\* \* \* \*\*\*\*\* \*\*\*\* \*\* \*\* \* \*\*\*\*

Amed\_PCNP\_17 98 CSIFDVHKYLDLNDLTRSFTTCPLVCRKGLRCRATQ---GKSRKRIAVCSRR
Anjap\_PCNP\_17 100 CSFVDIHKYLDLHDLTRSFTRCPMICKEGLRCWRTHERYSKSNTRKSVCRR-
consensus \*\* \* \*\*\*\*\*\* \*\*\*\*\*\*\* \*\* \* \*\*\*\* \* ... \*\* \* \*\* \*.**