Title: Visualization of fast calcium oscillations in the parafascicular nucleus

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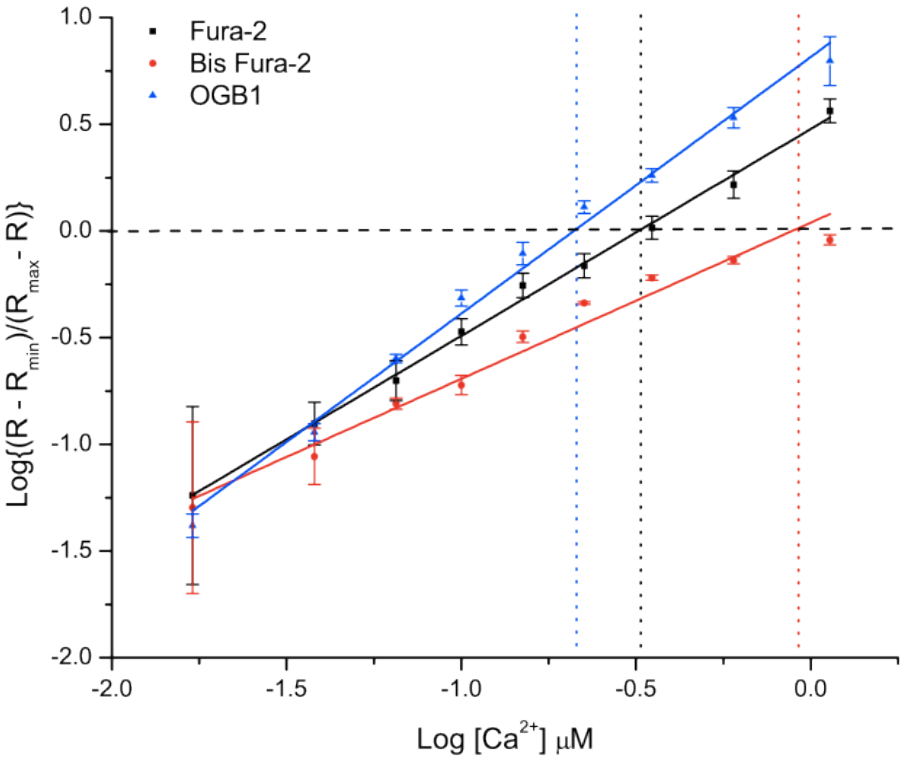
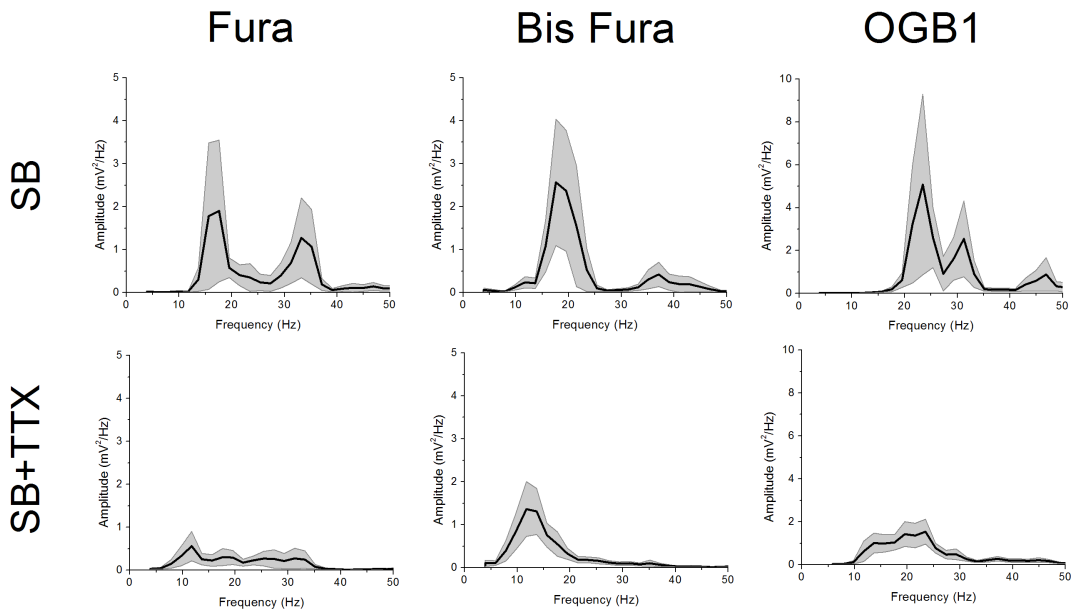
Supplemental Fig. 1

Ca^{2+} dissociation constants for Fura 2, Bis Fura, and OGB1. Calibration curves were obtained for each indicator at 200 µM using a reciprocal dilution method with a calibration buffer kit from Invitrogen. Each Fura and Bis Fura data point represents the average of 4 calibration experiments performed for each indicator (mean ± SE for that calcium concentration). OGB1 data points are an average of 6 calibration experiments. X-intercept and the corresponding log $[Ca^{2+}]$ for each indicator are shown with dotted and dashed lines. The calculated K_d value for each dye was as shown: Fura 2 K_d = 322±8 nM (black); Bis Fura K_d = 885±6 nM (red); and OGB1 K_d = 210±10 nM (blue)



Supplemental Fig. 2

Averaged power spectra for each experimental group before adding calcium channel blockers (CAD or Aga+CgTx). Post blocker power spectra were not shown because peaks were eliminated in all experiments. There was no significant difference in frequencies between dye groups with all groups showing activity in the beta and low gamma band frequency ranges. Note the general decrease in amplitude with the addition of TTX. This has been seen before in previous experiments and is explainable by the absence of high frequency action potentials and the associated lower synaptic activity.



*SB (Synaptic Blockers: APV+CNQX+STR+GLY)