**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 \*\* \* \*\*\*\*\*\* \*\*\*\*\*\*\* \*\* \* \*\*\*\* \* ... \*\* \* \*\* \*.**