An estrogen-sensitive limbic-hypothalamic circuit controls maternal aggression

Summary

Lactating animals across species show aggressive behaviors to protect infants from threats. Importantly, the estrogen surge during pregnancy is believed to stimulate maternal aggression in the lactation period. However, it remains ambiguous how estrogen shapes the maternal brain that drives aggressive behaviors to social threats. Using a series of recording, functional and molecular tools, we found that the surge of estrogen during pregnancy organizes a limbic-hypothalamic circuit that drives maternal aggression through estrogen receptor alpha. Our study reveals an essential role of the limbic-hypothalamic circuit in maternal aggression and highlights the importance of pregnancy estrogen in the formation of maternal aggression circuitry.