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CORRECTION

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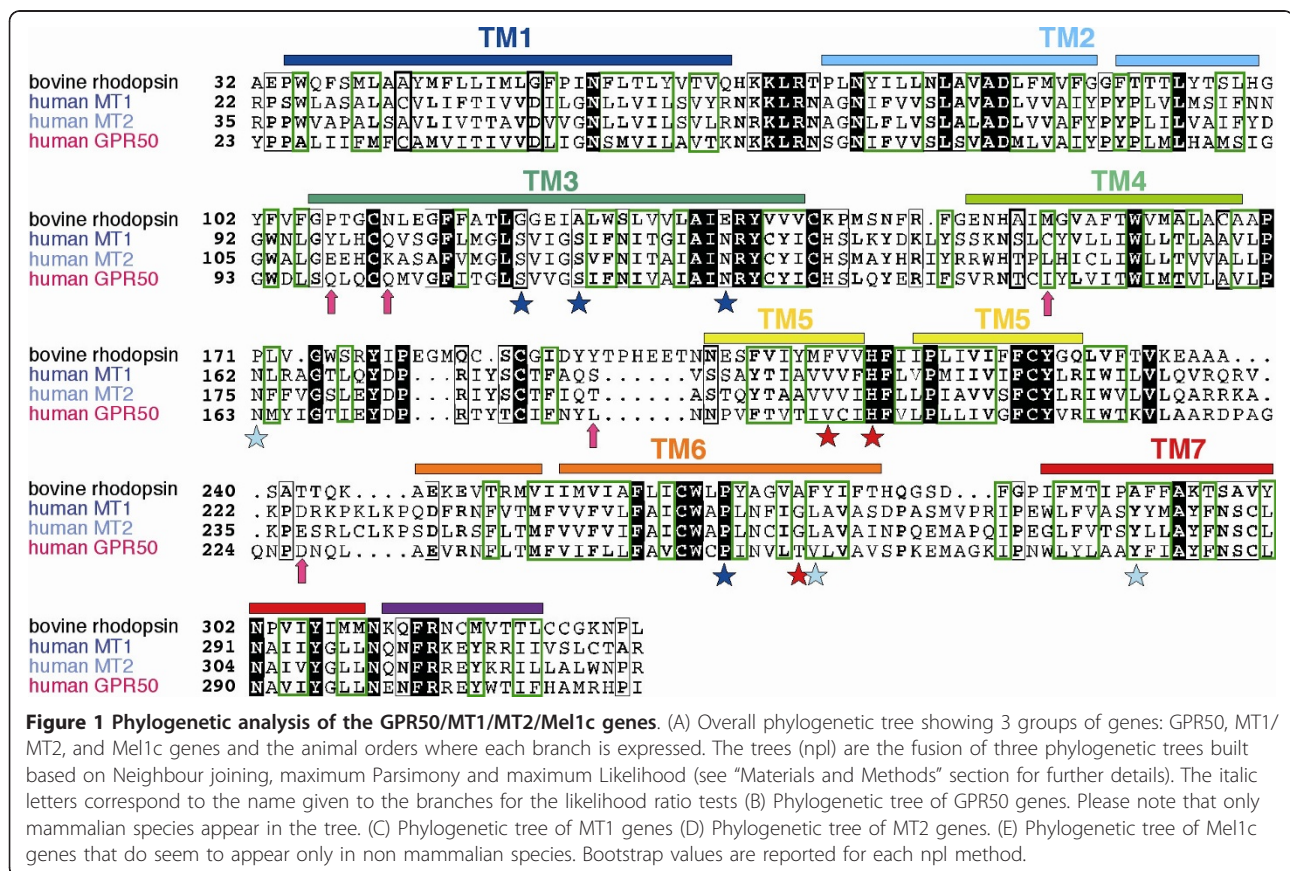
# Correction: GPR50 is the mammalian ortholog of Mel1c: Evidence of rapid evolution in mammals

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## Correction

The core of the text as well as the legends remain the same as in our article [1] since the changes provided here do not change any of the outcomes of the former

study including the results and our related conclusions. However, new figure files are provided since some arrows and stars have been previously misplaced in figures three A (figure 1) and four (figure 2), and the for-

