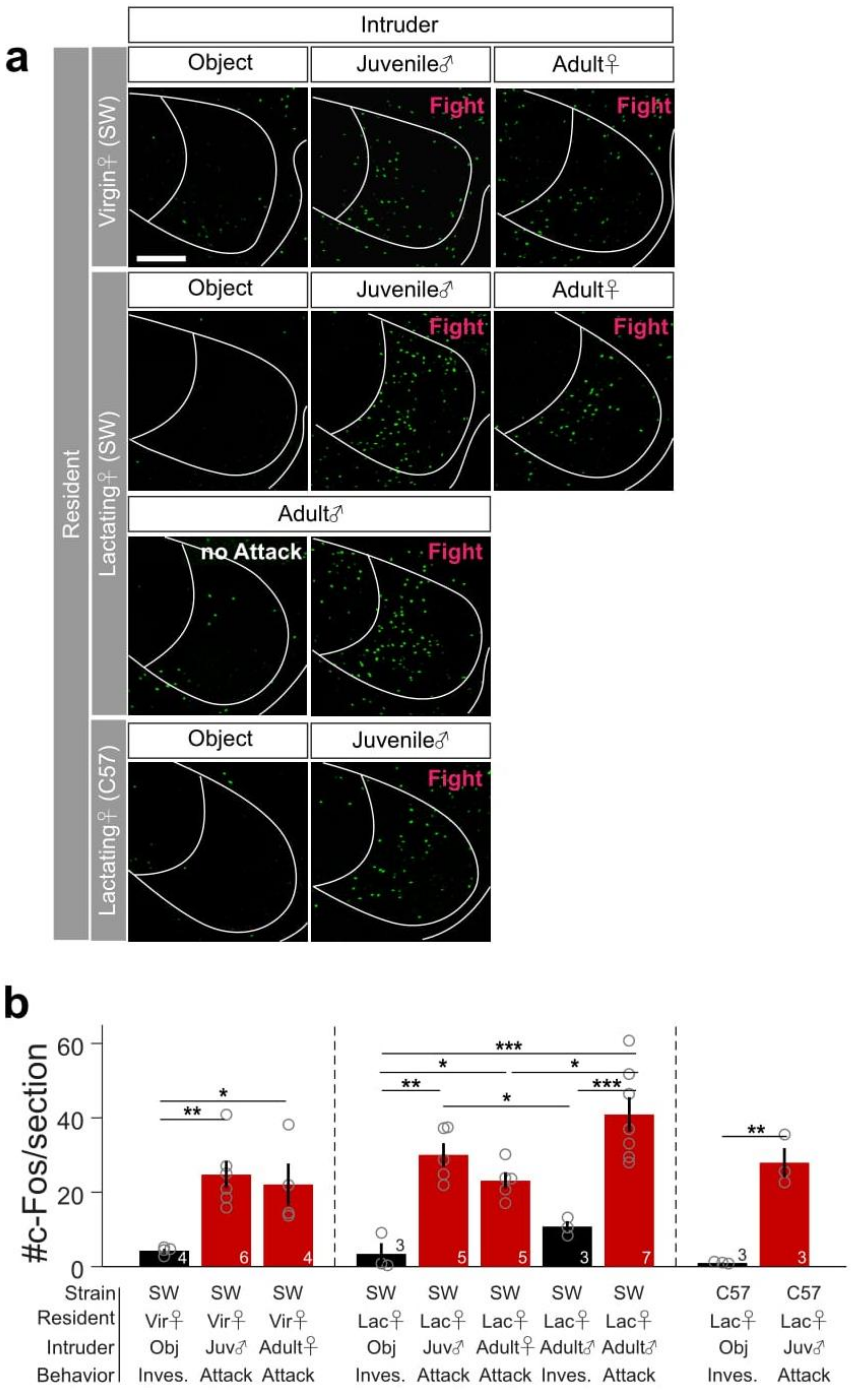
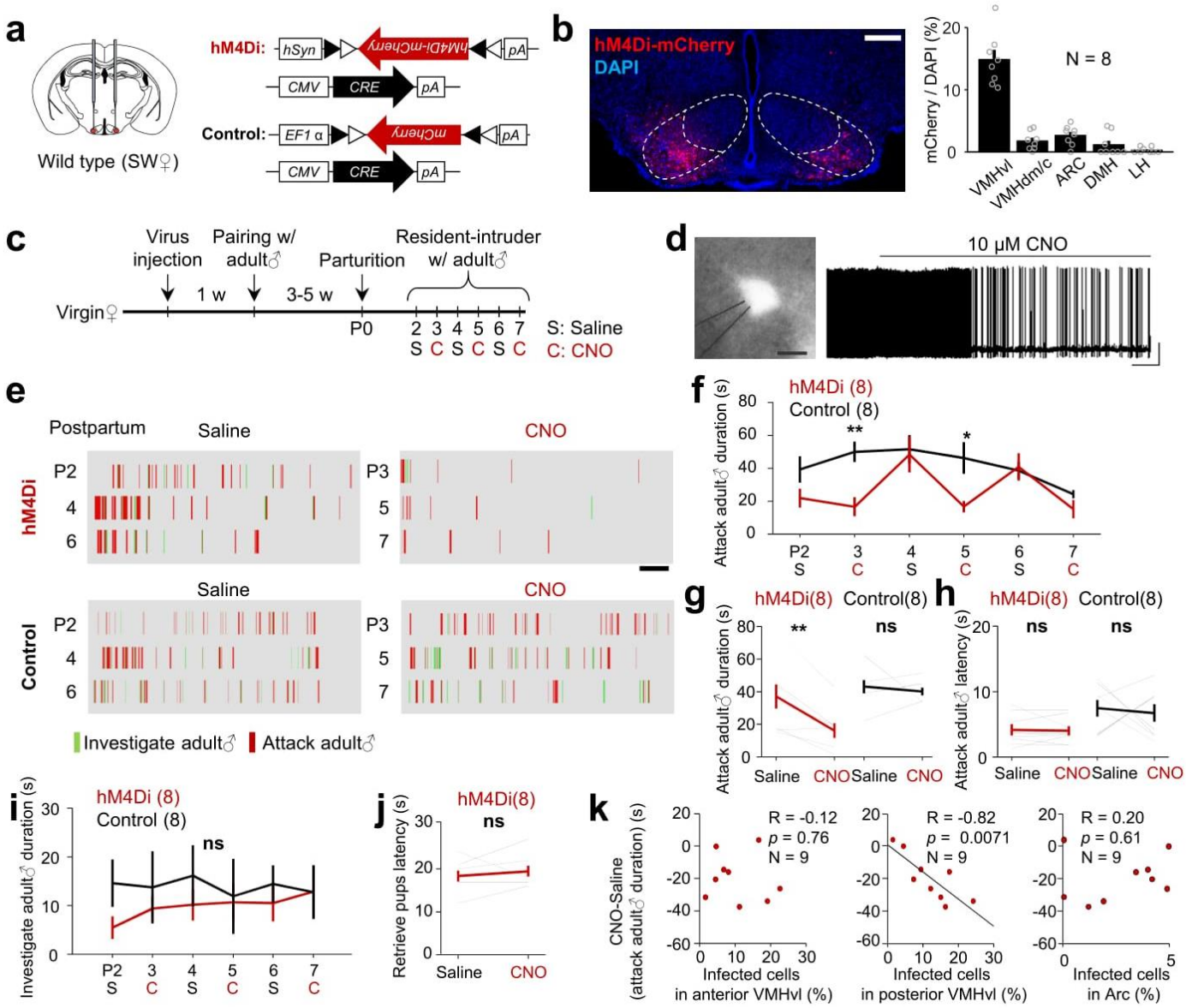


Supplementary Figure 1

The VMHvl is activated by aggression in both virgin and lactating females.

