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Ancient introns

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The origins of **introns** and their evolutionary role remain unclear. In the November 6 **Proceedings of the National Academy of Science**, Fedorov *et al.* describe the use of a computer program, called **INTRONMAP** to present evidence for the existence of ancient introns (*Proc Natl Acad Sci USA* 2001, **98**:13177-13182). They used the program to map intron positions onto homologous genes encoding proteins for which the three-dimensional structure is known. They applied the program to 665 nonredundant protein sequences in the **Protein Data Bank** and mapped over 8,000 introns. The result was a correlation of phase-zero introns with module boundaries in proteins, corresponding to ancient conserved regions (ACR). There was no correlation for phase-one or phase-two positions, or for non-ACR proteins (which presumably represent 'modern' genes).

References

1. What introns have to tell us: hierarchy in genome evolution.
2. *Proceedings of the National Academy of Science*, [<http://www.pnas.org>]
3. INTRONMAP, [<http://mcb.harvard.edu/gilbert/INTRONMAP>]
4. Protein Data Bank, [<http://www.rcsb.org/pdb/>]