CORRECTION



Correction: Extinction of contextual fear memory is facilitated in TRPM2 knockout mice

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Following publication of the original article [1], the authors identified an error in Fig. 1. Due to an error Fig. 5 was indicated also as Fig. 1. The correct figure and caption is given below.

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Fig. 1 Facilitated extinction of contextual fear memory in Trpm2^{-/-}mice. (a) Time line of the contextual fear conditioning procedure. The freezing re-sponse during habituation (BL) and acquisition was analyzed for 1 min per trial. A foot shock (2-s, 0.7 mA) was given at the end of habituation and the first three conditioning trials. (b) Trpm2^{-/-} mice displayed reduced contextual fear acquisition (two-way repeated measures ANOVA, genotype: F(1,44) = 23.53, p < 0.0001; shock: F(3,132) = 248.3, p < 0.0001; genotype × shock interaction: Interaction, F(3,132) = 12.26, p < 0.0001; Bonferroni post hoc, 1st, p < 0.0001; 2nd, p < 0.0001; 3rd, p = 0.0276; WT, n = 23; $Trpm2^{-/-}$, n = 23). (c) Similar levels of freezing during fear retrieval 24 h after CFC and the first 5 min of extinction training session E1 (unpaired two-tailed t test, genotype: t(46) = 0.1876, p = 0.852; WT, n = 24; Trpm2^{-/-}, n = 24). (d) Time line of the contextual fear extinction procedure. During the extinction phase, the mice were placed in the chamber for 5 min without reinforcing shock. 24 h later, consolidated extinction memory was recalled by monitoring freezing behavior for 2 min in the original chamber. (e) Trpm2^{-/-} mice showed a faster rate of contextual fear extinction over the 7-day course of extinction training (two-way repeated measures ANOVA, genotype: F(1,46) = 6.369, p=0.0151; day: F(6,276)=65.95, p<0.0001; genotype × day interaction: Interaction F(6,276)=3.067, p=0.0064; Bonferroni post hoc, E2, p>0.999; E3, p>0.999; E4, p=0.1266; E5, p=0.0556; E6, p=0.0085; E7, p=0.0278; WT, n=24; Trpm2^{-/-}, n=24). Extinction retrieval tests 24 h (at 8 d: retrieval 1) and 21 d (at 28 d: retrieval 2) after extinction training showed that $Trpm2^{-/-}$ mice had less context-dependent freezing behavior to the conditioning context 24 h and 21 d after extinction training than WT mice (unpaired two-tailed t test, 24 h, p = 0.0065, WT, n = 8; Trpm2^{-/-}, n = 8; 28 d, genotype: t(23) = 3.535, p=0.0018, WT, n=12; Trpm2^{-/-}, n=13). (f) Remote memory. Conditioned mice without extinction training were returned to the context 28 d later for the remote memory test. There were no significant differences in the percentage durations of freezing between WT and Trpm2^{-/-} mice at day 28 (p=0.2405). Animal freezing is measured as percent time spent freezing over a given test period. *p < 0.05, **p < 0.01, ***p < 0.001, ***p < 0.00compared with WT littermates. Numbers in parentheses denote the number of mice in each group used for the experiment. All data are mean ± SEM. Detailed statistics in Supplementary Information

The correct Fig. 1:



Fig. 1 Facilitated extinction of contextual fear memory in Trpm2^{-/-}mice. (a) Time line of the contextual fear conditioning procedure. The freezing re-sponse during habituation (BL) and acquisition was analyzed for 1 min per trial. A foot shock (2-s, 0.7 mA) was given at the end of habituation and the first three conditioning trials. (b) Trpm2^{-/-} mice displayed reduced contextual fear acquisition (two-way repeated measures ANOVA, genotype: F(1,44) = 23.53, p < 0.0001; shock: F(3,132) = 248.3, p < 0.0001; genotype × shock interaction: Interaction, F(3,132) = 12.26, p < 0.0001; Bonferroni post hoc, 1st, p < 0.0001; 2nd, p < 0.0001; 3rd, p = 0.0276; WT, n = 23; Trpm2^{-/-}, n = 23). (c) Similar levels of freezing during fear retrieval 24 h after CFC and the first 5 min of extinction training session E1 (unpaired two-tailed t test, genotype: t(46) = 0.1876, p = 0.852; WT, n = 24; Trpm2^{-/-}, n = 24). (d) Time line of the contextual fear extinction procedure. During the extinction phase, the mice were placed in the chamber for 5 min without reinforcing shock. 24 h later, consolidated extinction memory was recalled by monitoring freezing behavior for 2 min in the original chamber. (e) Trpm2^{-/-} mice showed a faster rate of contextual fear extinction over the 7-day course of extinction training (two-way repeated measures ANOVA, genotype: F(1,46) = 6.369, p = 0.0151; day: F(6,276) = 65.95, p < 0.0001; genotype × day interaction: Interaction F(6,276) = 3.067, p=0.0064; Bonferroni post hoc, E2, p>0.999; E3, p>0.999; E4, p=0.1266; E5, p=0.0556; E6, p=0.0085; E7, p=0.0278; WT, n=24; Trpm2^{-/-}, n = 24). Extinction retrieval tests 24 h (at 8 d: retrieval 1) and 21 d (at 28 d: retrieval 2) after extinction training showed that Trpm2^{-/-} mice had less context-dependent freezing behavior to the conditioning context 24 h and 21 d after extinction training than WT mice (unpaired two-tailed t test, 24 h, p=0.0065, WT, n=8; Trpm2^{-/-}, n=8; 28 d, genotype: t(23)=3.535, p=0.0018, WT, n=12; Trpm2^{-/-}, n=13). (f) Remote memory. Conditioned mice without extinction training were returned to the context 28 d later for the remote memory test. There were no significant differences in the percentage durations of freezing between WT and Trpm2^{-/-} mice at day 28 (p = 0.2405). Animal freezing is measured as percent time spent freezing over a given test period. *p < 0.05, **p < 0.01, ***p < 0.001, ****p < 0.0001 compared with WT littermates. Numbers in parentheses denote the number of mice in each group used for the experiment. All data are mean ± SEM. Detailed statistics in Supplementary Information

Figure 1 has been updated above and the original article [1] has been corrected.

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Reference

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