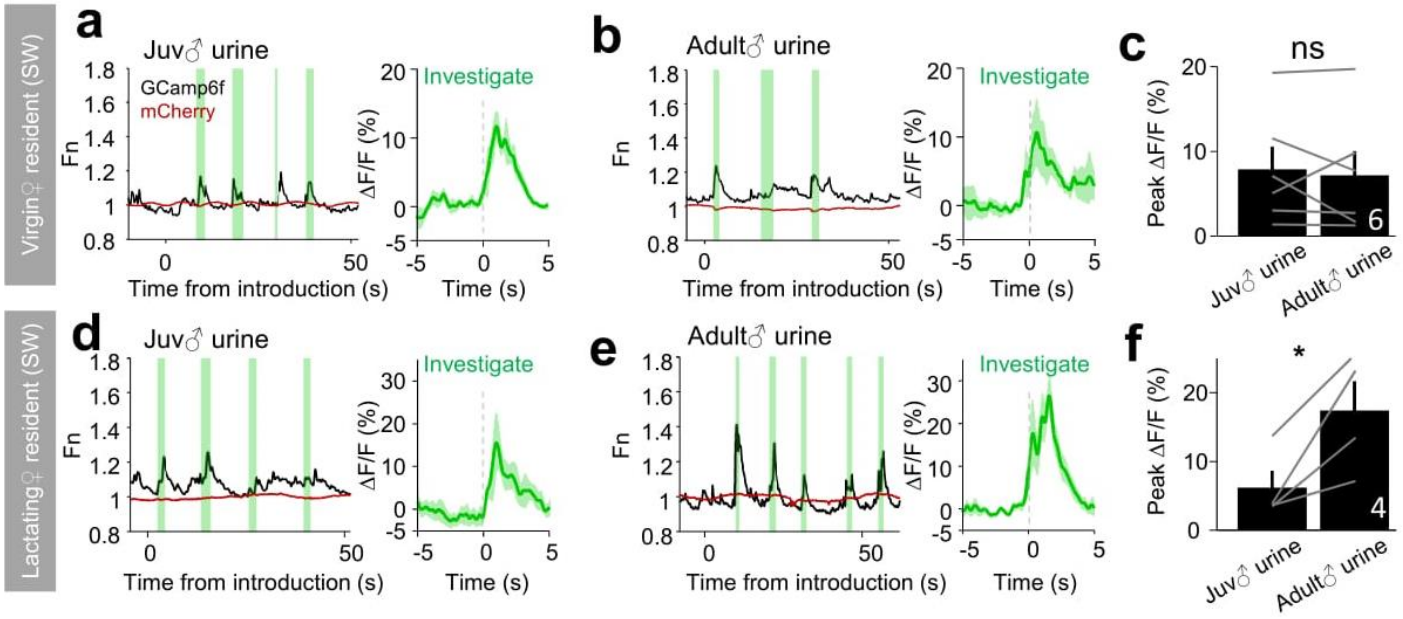
(a) Representative images showing fighting induced c-Fos (green) in the VMHvl in virgin SW female (1st row), lactating SW female (2nd and 3rd rows) and lactating C57 female (4th row) mice. Scale bar: 150 µm. **(b)** Average number of c-Fos+ cells per section in the VMHvl following various test conditions. Inves. : Investigate. Unpaired *t*-test or one way ANOVA followed by Tukey test. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Data are presented as mean ± s.e.m. See also **Supplementary Table 1**.



Supplementary Figure 2

Inhibiting the VMHvl reduces female aggression in wild-type animals.

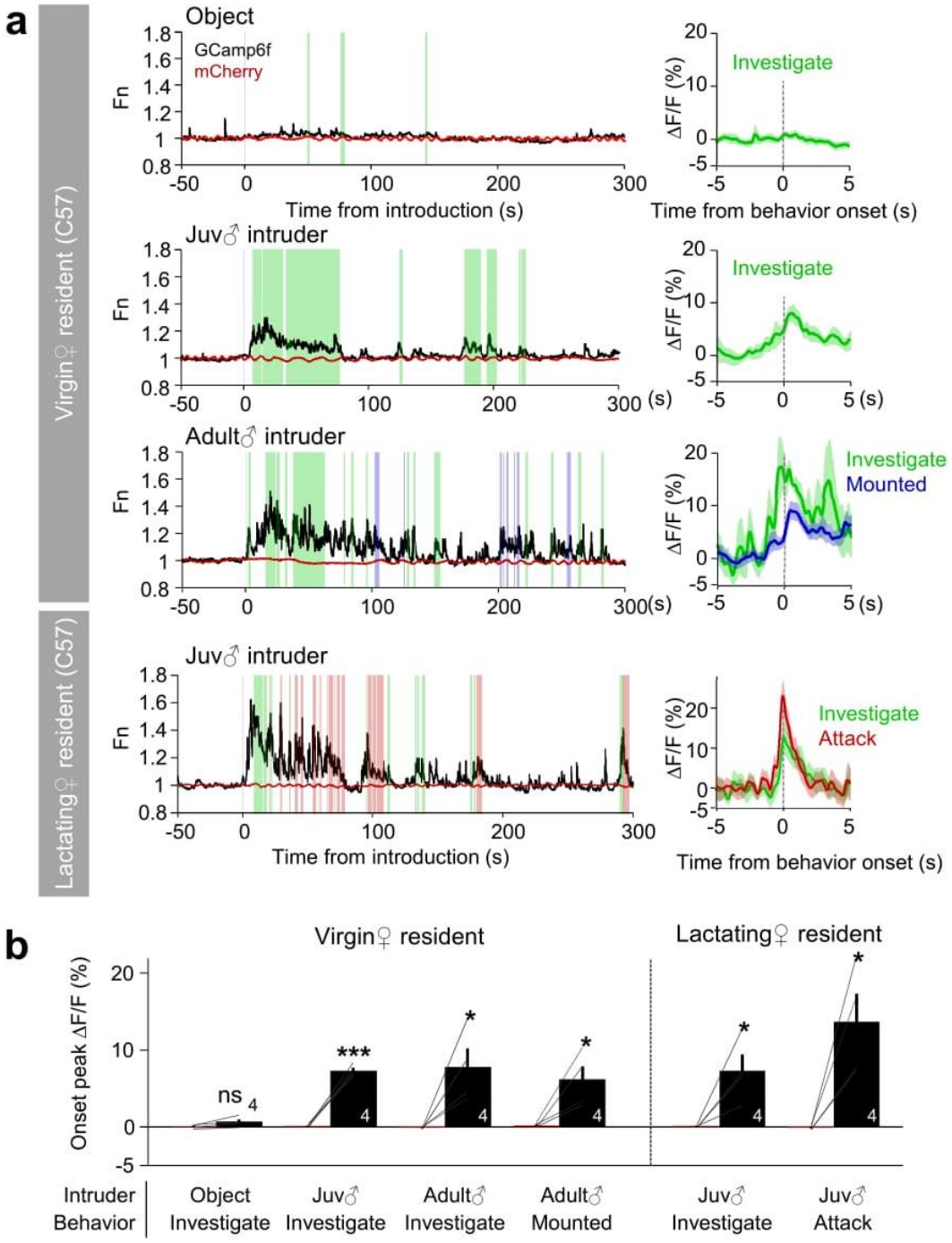
(a) Viral constructs and schematics of the experiment. **(b)** Left: bilateral hM4Di-mCherry expression (red) in the VMHvl of a wild type SW female mouse. Scale bar: 300 μm. Right: percentage of infected cells among all DAPI stained cells in the VMHvl and its surrounding areas. **(c)** Timeline of the experiment. **(d)** Whole-cell patch clamp recording from a hM4Di-mCherry^{+} VMHvl neuron on a brain slice. Scale bars: 10 μm (left); 30 s and 20 mV (right). **(e)** Representative raster plots illustrating the effect of CNO injection on aggression (red) and investigation (green) towards an adult male intruder from animals in hM4Di group (top) and control group (bottom). Scale bar: 60 s. **(f)** Attack duration on each day after saline (S) and CNO (C) injection. **(g-h)** In comparison to saline injection, CNO injection **(g)** reduced attack duration (**h**) but did not change latency to attack. **(i)** Investigation duration and **(j)** time required to retrieve four pups were not changed after CNO injection. **f-j** only includes animals with over 10% of infected cells in the VMHvl and less than 5% of infected cells in regions outside of the VMHvl. **(k)** Changes in attack duration after CNO injection was correlated with the percentage of infected cells in the posterior VMHvl (middle) but not that in the anterior VMHvl (left) or Arc (right). **k** includes all animals with attack duration over 20 s on saline days regardless of the percentage of infected cells. **g, h, j:** paired *t*-test; **f, i:** Two-way repeated measure ANOVA followed by Holm-Sidak post-hoc multiple comparisons. **k:** Pearson product-moment correlation. $^{*}p < 0.05$, $^{**}p < 0.01$.



