PRELIMINARY ANALYSIS OF RNA EDITING IN A. THALIANA MITOCHONDRIA.

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Editing of mitochondrial messenger RNA in *A. thaliana* was observed in 455 distinct sites by sequencing both mitochondrial DNA and cDNA. Each edit changed a cytosine to a uracil, and 441 of these sites are located within coding sequences. The mechanism of this editing process is currently not understood, although similar phenomena have been observed in other organisms such as humans and the slime mold Physarum polycephalum. The rate of editing varies by gene, and the edits are biased towards creating hydrophibic amino acids (84.9% of edited codons result in hydrophobic amino acids). Editing is also linked to codon position, with 88.4% of editing sites occuring within the first two codon positions. A presentation on a algorithm that uses these edit site features in order to predict novel edit sites will be given.

James would like to present this as a Powerpoint presentation at the Symposium.