Repetitive DNA sequence from the crayfish *Procambarus clarkii*

Lidia-Yolanda Fuchs, Cesar Ovando, Patricia Joseph, Xavier Soberon and Jean Louis Charli
Centro de Inves. sobre Ingenieria Genetica y Biotecnologia, Apdo. Postal 510-3, Quernavaca,
Morelos 62271, Mexico

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A repetitive DNA element was obtained from a crayfish genomic library while attempting to isolate the gene for the pigment concentrating hormone (PCH) with an oligonucleotide probe. The probe was directed to the coding region of the octapeptidic hormone deduced from the amino acid sequence of PCH (1). The isolated clone contained a 14 nucleotide sequence tandemly repeated 30 times; eleven nucleotides of the repeat were identical to a region of the probe. Dot blot hybridization of genomic DNA with the purified insert shows that there are approximately 100 copies per genome. Preliminary Southern blot experiments indicate that the repeat is dispersed throughout the genome.

The isolated clone comprises the following sequence:

Hybridization experiments showed that the insert is specific for the crayfish. Related species like freshwater prawn, shrimp and crab showed no cross-hybridization.

Comparison of this sequence to the GenBank data (release 59)

revealed similarity to immunoglobulin switch regions. The significance of this is hard to assess, due to the fact that they are both reiterated sequences. No cross-hybridization was obtained to rat nor human DNA.

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REFERENCE

1. Fernlund, P. (1976) Structure of a light-adapting hormone from the shrimp, *Pandalus borealis*. *Biochem. Biophys. Acta* **439**, 17-25.

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1  AAAAAAAGT  GTCGTCTCCT  GTGTCGTCTT  GCTCCCTACT  ACTGCTATCT
51  TTGGCTGGGC  TATCCTGGCT  GGGCTATCCC  GGCTAGGCTA  TCCTGGCTGG
101 GCTACCCTGG  CTGGGCTATC  CTGGCTGGGC  TATCCTGGCT  GGGCTATCCT
151 GGCTGGGCTA  TCCTGGCTGA  GCTATCCTGG  CTGGGCTACT  CTGGCTGTGC
201 TATCCTGGCT  GGGTTATCTT  TCTGAACTAC  CCTGGCTGGG  CTTTTCGGGC
251 TGGGCTATCC  CGGCTGGGCT  ATCCTGGCTG  GGCTATCCTT  GCTGAACTAT
301 CCTGGCTGGG  CCATCCTGGC  TGGGCTACTC  TGGCTGTGCT  ATCCTGGCTG
351 GGTATCTTGG  CTGGGCTATC  CTTGCTGAAC  TACCCTGGCT  GGGCTATCCT
401 GGCTGGGACT  TTTCCGGCTG  GGCTATCCCA  GCTGGACTAT  CCTGGCTGGG
451 CTATCCTGGC  TGGGCTAGCA  GGGCAGAAGG  ATAGGAAGAT  CATACTGTGA
501 AGCTGGCTCC  TGTGCGTCCA  CACTCACTAC  GCTTCACTAC  AATCTATGAG
551 ATGGTTAAGA  CAGAGGAGGA  CAGCAAGAGG  CTACAGGATG  ACCTGGACAG
601 ACTGAAGGAA  TGGCACAACA  AATGGCTACT  AGACTTCAAC  TCGAGCAAAT
651 GTAAAGTGAT  GAAGATTGGT  GCAGGGAGAA  CGAGGCTAAA  CATAAGGTAC
701 CAGCTGCCAG  AGGAAATCCT  ACAGTATGCC  GGCGAGTATA  TCCTTCAAGT
751 AATCCTGGAA  TAT
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