Supplementary Figure 3

Responses of VMHvl Esr1^{+} neurons to conspecific olfactory cues.

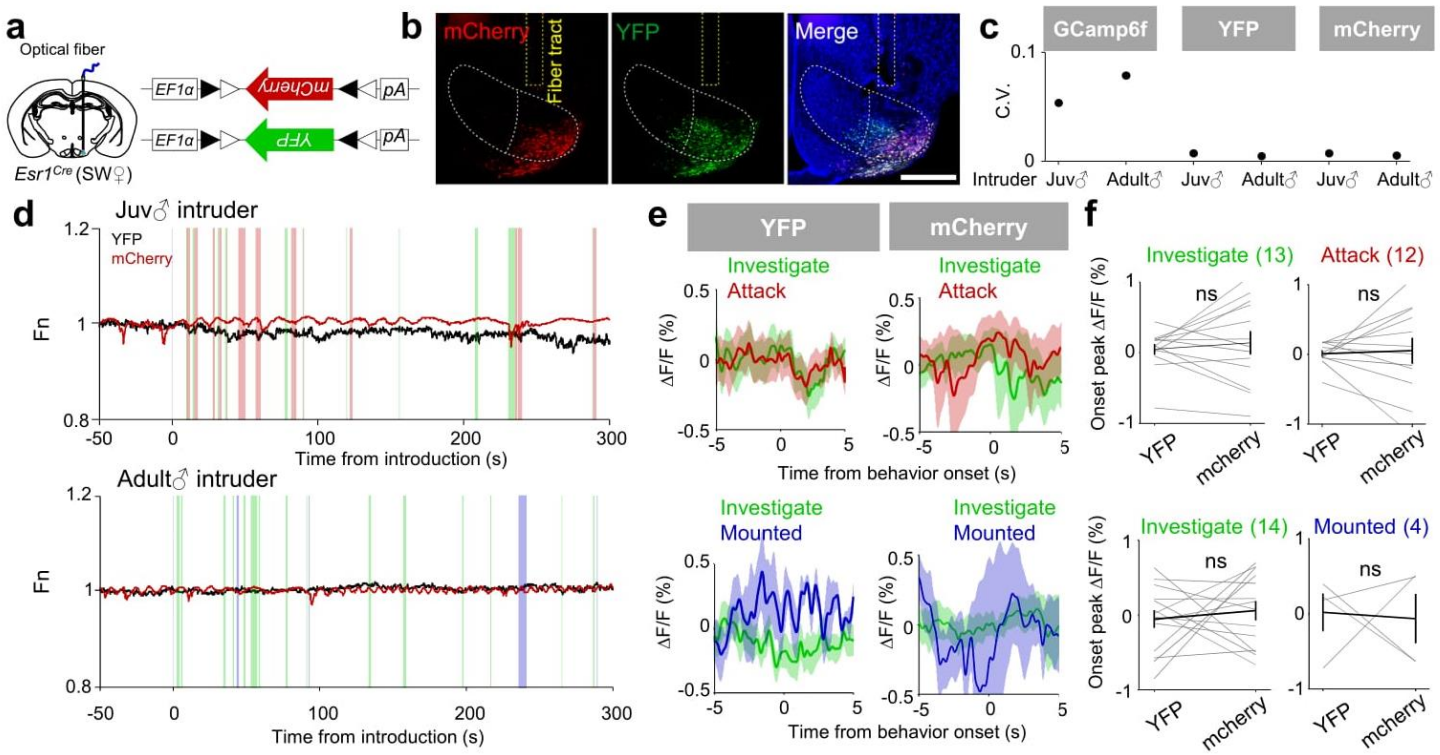
(a, b, d, e) (left): Normalized GCaMP6f (black) and mCherry (red) traces when a virgin or a lactating SW female resident investigated juvenile or adult male urine. Green shades mark periods of investigation; (right): PETHs of GCaMP6f signal aligned to the onset of investigation. **(c, f)** The peak ΔF/F of GCaMP6f signals during investigating urine in (**c**) virgin females or (**f**) lactating females. Note that adult male urine elicited significantly higher VMHvl responses in lactating but not virgin females. Paired *t*-test. * $p < 0.05$. Data are presented as means ± s.e.m.



Supplementary Figure 4

VMHvl Esr1^{+} neurons are activated during fighting or mating in female C57BL/6 mice.

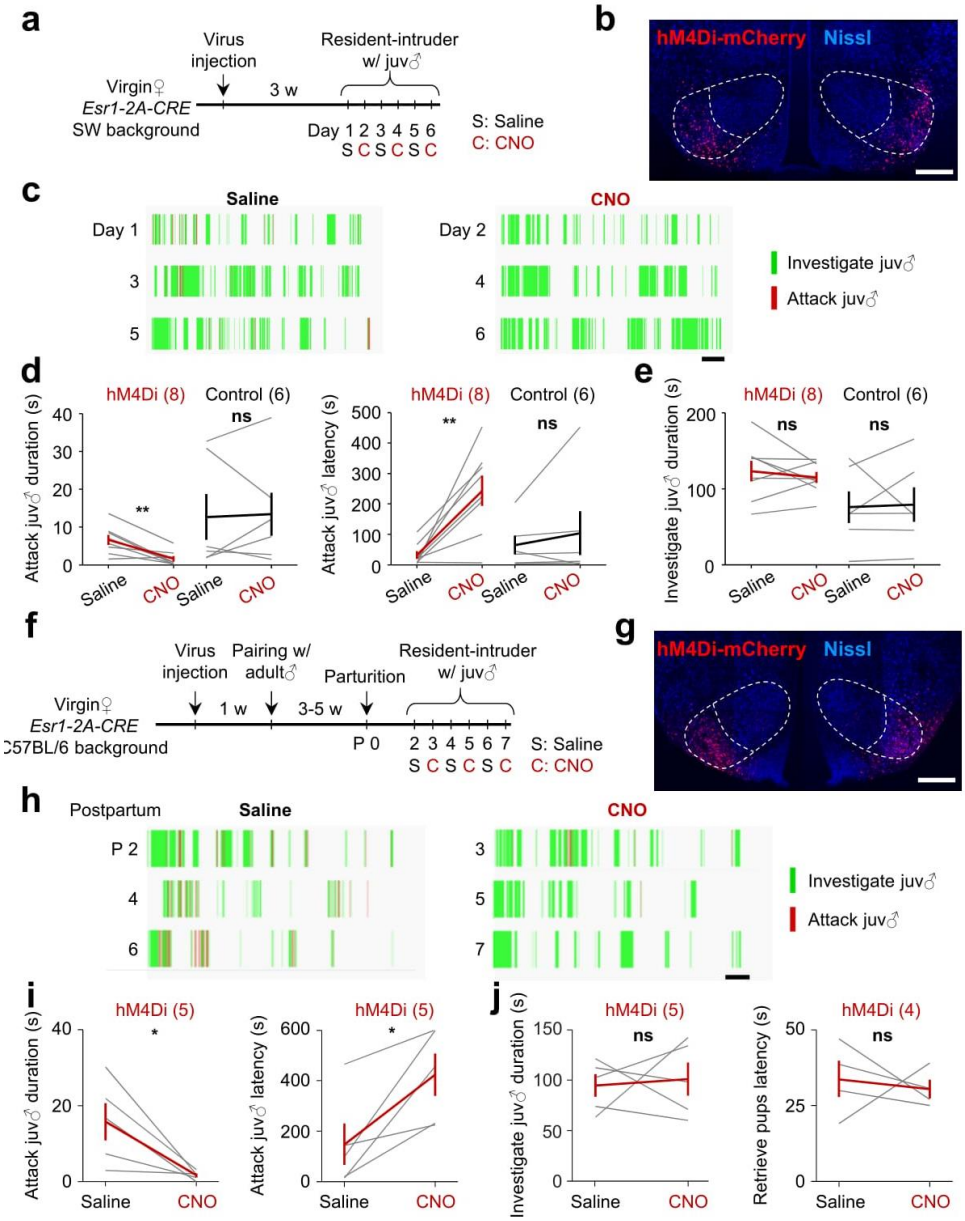
(a) (left): Representative normalized GCaMP6f (black) and mCherry (red) traces during interaction with an object or various social stimuli introduced into the home cage of the test female. Colored shades mark behavioral episodes. Green: investigation; Blue: mounted; Red: attack. (right) PETHs of GCaMP6f signal aligned to the onset of various behaviors. **(b)** The peak ΔF/F of GCaMP6f (black) and mCherry (red) signals during various behaviors in virgin and lactating C57BL/6 female. Paired *t*-test. $^{*}p < 0.05$, $^{***}p < 0.001$. Data are presented as means ± s.e.m.



