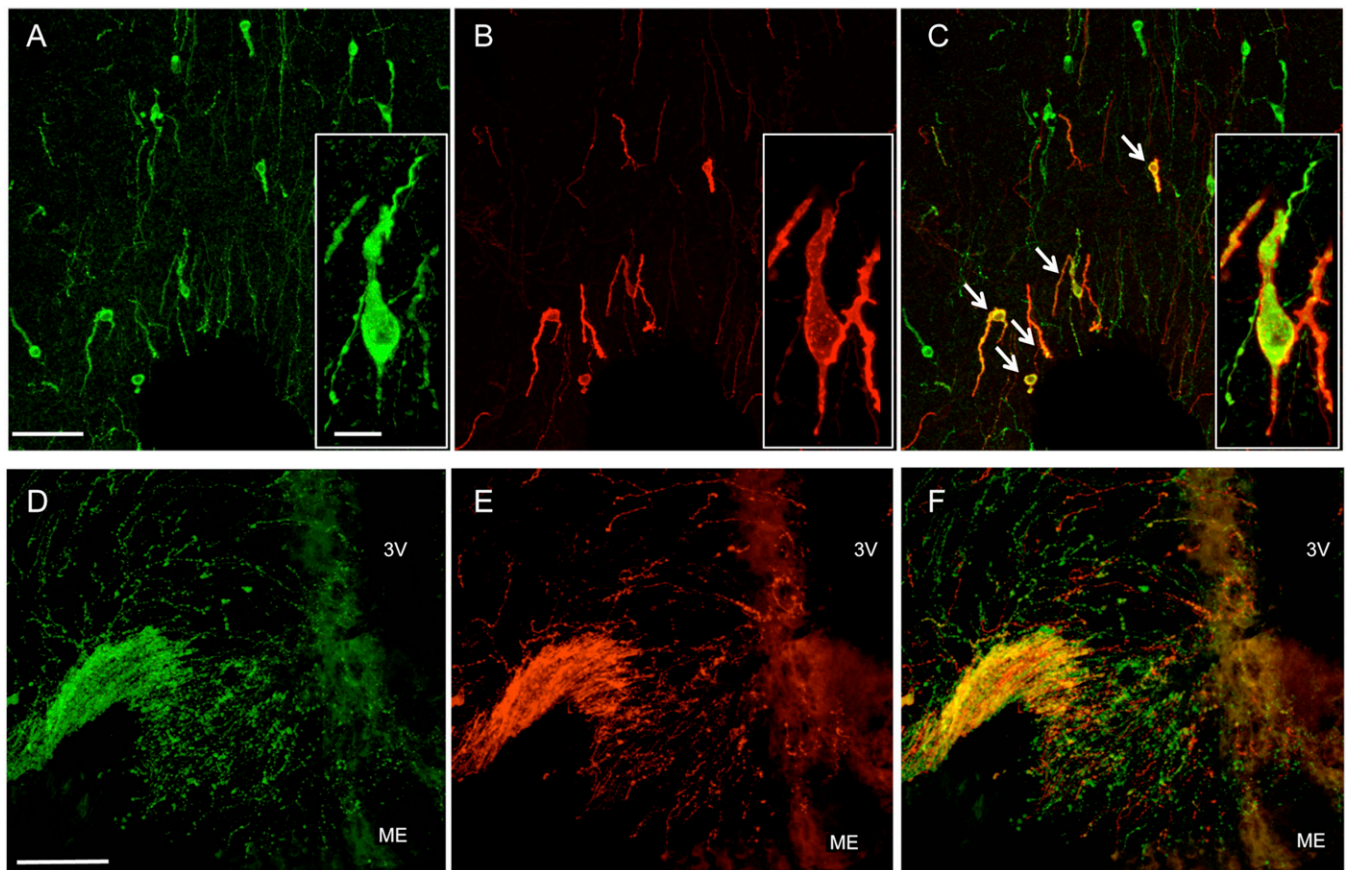


# Supporting Information

Campos and Herbison 10.1073/pnas.1415226112



**Fig. S1.** (A–C) Photomicrographs showing GnRH immunoreactivity (green), mCherry (red), and overlay in the rPOA. White arrows indicate GnRH neurons expressing mCherry. rPOA, rostral preoptic area. (Scale bar, 100  $\mu\text{m}$ .) (Insets) High-power confocal images of GnRH neurons coexpressing mCherry. Note the different cellular distribution of GnRH and mCherry. (Scale bar, 10  $\mu\text{m}$ .) (D–F) Photomicrographs showing GnRH fiber immunoreactivity (green), mCherry (red), and overlay in the region of the median eminence (ME). 3V, third ventricle. (Scale bar, 100  $\mu\text{m}$ .)

