

Supplementary Figure 2. [Prediction of mitochondrial RNA editing.](#)

RNA editing sites were predicted using the “commons” function of PREPACT 3.0 (Lenz et al., 2018) with the selection of reference editomes shown on top (the alga *Chara vulgaris*, the liverwort *Marchantia paleacea*, the moss *Physcomitrella patens*, the lycophytes *Isoetes engelmannii* and *Selaginella moellendorffii*, the eusporangiate ferns *Ophioglossum californicum* and *Psilotum nudum* and the angiosperms *Cocos nucifera* and *Liriodendron tulipifera*). Black font indicates prediction from genomically encoded conserved codons, red font indicates known editing events in the respective reference and single letters indicate a deviating amino acid in a given reference editome. Examples are shown for the *atp9* gene (A) and the *atp6* gene (B).

A. *atp9*

All 15 RNA editing events predicted for *atp9* in *Haplopteris ensiformis* were confirmed with editing efficiencies between 92% for atp9eU65AV and nearly 100% for atp9eU83SF. Few edits are shared with angiosperms, here exemplarily represented by *Cocos nucifera* and *Liriodendron tulipifera*, but many edits are shared in the lycophytes *Isoetes engelmannii* and *Selaginella moellendorffii* or the eusporangiate ferns *Ophioglossum californicum* and *Psilotum nudum*. Edit atp9eU194TM may have been missed or is undetectable in the analysis of the *O. californicum* editome. Some “novel” in *Haplopteris* edits have not yet been reported in any of the reference editomes, e.g. atp9eU95TI, atp9eC116LP, atp9eC130*Q.

Chara vulgaris	Cocos nucifera	Isoetes engelmannii	Liriodendron tulipifera	Marchantia paleacea	Ophioglossum californicum	Physcomitrella patens	Psilotum nudum	Selaginella moellendorffii
atp9eU65AV	atp9eU65AV	atp9eU65AV	atp9eU65AV	atp9eU65AV	atp9eU65AV	I	atp9eU65AV	atp9eU65AV
atp9eU83SF	atp9eU83SF	atp9eU83SF	atp9eU83SF	atp9eU83SF	atp9eU83SF	atp9eU83SF	atp9eU83SF	atp9eU83SF
atp9eU88PS	atp9eU88PS	atp9eU88PS	atp9eU88PS	atp9eU88PS	atp9eU88PS	atp9eU88PS	atp9eU88PS	atp9eU88PS
atp9eU92SL	atp9eU92SL	atp9eU92SL	atp9eU92SL	atp9eU92SL	atp9eU92SL	atp9eU92SL	atp9eU92SL	atp9eU92SL
atp9eU95TI	atp9eU95TI	atp9eU95TI	atp9eU95TI	atp9eU95TI	atp9eU95TI	atp9eU95TI	atp9eU95TI	atp9eU95TI
atp9eU100PS	atp9eU100PS	G	atp9eU100PS	atp9eU100PS	atp9eU100PS	atp9eU100PS	atp9eU100PS	atp9eU100PS
atp9eC109*R	atp9eC109*R	atp9eC109*R	atp9eC109*R	atp9eC109*R	atp9eC109*R	atp9eC109*R	atp9eC109*R	atp9eC109*R
atp9eC116LP	atp9eC116LP	atp9eC116LP	atp9eC116LP	atp9eC116LP	atp9eC116LP	atp9eC116LP	atp9eC116LP	atp9eC116LP
atp9eC130*Q	atp9eC130*Q	atp9eC130*Q	atp9eC130*Q	atp9eC130*Q	atp9eC130*Q	atp9eC130*Q	atp9eC130*Q	atp9eC130*Q
atp9eC146VA	atp9eC146VA	atp9eC146VA	atp9eC146VA	atp9eC146VA	atp9eC146VA	atp9eC146VA	atp9eC146VA	atp9eC146VA
atp9eU149TI	atp9eU149TI	atp9eU149TI	atp9eU149TI	atp9eU149TI	atp9eU149TI	atp9eU149TI	atp9eU149TI	atp9eU149TI
atp9eU185SF	atp9eU185SF	atp9eU185SF	atp9eU185SF	atp9eU185SF	atp9eU185SF	atp9eU185SF	atp9eU185SF	atp9eU185SF
atp9eU194TM	atp9eU194TM	atp9eU194TM	atp9eU194TM	atp9eU194TM	T	atp9eU194TM	atp9eU194TM	atp9eU194TM
atp9eU206SL	atp9eU206SL	atp9eU206SL	atp9eU206SL	atp9eU206SL	atp9eU206SL	atp9eU206SL	atp9eU206SL	atp9eU206SL
atp9eU221SF	-	atp9eU221SF	atp9eU221SF	atp9eU221SF	atp9eU221SF	atp9eU221SF	atp9eU221SF	atp9eU221SF

B. *atp6*

Like in *atp9*, strongly predicted RNA edits were confirmed in *atp6* with editing efficiencies in the range between 59% for atp6eU713PL and 98% for atp6eU365PL and many are shared, particularly in the lycophyte editomes. Interestingly, this includes edit atp6eU662TI, exclusively shared with the eusporangiate editomes. Conversely, the isolated “questionable” edits atp6eU382LF and atp6eU412HY in *Selaginella* and atp6eU421HY in *Isoetes* changing conserved codon identities and not reported elsewhere were also not identified in *Haplopteris ensiformis*. Additionally, we identified six unpredictable silent editing sites (see Suppl. Tab. 2) with efficiencies as low as 7% for atp6eU81II(TT) and two unpredicted edits atp6eU133HY and atp6eU245SF, likewise with only 8% and 6% efficiency, respectively. *Vice versa*, exceptions for predicted but unconfirmed sites are atp6eU197TI, atp6eC631FL and atp6eU716TI.

