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CORRECTION
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Corrigendum: IRSp53 Deletion in Glutamatergic and GABAergic Neurons and in Male and Female Mice Leads to Distinct Electrophysiological and Behavioral Phenotypes

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A Corrigendum on

IRSp53 Deletion in Glutamatergic and GABAergic Neurons and in Male and Female Mice Leads to Distinct Electrophysiological and Behavioral Phenotypes
by Kim, Y., Noh, Y. W., Kim, K., Yang, E., Kim, H., and Kim, E. (2020). Front. Cell Neurosci. 14:23. doi: 10.3389/fncel.2020.00023

In the original article, there was a mistake in **Figure 3** as published. It was due to an inadvertent mistake in the quantification process. The new quantification indicates that there is no statistical difference in the NMDA/AMPA ratio between WT and IRSp53-KO mice; previous **Figure 3C** indicated a decrease in the mutant mice. The correct **Figure 3** and legend appears below.

To reflect this change a correction has also been made to the Results, *Emx1-Cre; Irsp53*$^{fl/fl}$ and *Viaat-Cre; Irsp53*$^{\mathrm{fl/fl}}$ Mice Show Distinct Changes in Synaptic Transmission and Intrinsic Excitability in mPFC Pyramidal Neurons, Second paragraph:

"When evoked synaptic transmission was measured, the ratio of NMDAR-mediated EPSCs and AMPA receptor (AMPAR)-mediated EPSCs was not altered in *Emx1-Cre; Irsp53*$^{fl/fl}$ layer V pyramidal neurons (**Figure 3C**). These results collectively suggest that Irsp53 deletion in glutamatergic neurons leads to reduced spontaneous excitatory but not inhibitory synaptic transmission, increased ratio of evoked EPSCs/IPSCs, and increased neuronal excitability without affecting evoked NMDAR-EPSC/AMPAR-EPSC ratio in layer V mPFC neurons."

