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TRILERT CHAICHERDSAKUL: STRUCTURAL CHARACTERIZATION OF  
MITOCHONDRIAL DNA OF BLACK TIGER PRAWN (*PENAEUS MONODON*).  
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This work involved partial characterization of mitochondrial DNA from black tiger prawn, *Penaeus monodon*. Mitochondria were prepared from abdominal and pleopod muscles. Mitochondrial DNA was purified by EtBr-CsCl ultracentrifugation and electroelution. DNA was partially digested by *Sau* 3AI, and cloned into pBluescript SK (-) and pUC 19 vectors. Random DNA clones were picked and subjected to automated DNA sequencing. DNA sequences were then subjected to GenBank databank searches by BLAST program at NCBI. In the first set of experiments, 17 clones with 38-52 % sequence identity to mtDNA of *Drosophila melanogaster* and other related organisms could be identified by GAP and BESTFIT programs in the GCG package, as well as by ClustalW. The data indicated that the 17 clones might not be genuine mtDNA clones but, more likely, were genomic DNA clones of the prawn. In later experiments, 3 additional clones (PMTC018, PMTC019 and PMTC020) gave better match to known mitochondrial genes. When compared with mtDNA of *Drosophila melanogaster*, clone PMTC018, with a size of 945 bp, matched cytochrome oxidase subunit I gene at 70.4 % sequence identity; clone PMTC019, with a size of 744 bp, matched cytochrome *b* gene at 74.7 % identity; and clone PMTC020, with a size of 900 bp, matched 16S rRNA gene at 48.3 % identity. The 3 additional clones also matched corresponding gene sequences of other higher eukaryotes with 70-90 % nucleotide sequence identities. This indicated that the 3 clones were of genuine mtDNA from the black tiger prawn.