

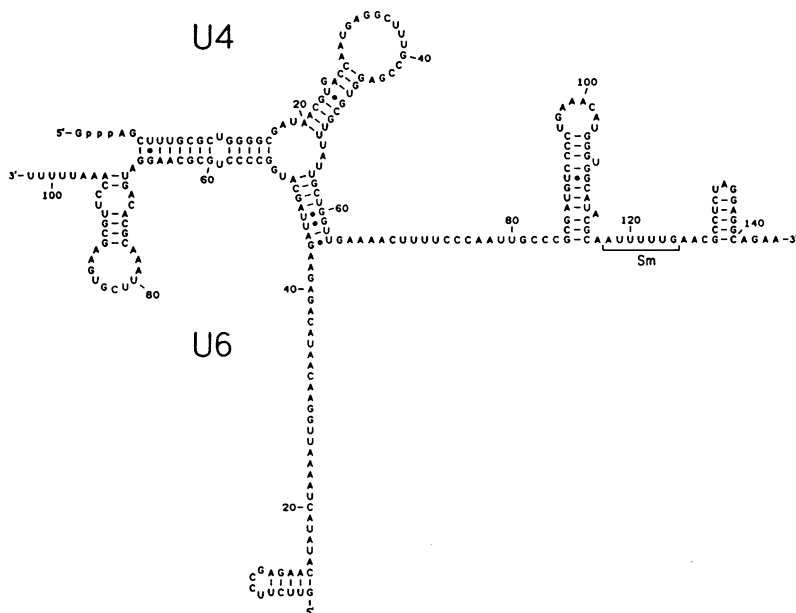
***C. elegans* snRNAs: a model for U4/U6 base pairing**

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Two of the snRNAs involved in pre-mRNA splicing, U4 and U6, are known to interact by base pairing. This has been demonstrated by their presence in a single snRNP particle which can be dissociated by heating (1-3) and by photochemical cross-linking (4). We have cloned three U4 and two U6 genes from *Caenorhabditis elegans* and determined their sequences. We are confident that the sequences reflect the true RNA sequences, since the U4 genes all have identical sequences, as do the U6 genes. In addition we have confirmed the first 96 nucleotides of U4 RNA and the first 47 nucleotides of U6 RNA by primer extension sequencing of the RNA.



The Figure shows the proposed secondary structure of the *C. elegans* U4/U6 complex. This structure includes portions of several previously-published models for U4, U6, and the complex (2,4,5). It allows pairing of the portions of U4 and U6 shown by cross-linking to be base paired (4). Existence of the proposed stems is supported by extensive phylogenetic evidence. Indeed, there are compensating base changes for most positions in the 5' U4 stem and for many positions in each of the other stems (2,3,5-7). A model including the same features of the central 3-stem structure for the U4/U6 homologs of *S. cerevisiae* has been independently derived by Brow and Guthrie (3).

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