Supplementary Figure 5

Control fluorophores show minimal fluctuation in fluorescence during social interactions.

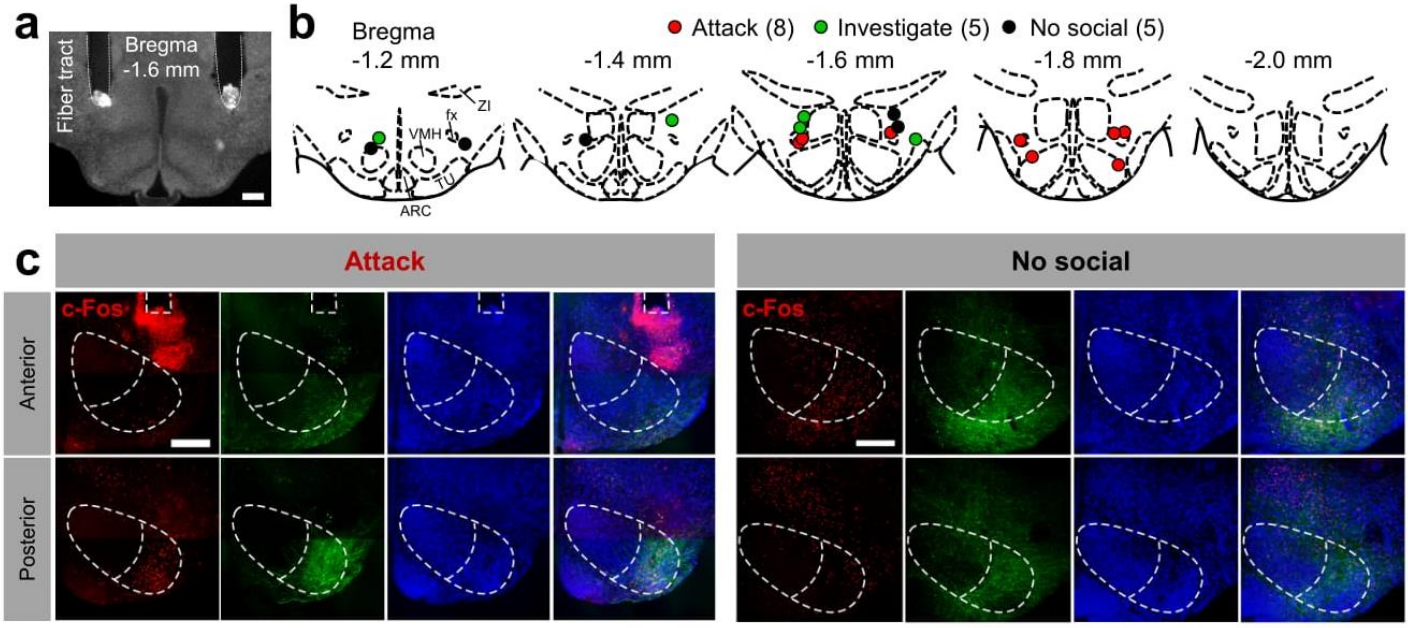
(a) Experimental scheme. YFP and mCherry were conditionally expressed in Esr1^{+} neurons in the VMHvl. (**b**) Representative images showing mCherry (red), YFP (green), Nissl (blue) and optical fiber tract (yellow dashed line). Scale bar: 300 μm. (c) Coefficient of variation of GCamp6f, YFP and mcherry signals during encounters with a juvenile or an adult male intruder. **(d)** Representative normalized simultaneously recorded YFP (black) and mCherry (red) traces during interaction with various social stimuli introduced into the home cage of the test female. Colored shades mark behavioral episodes. Green: investigation; Blue: mounted; Red: attack. **(e)** PETHs of YFP (left) and mCherry (right) signals aligned to the onset of various behaviors. **(f)** Comparison of the peak ΔF/F of YFP and mCherry signals during various behaviors. Paired *t*-test. Data are presented as means ± s.e.m.



Supplementary Figure 6

Inactivation of Esr1^{+} neurons in the VMHvl reduced aggression in virgin *Esr1-2A-Cre* mice with a SW background and in lactating *Esr1-2A-Cre* mice with a C57 background.

