

SPLICING: Need for Pre-mRNA Splicing

- introns constitute 90% of vertebrate genes
- exons must be “joined” accurately in order to produce translatable mRNA

INTRONS: Discovery

- discovered via electron microscopy (EM)
- **DNA:mRNA hybrid** examined by EM
 - gene segments **DISPLACED** (looped out → **D-loops**)
 - **D-loop** = segment of gene w/o its corresponding sequence in the mRNA
- process of discovery:
 1. Isolate mature mRNA.
 2. Base-pair mRNA to DNA of gene.
 3. Prepare DNA for visualization.
 4. Observe via EM.