The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

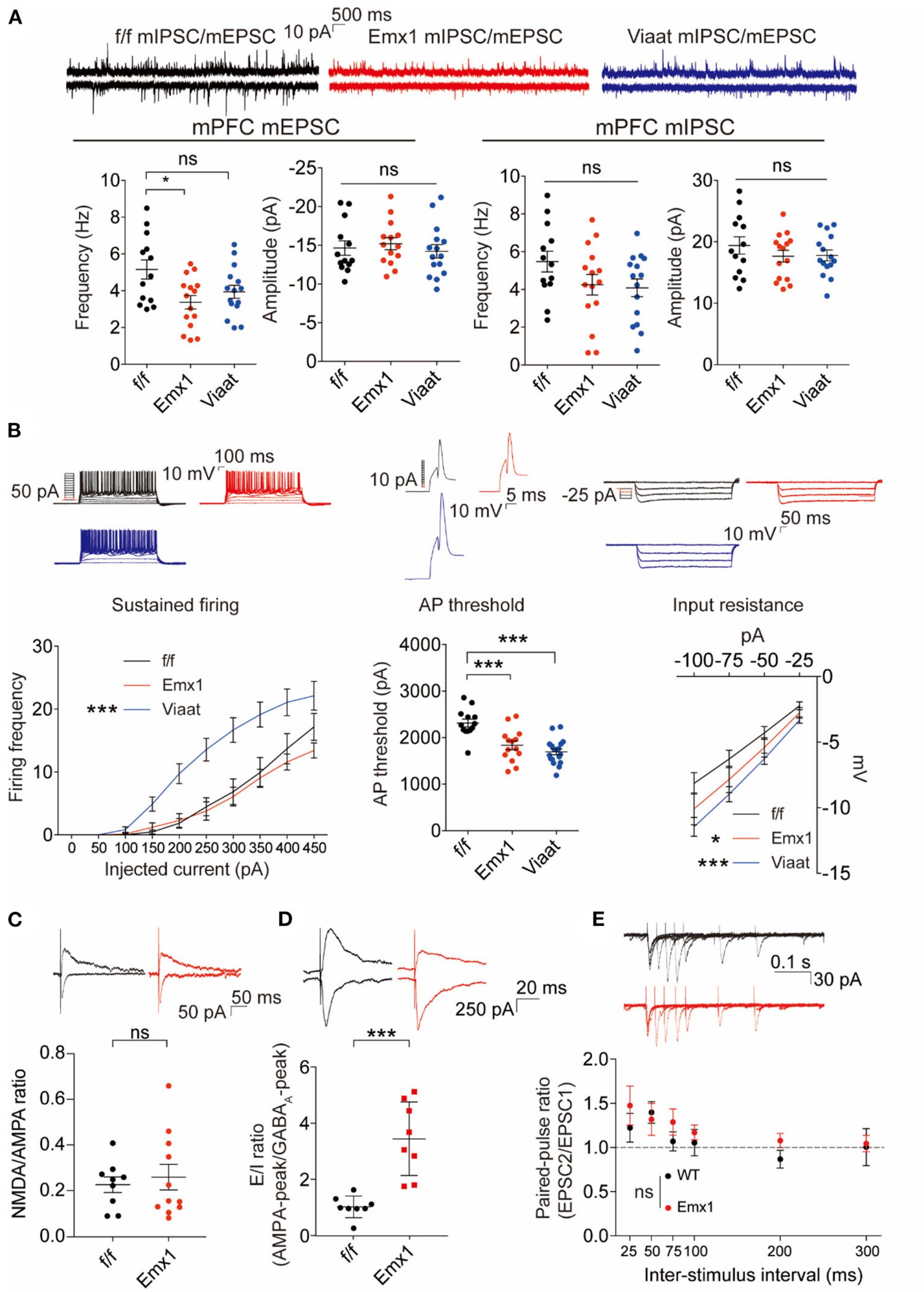

FIGURE 3 | *Emx1-Cre;Irsp53$^{fl/fl}$* and *Viaat-Cre;Irsp53$^{fl/fl}$* mice show distinct changes in synaptic transmission and intrinsic excitability in medial prefrontal cortex (mPFC) pyramidal neurons. **(A)** Miniature excitatory postsynaptic currents (mEPSCs) and miniature inhibitory postsynaptic currents (mIPSCs) in layer V pyramidal neurons in the prelimbic region of the mPFC in *Emx1-Cre;Irsp53$^{fl/fl}$* and *Viaat-Cre;Irsp53$^{fl/fl}$* mice (3 months; male). Note that the frequency of mEPSCs is significantly decreased in *Emx1-Cre;Irsp53$^{fl/fl}$* mice. $n = 13$ neurons from three mice for f/f-mEPSC, 14, 3 for Emx1-mEPSC, 15, 3 for Viaat-mEPSC, 13, 3 for f/f-mIPSC, 15, 3 for Emx1-mIPSC, and 15, 3 for Viaat-mIPSC, $^{*}P < 0.05$, ns, not significant, one-way ANOVA with Bonferroni's test. mEPSC frequency, $F_{(2, 39)} = 4.119$; mEPSC amplitude, $F_{(2, 39)} = 0.342$; mIPSC frequency, $F_{(2, 40)} = 2.012$; mIPSC amplitude, $F_{(2, 40)} = 0.7806$. **(B)** Intrinsic excitability in layer V pyramidal neurons in the prelimbic region of the mPFC in *Emx1-Cre;Irsp53$^{fl/fl}$* and *Viaat-Cre;Irsp53$^{fl/fl}$* mice (3 weeks; male). Note that intrinsic excitability is increased both in *Emx1-Cre;Irsp53$^{fl/fl}$* and *Viaat-Cre;Irsp53$^{fl/fl}$* mice. $n = 13$, 3 for f/f-firing frequency, 14, 3 for Emx1-firing frequency, 18, 3 for Viaat-firing frequency, 13, 3 for f/f-AP threshold, 14, 3 for Emx1-AP threshold, 18, 3 for Viaat-AP threshold, 13, 3 for f/f-input resistance, 14,3 for Emx1-input resistance, 18, 3 for Viaat-input resistance, $^{*}P < 0.05$, $^{***}P < 0.001$; ns, not significant, one-way ANOVA with Bonferroni's test for AP threshold, two-way ANOVA with Bonferroni's test for firing frequency and input resistance. Sustained firing, interaction $F_{(18, 420)} = 3.165$, current $F_{(9, 420)} = 61.89$, genotype $F_{(2, 420)} = 56.73$; action potential threshold, $F_{(2, 42)} = 16.14$; input resistance, interaction $F_{(6, 168)} = 0.5088$, current $F_{(3, 168)} = 60.88$, genotype $F_{(2, 168)} = 11.33$. **(C)** Normal ratio of evoked N-methyl-D-aspartate receptors (NMDAR)-EPSCs and AMPA receptor

(Continued)

FIGURE 3 | (AMPAR)-EPSCs in *Emx1-Cre;Irsp53*$^{fl/fl}$ layer V pyramidal neurons in the prelimbic region of the mPFC (2 months; male). $n = 9$ neurons for three mice for f/f, 11, 3 for Emx1, ns, not significant, Student's t-test, $t = 0.2447$, df = 18. **(D)** Increased ratio of evoked EPSCs and IPSCs in *Emx1-Cre;Irsp53*$^{fl/fl}$ layer V pyramidal neurons in the prelimbic region of the mPFC (2 months; male). $n = 8$ neurons for three mice for f/f, 8, 3 for Emx1, $^{***}P < 0.001$, Student's t-test, $t = 5.019$, df = 14. **(E)** Normal paired-pulse ratio in *Emx1-Cre;Irsp53*$^{fl/fl}$ layer V pyramidal neurons in the prelimbic region of the mPFC (2 months; male). $n = 10$ neurons for three mice for f/f, 9, 3 for Emx1, ns, not significant, two-way ANOVA with Bonferroni's test, interaction $F_{(5,85)} = 0.6379$, time $F_{(5,\ 85)} = 4.100$, genotype $F_{(1,\ 17)} = 0.7348$.

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