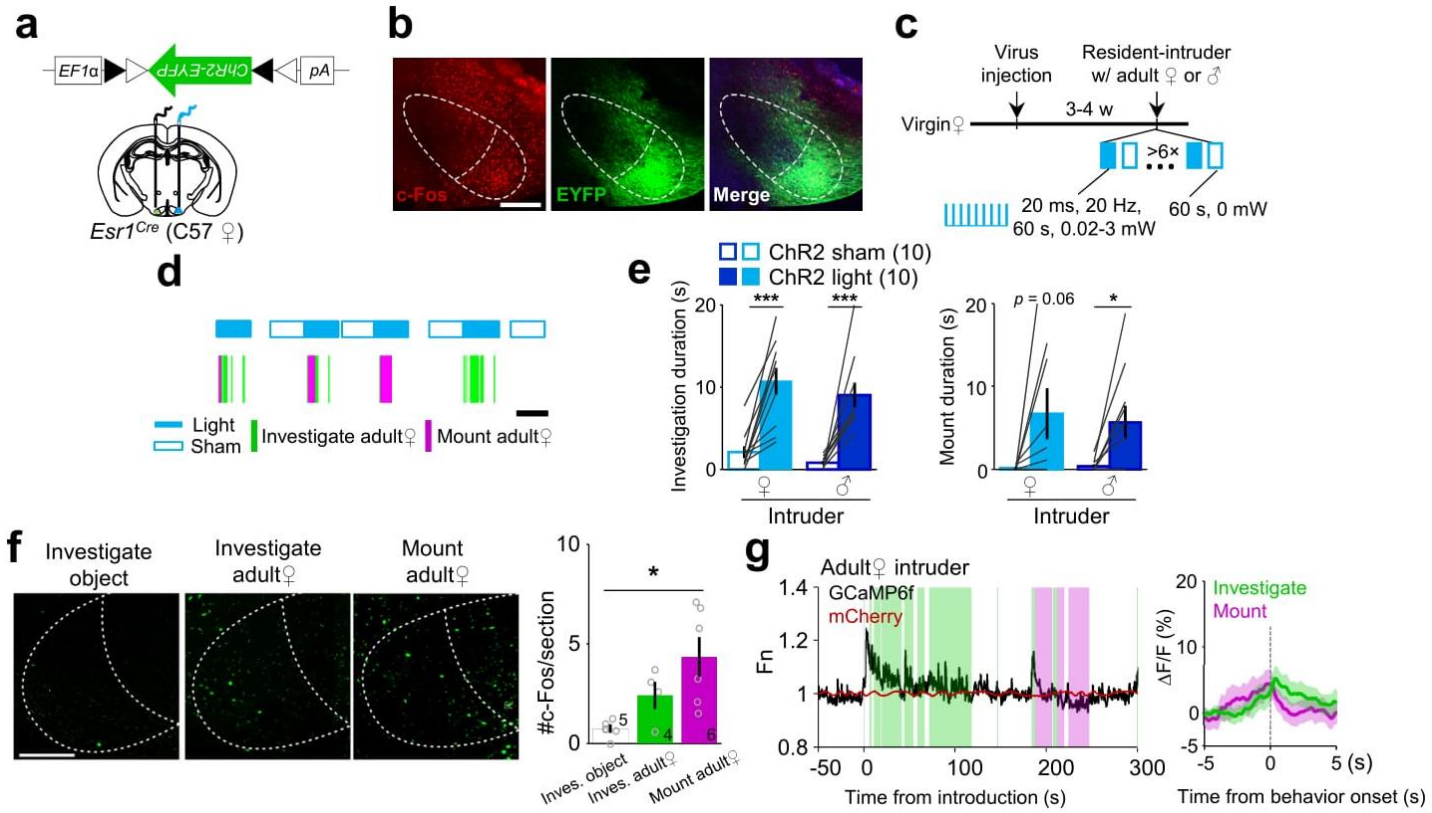
(a) Experimental schedule. **(b)** A representative image showing bilateral hM4Di-mCherry expression (red) in the VMHvl. Blue: Nissl. Scale bar: 300 μm. **(c)** Representative raster plots illustrating effect of CNO injection on aggression (red) and investigation (green) towards a juvenile male intruder. Scale bar: 60 s. **(d)** CNO injection significantly reduced attack duration (left) and increased latency to attack a juvenile male intruder (right) in hM4Di group (red), but not in control group (black). **(e)** The investigation duration after CNO injection did not change in comparison to that after saline injection. Results from all CNO (saline) days were first averaged and then compared. **(f)** Experimental schedule. **(g)** A representative image showing bilateral hM4Di-mCherry expression (red) in the VMHvl. Blue: Nissl. Scale bar: 300 μm. **(h)** Representative raster plots illustrating effect of CNO injection on aggression (red) and investigation (green) towards a juvenile male intruder. Scale bar: 60 s. **(i)** CNO injection significantly reduced attack duration (left) and increased latency to attack a juvenile male intruder (right). **(j)** The investigation duration (left) and the time spent to retrieve four pups (right) after CNO injection did not change in comparison to that after saline injection. **d, e, i and j**: paired *t*-test, **p* < 0.05, ***p* < 0.01. Data are presented as means ± s.e.m.



Supplementary Figure 7

Esr1^{+} neurons in the posterior VMHvl are critical for eliciting attack in female mice.

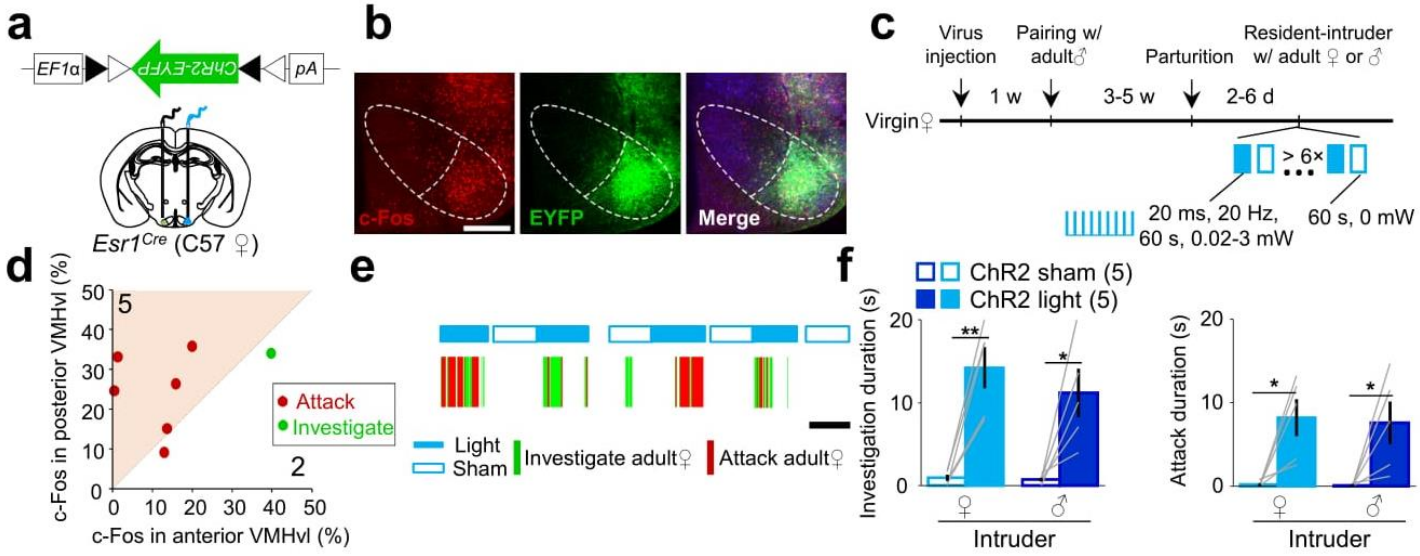
(a) A representative image showing tracks of optic fibers over the VMHvl. Scale bar: 300 μm. **(b)** The ending points of the optic fibers in all tested sites with >10% light induced c-Fos. Color indicates the type of light induced behavior. **(c)** Representative images illustrating light induced c-Fos (red), ChR2-EYFP (green), and Nissl (blue) in the anterior and posterior VMHvl of an attack-inducible site (left) and a site that no social behavior could be induced (right). Scale bars: 300 μm.



Supplementary Figure 8

Activation of Esr1^{+} neurons in the VMHvl induces mounting in virgin female mice with a C57BL/6 background.

