

Department of Biological Sciences Seminar Announcement



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Date: 10 Feb 2003, Monday
Time: 2-4pm
Venue: LT20
Host: A/P Prakash Kumar

The Roles of tRNA editing in Plant Mitochondria

In plant mitochondria, RNA editing changes a number of C residues into U residues in the messenger RNAs, thus correcting the genetic information needed for accurate protein biosynthesis. But editing also occurs in several mitochondrial (mt) tRNAs encoded in the mt genome (not all plant mt tRNAs are encoded in the mt genome, some are encoded in the nuclear genome and are imported into mitochondria).

This phenomenon will be discussed with examples including the case of mt tRNA^{Phe}(GAA) and of tRNA^{His}(GUG) of larch, where editing events correct a C:A mismatch into a U:A base-pair and are required for processing of the precursors into mature functional tRNAs. Another example will be discussed, that of potato tRNA^{Cys}(GCA) where an editing event changes a C:U mismatch into a non-canonical U:U base-pair and is necessary for the isomerization of U into pseudo-U.

All are welcome