

## **Heterogeneous sequences in the 5'UTRs of Inhibitor of Apoptosis Protein 1 homologues from *Aedes* and *Culex* spp. mosquitoes**

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We determined the entire cDNA sequences of Inhibitor of Apoptosis Protein 1 (IAP1) homologues from *Aedes triseriatus*, *Ae. albopictus* and *Culex pipiens*. The cDNAs encode translation products of 402 to 409 amino acids that share striking amino acid sequence similarity ( $\geq 80\%$  similarity,  $\geq 86\%$  identity). The IAP1 mRNAs from *Ae. triseriatus* and *Cx. pipiens* contain long 5' untranslated regions (UTRs), with heterogeneous sequences identified at the distal end of the 5'UTRs. In contrast, the IAP1 mRNAs from *Ae. albopictus* and *Ae. aegypti* (the latter sequence was obtained from the Genbank database) contain relatively short 5'UTRs (193 and 182 nt, respectively) of uniform length and nucleotide composition. More specifically, we analyzed 30 *Ae. triseriatus* IAP1 cDNA clones by 5'RACE and automated sequencing. The 5'UTRs of these clones were 450 nt (n = 1), 550 nt (n = 1), 604 nt (n = 9), 624 nt (n = 7) and 725 (n = 12) in length. The 401 nt immediately upstream of the open reading frame (ORF) were identical for each clone, with the heterogeneous sequences located at the distal end of the 5'UTR. Analysis of 7 *Cx. pipiens* IAP1 cDNA clones identified 5'UTRs that were 431 nt (n = 3), 473 nt (n = 1), 537 nt (n = 2) and 677 nt (n = 1) in length. The 352 nt immediately upstream of the ORF were identical for each clone; the heterogeneous sequences were again located at the distal end of the 5'UTR. Genomic sequencing of the *Ae. triseriatus* IAP1 gene is currently being performed to determine whether these heterogeneous sequence represent a splicing event. Expression of the *Ae. triseriatus* IAP1 mRNA was assessed in various tissues (midguts, ovaries and salivary glands) by RT-PCR using primers specific to each heterogeneous 5'UTR sequence. All 5 heterogeneous sequences were detected in all tissues examined. Quantitative RT-PCR is now being performed to determine the relative expressions of the heterogeneous 5'UTRs of the *Ae. triseriatus* IAP1 mRNA in these tissues.