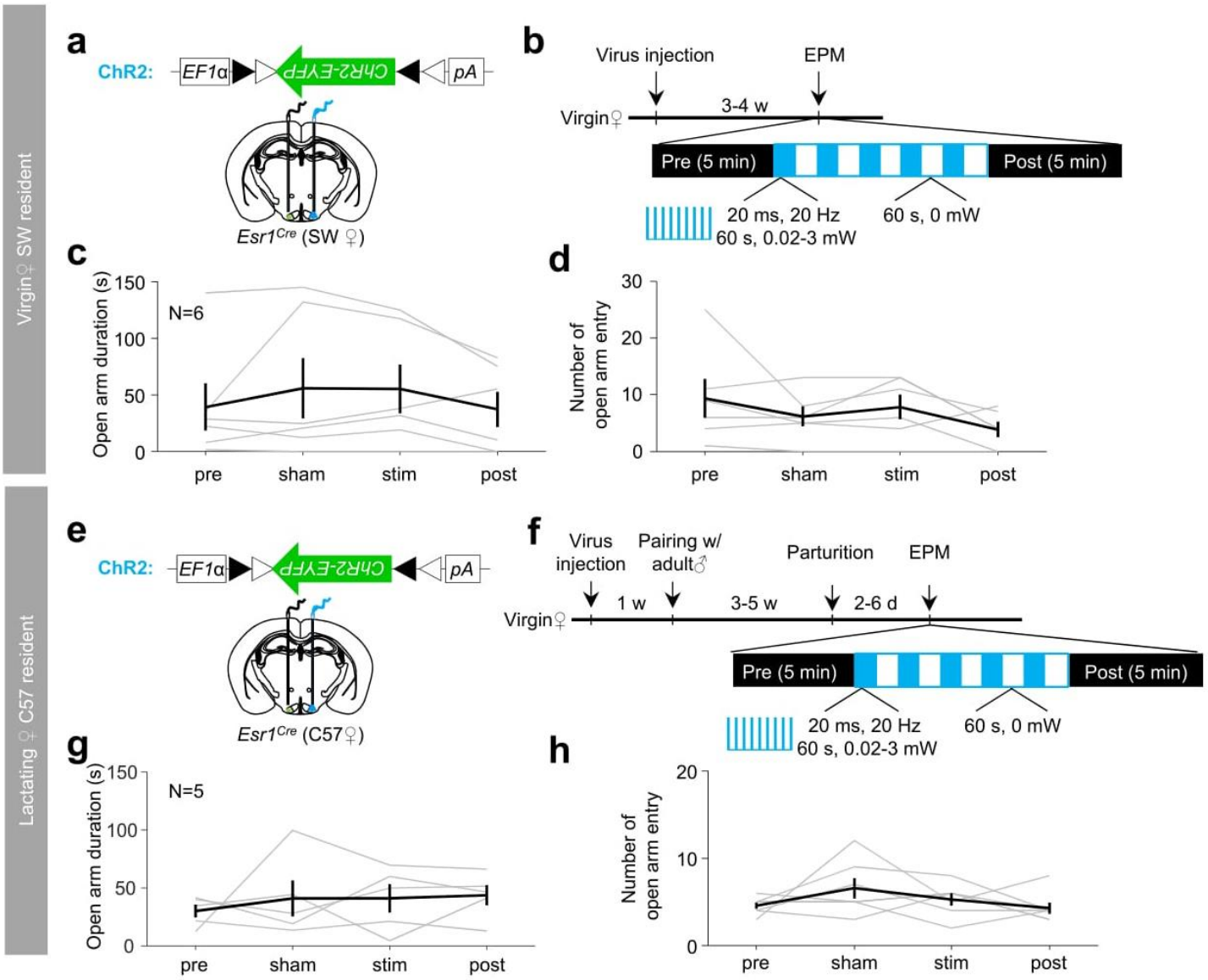
(a) Experimental scheme. **(b)** ChR2-EYFP (green) and light-induced c-Fos (red) at an injection site. Scale bar: 300 μm. **(c)** Experimental schedule. **(d)** Representative raster plots illustrating light-induced behaviors towards a female intruder. Scale bar: 60 s. **(e)** Across all stimulated sites, light activation significantly increased the duration of investigation (left) and mounting (right) towards either an adult female or an adult male intruder. Paired *t*-test. **(f)** Left: representative images showing c-Fos expression in the VMHvl of virgin C57BL/6 mice after various testing conditions. Scale bar: 150 μm. Right: average number of c-Fos cells per section. Tukey test after one-way ANOVA. **(g)** Left: representative normalized GCaMP6f (black) and mCherry (red) traces during interaction with an adult female introduced into the home cage of the test female. Colored shades mark behavioral episodes. Green: investigation; purple: mount. Right: PETHs of GCaMP6f signal aligned to the onset of various behaviors. $^{*}p < 0.05$, $^{***}p < 0.001$. Data are presented as means ± s.e.m.



Supplementary Figure 9

Activation of Esr1^{+} neurons in the VMHvl induces attack in lactating C57BL/6 female mice.

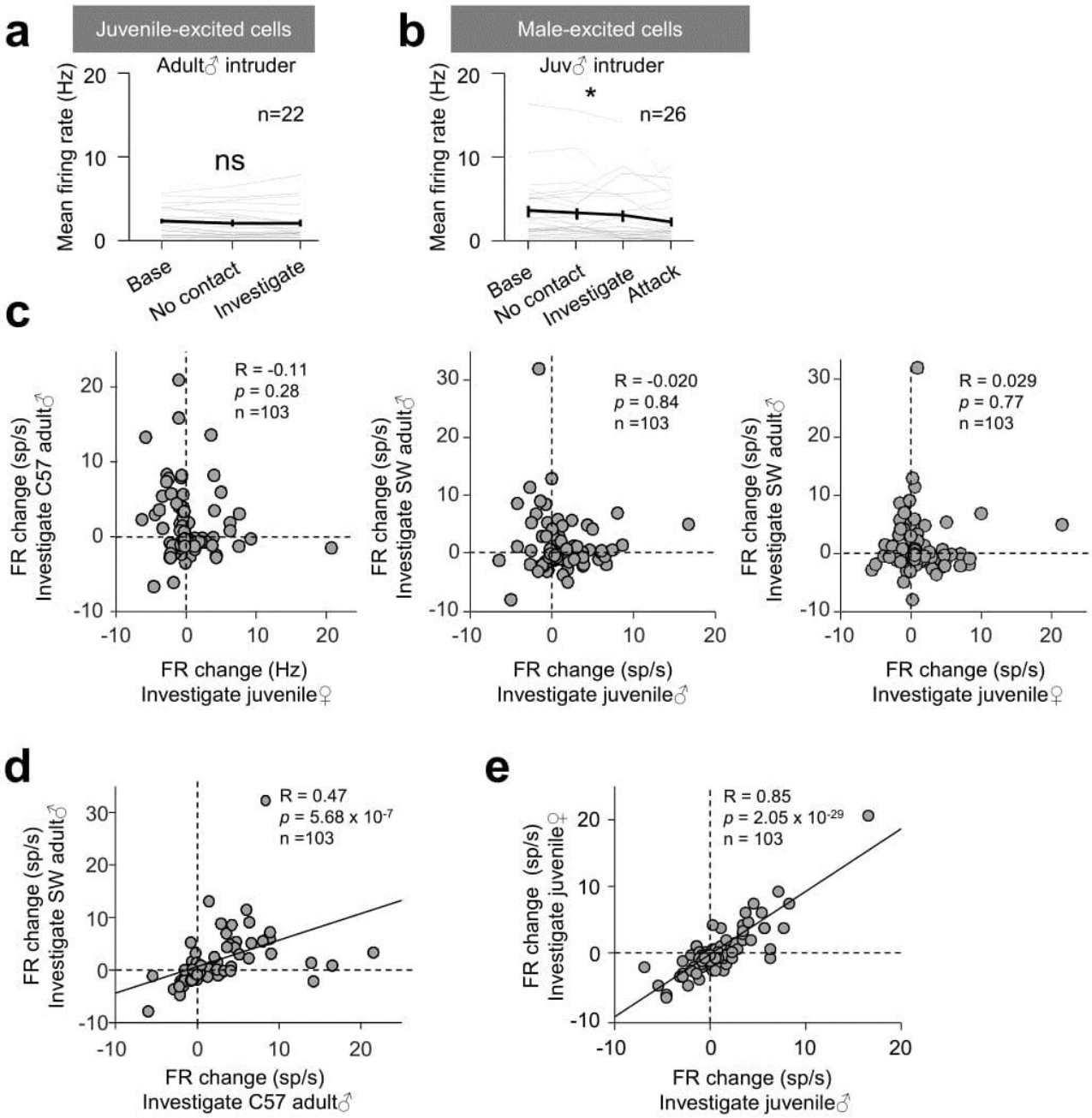
(a) Experimental scheme. **(b)** Representative histological pictures showing the ChR2-EYFP expression (green) and c-Fos (red) at an injection site. Scale bar: 300 µm. **(c)** Experimental schedule. **(d)** The percentage of VMHvl cells expressing light-induced c-Fos in the anterior vs. posterior VMHvl of all tested sites. **(e)** Representative raster plots illustrating light-induced behaviors towards a female intruder. Scale bar: 60 s. **(f)** Light activation of posterior VMHvl sites increased investigation (left) and attack (right) duration towards either an adult female or male intruder. Paired *t*-test, $^{*}p < 0.05$, $^{**}p < 0.01$. Data are presented as means ± s.e.m.