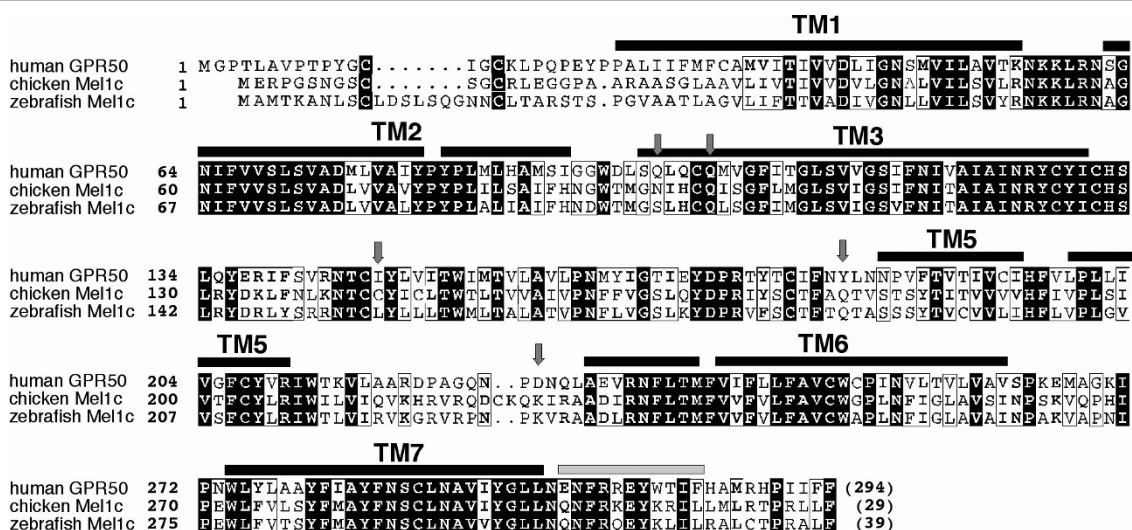


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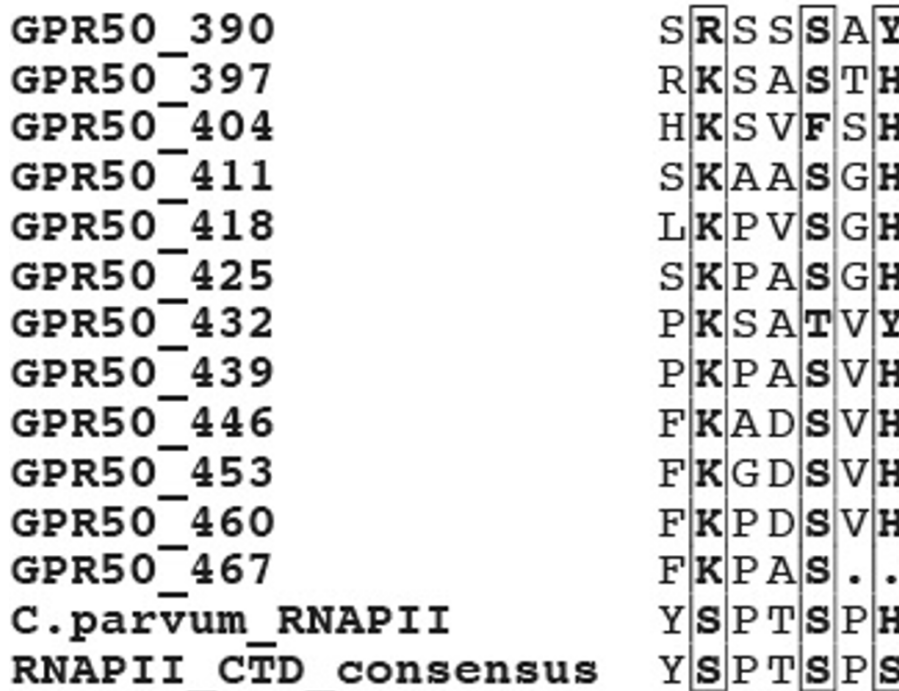
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**Figure 2 Synteny of Mel1c/GPR50 genes and neighbours in vertebrate genomes.** Note that genes are found on chromosome 5 in zebra fish and on chromosome 4 in chicken while they are found on chromosome X in other depicted species. Please note that synteny is mostly conserved for bHLHPAS, 2610030H06 RIK, Mel1c, HMG2A, CD99, and myotubularin related protein in opossum and mammalian species despite the integration of new genes coding for hypothetical proteins (opossum, chimpanzee, cow), ribosomal proteins (dog, chimpanzee, man), NGF1-A binding protein (chimpanzee, man), Utbf (mouse) and MAGE (cattle) proteins. It is also of note that several genes surrounding Mel1c in zebra fish (pdc8, nono, and the two hypothetical proteins) present high identities with genes found on chromosome X in mouse but not in the GPR50 locus (unpublished data). p.d.: predicted gene. Chrm: chromosome.



**Figure 3 Sequence alignment of human MT1, MT2 and GPR50 with bovine rhodopsin (pdb 1F88).** Sequence identities are reported white on a black background, whereas sequence similarities are boxed (A). The positions of the transmembrane helices, as observed in the bovine rhodopsin structure, are reported above its sequence. Arrows indicate the positions of the amino acids that, in GPR50, evolved under positive selection. Stars indicate amino acids which have been shown to play a key role for melatonin binding in MT1 (dark blue), MT2 (light blue) or both (red). A ribbon representation of the GPR50 3D structure model is represented (B), with transmembrane helices colored according to the sequence alignment. Amino acids evolving under positive selection and amino acids important for melatonin binding in MT1/MT2 are shown according to the colors reported in the sequence alignment.

mer figure six (figure 3) showed the GPR50 mouse sequence instead of the human sequence as stated in the legend [1].

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#### Reference

1. Dufourny L, Levasseur A, Migaud M, Callebaut I, Pontarotti P, Malpoux B, Monget P: **GPR50 is the mammalian ortholog of Mel1c: evidence of rapid evolution in mammals.** *BMC Evol Biol* 2008, **8**:105.

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