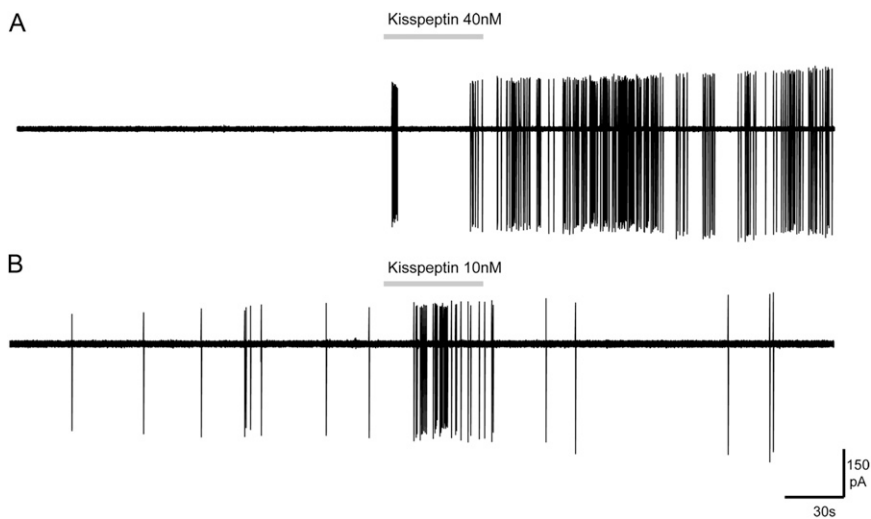


Fig. 52. Representative cell-attached, voltage-clamp traces of action currents from ChR2-expressing GnRH neurons responding to a 1-min application of 40 nM (A) and 10 nM (B) of kisspeptin.

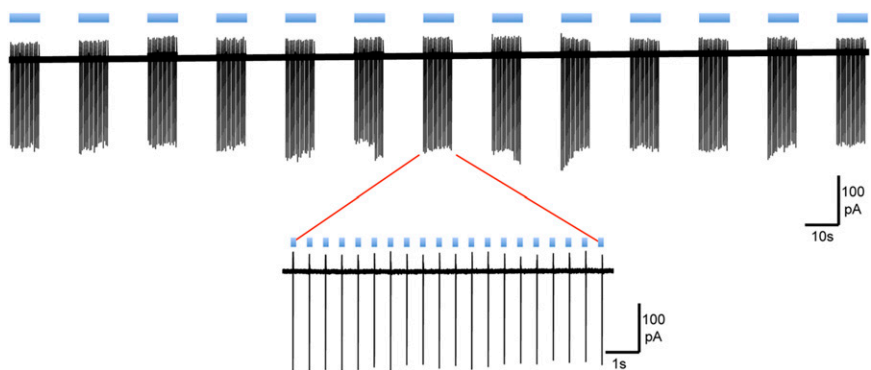


Fig. 53. Representative cell-attached, voltage-clamp trace of action currents from a ChR2-expressing GnRH neuron in response to 5-ms blue-light burst stimulation protocol of 1.9 Hz, 10 s on followed by 15 s of silence repeated. Lower trace shows one 10-s stimulation period at higher magnification.

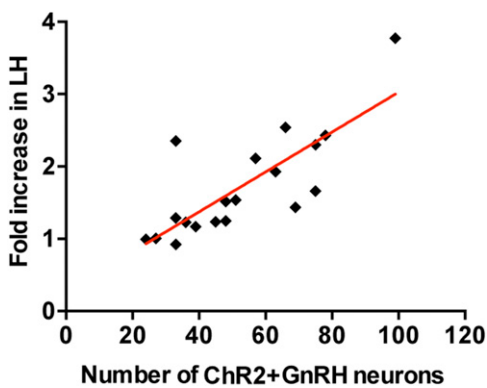


Fig. 54. Relationship between number of ChR2-expressing GnRH neurons in the immediate vicinity of the fiber optic probe and the increment in LH secretion following 10 Hz of activation for 10 min.