Supplementary Figure 10

Optogenetic activation of VMHvl Esr1^{+} cells does not affect anxiety state.

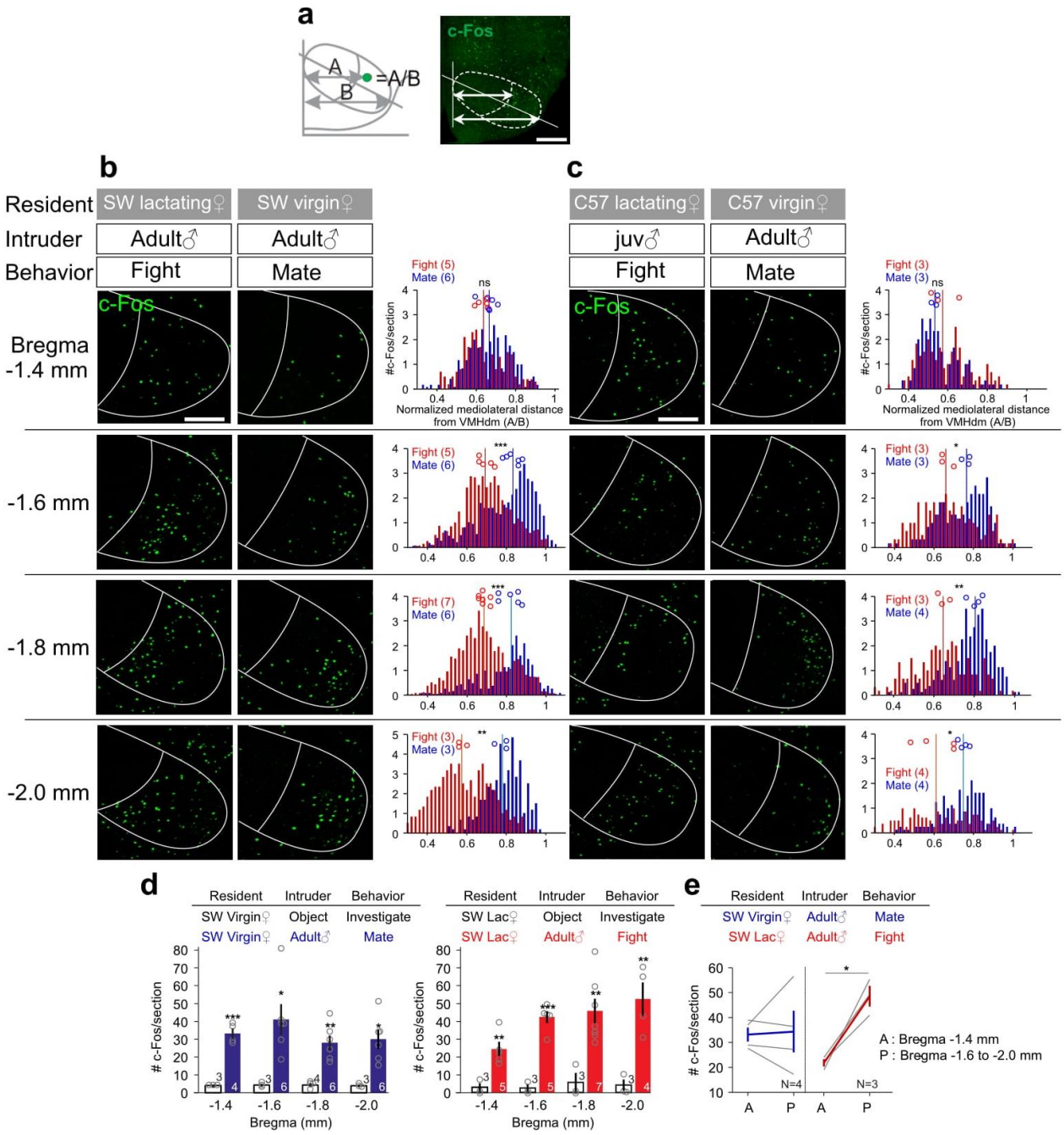
(a, e) Experimental scheme. **(b, f)** Experimental schedule. EPM: elevated plus maze. **(c, d, g, h)** No difference was found in (**c, g**) the time spent in in open arm or (**d, h**) the number of entry into the open arm during pre-stimulation, sham-on, light-on, and post-stimulation periods in (**c, d**) SW virgin female and (**g, h**) C57BL/6 lactating females. One-way ANOVA followed by Holm-Sidak post-hoc multiple comparisons. Data are presented as means ± s.e.m.



Supplementary Figure 11

Comparing responses of VMHvl neurons to juveniles and adult males in female mice.

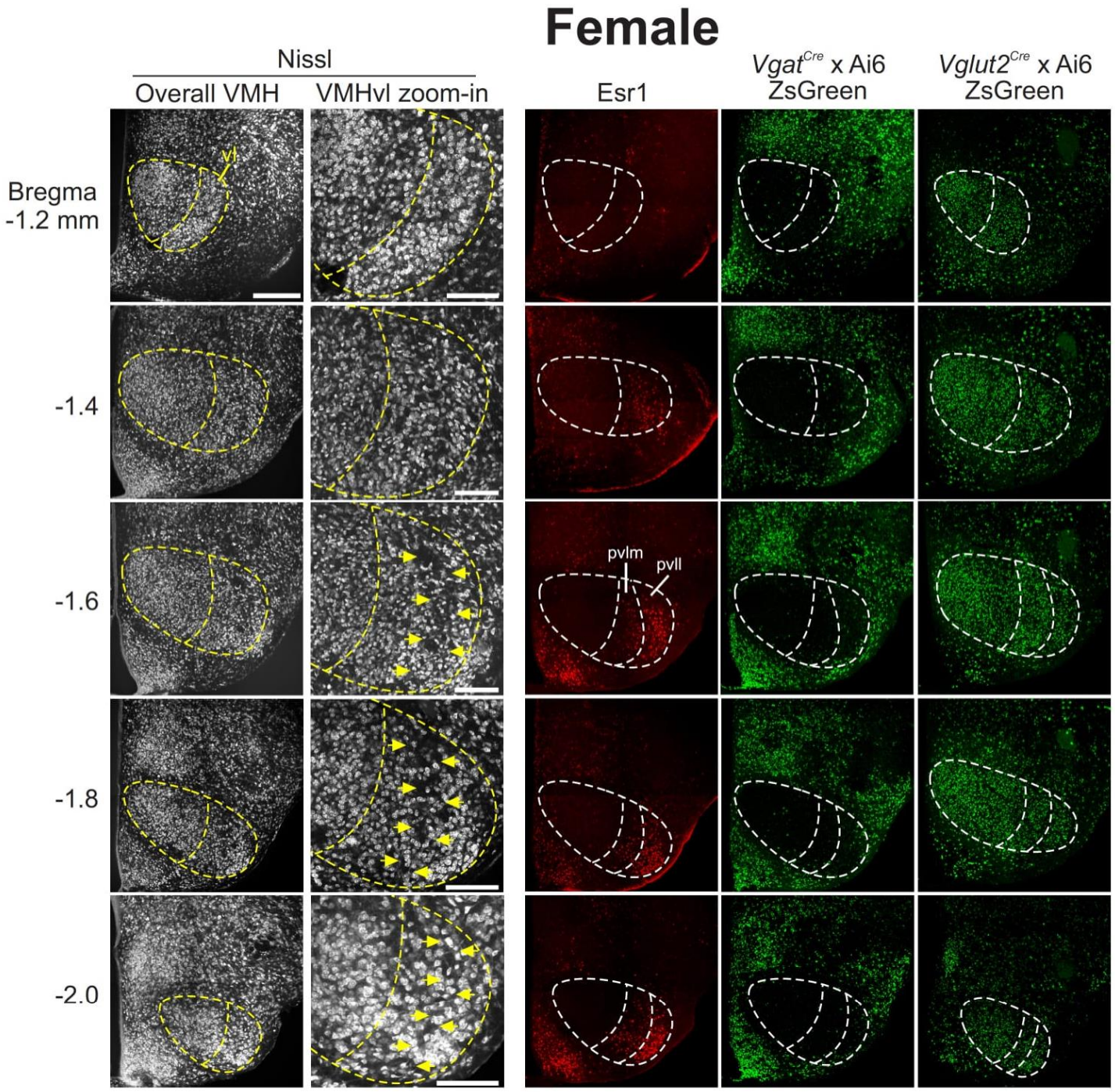
(a) Firing rates of juvenile-excited cells before adult male introduction (base) and during investigating or staying away (no contact) from the adult male. **(b)** Firing rates of male-excited cells before juvenile male introduction (base) and when the recorded animal investigated, attacked or stayed away from the juvenile male. Only male-excited cells with attacking juvenile episodes are shown. **(c-e)** Distributions of the firing rate changes during investigation of a juvenile male, a juvenile female and two strains of adult males in all 103 recorded cells. **a and b**: One-way ANOVA followed by Holm-Sidak post-hoc multiple comparisons; *p <0.05; **c-e:** Pearson product-moment correlation.



