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OPEN Author Correction: Adrenergic inhibition facilitates normalization of extracellular potassium after cortical spreading depolarization

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The original version of this Article contained errors in Figure 3 (B) and (C), where grey shadings were incorrectly positioned.

The original Figure 3 and accompanying legend appear below.

The original Article has been corrected.

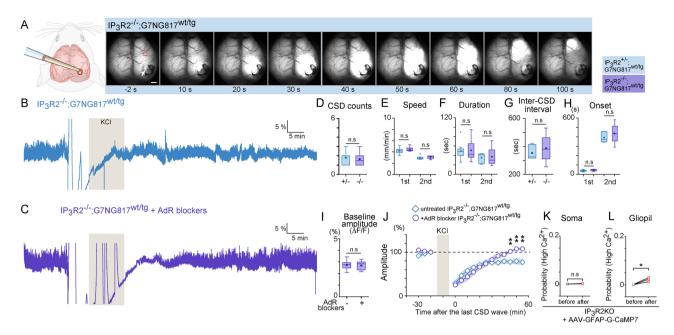


Figure 3. CSD propagation and neural activity recovery in IP₃R2 KO mice. (A) Representative image of the time series of CSD propagation. Other than using IP₃R2^{-/-};G7NG817^{wt/tg} double transgenic mouse as subjects, the experimental conditions are the same as in Fig. 1. Scale bar 1 mm. (B) Example trace of Ca²⁺ activity of an ROI located ~2 mm anterior to the KCl application site (Black square indicated in A). Note that neural activity does not recover completely within 50 min. (C) Similar Ca^{2+} signal trace as (B). measured in an IP₃R2^{-/-};G7NG817^{wt/tg} mouse pretreated with AdR blockers. (D) Comparison of CSD Ca²⁺ wave number during 10 min KCl application between IP₃R2^{+/-};G7NG817^{wt/tg} and IP₃R2^{-/-}:G7NG817^{wt/tg} mice. 1.8 ± 0.2 vs. 1.6 ± 0.3 , from N = 10 vs. N = 8, p = 0.64. (E) Comparison of CSD Ca²⁺ propagation speed between $IP_3R2^{+/-3}G7NG817^{wt/tg}$ and $IP_3R2^{-/-3}G7NG817^{wt/tg}$ mice. First wave: 4.2 ± 0.2 vs. 4.5 ± 0.1 mm/min; second wave: 5.5 ± 1.4 vs. 3.1 ± 0.2 mm/min. (F) Comparison of CSD Ca²⁺ wave duration between IP₃R2^{+/-};G7NG817^{wt/tg} = 0.000 MeV/t² = 0.0000 MeV/t² = 0.00000 MeV/t² = 0.0000 MeV/t² = 0.00000 MeV/t² = 0.00000 MeV/t² = 0.00000 MeV/t² = and IP₃R2^{-/-};G7NG817^{wt/tg} mice. First wave: 49.3 ± 5.4 vs. 50.9 ± 8.0 s; second wave: 35.0 ± 3.8 vs. 37.4 ± 11.6 s. (G) Comparison of inter-CSD Ca²⁺ wave interval between IP₃R2^{+/-};G7NG817^{wt/tg} and IP₃R2^{-/-};G7NG817^{wt/tg} mice. 353.5 ± 20.9 s vs. 386.6 ± 57.1 s, N=6 vs. N=4, p=0.54. (H) Comparison of first and second CSD Ca²⁺ wave onset time between IP₃R2^{+/-};G7NG817^{wt/tg} (WT, black) and IP₃R2^{-/-};G7NG817^{wt/tg} (IP₃R2 KO, blue) mice. First wave: 38.3 ± 2.6 vs. 45.0 ± 3.2 s, N = 10 vs. N = 8; second wave: 391.4 ± 22.1 vs. 434.3 ± 59.5 s, N = 7 vs. N = 4. (I) Comparison of baseline amplitude before AdR blocker in IP₃R2^{-/-};G7NG817^{wt/tg} mice. (J) Effect of AdR blocker pretreatment on the recovery of neural oscillations after KCl-induced CSD in IP₃R2^{-/-};G7NG817^{wt/tg} mice. Recovery is facilitated by AdR blocker pretreatment (N=6) compared with the untreated control group (N=6). (K,L) Comparisons of mean somatic and gliopil Ca²⁺ probability in IP₃R2 KO expressing G-CaMP7 in astrocytes via AAV (I, 80 cells vs. 113 cells from N=3 mice) and gliopil Ca²⁺ events in IP₃R2 KO mice (J, N=3 mice). *p<0.05.

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