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**A model for codon position bias in RNA editing**[1] RALF BUNDSCHUH, TSUNGLIN LIU, The Ohio State University — RNA editing can be crucial for the expression of genetic information via inserting, deleting, or substituting a few nucleotides at specific positions in an RNA sequence. Within coding regions in an RNA sequence, editing usually occurs with a certain bias in choosing the positions of the editing sites. In the mitochondrial genes of *Physarum polycephalum*, many more editing events have been observed at the third codon position than at the first and second, while in some plant mitochondria the second codon position dominates. Here we propose an evolutionary model that explains this bias as the basis of selection at the protein level. The model predicts a distribution of the three positions rather close to the experimental observation in *Physarum*. This suggests that the codon position bias in *Physarum* is mainly a consequence of selection at the protein level.

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