Supplementary Figure 12

Fighting- and mating-related populations are topographically organized in the VMHvl in both SW and C57 females.

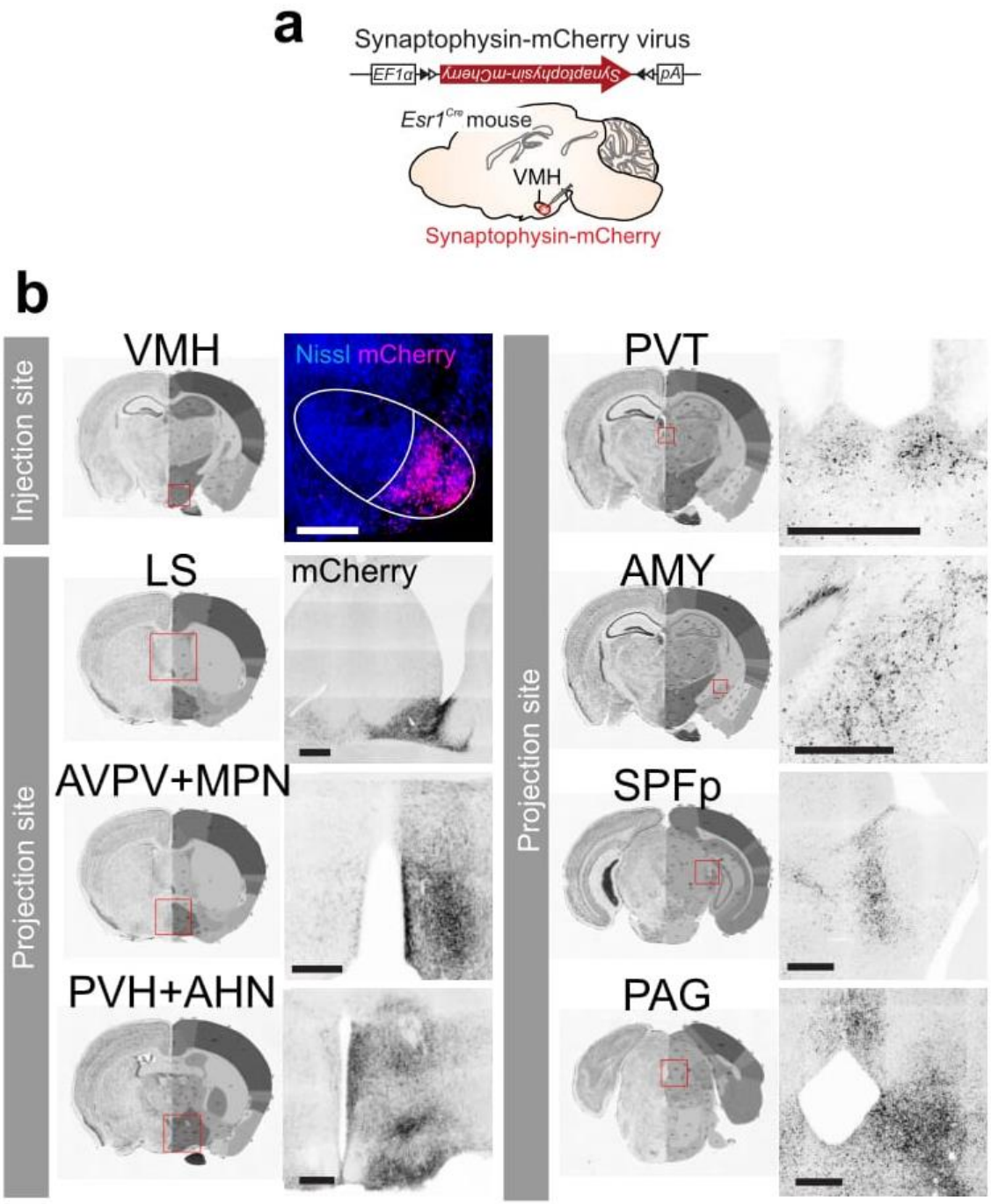
(a) Schematic illustration of how the mediolateral distances of c-Fos$^+$ cells were measured. Scale bar: 300 μm. **(b, c)** (left, middle) Representative images showing fighting (left) or mating (middle) induced c-Fos. (right) Distributions of the mediolateral distances of c-Fos$^+$ cells after fighting (red) or mating (blue) in females (b, SW; c, C57BL/6N) at Bregma levels -1.4, -1.6, -1.8 and -2.0 mm (N = 3-7 animals). Dashed line indicates the median value of the mediolateral distance of each group. **(d)** The number of c-Fos$^+$ cells per section in the VMHvl along the anterior-posterior axis (N = 3-7 animals). **(e)** The number of c-Fos$^+$ cells in the anterior (Bregma level: -1.4 mm) and posterior VMHvl (Bregma level: -1.6mm to -2.0mm) after mating (blue, left) and fighting (red, right). Sections were occasionally not successfully collected resulting in different sample size at different Bregma level. Data are presented as means ± s.e.m**. b, c, d:** unpaired *t*-tests. **e:** paired *t*-test. $^*p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.



Supplementary Figure 13

Neuronal staining revealed subcompartments in the female VMHvl.

The left four columns showing Nissl (white), Esr1 (red), and ZsGreen (green) of female *Vgat-ires-Cre* × Ai6 mice in the hypothalamus from Bregma level -1.2 to -2.0 mm. The rightmost column shows ZsGreen of a female *Vglut2-ires-Cre* × Ai6 mouse. The outlines of the VMHpvlm and VMHpvll are determined based solely on Nissl and then overlaid onto the Esr1 and ZsGreen images. Yellow arrows indicate the gap between the VMHpvlm and VMHpvll. Note that the VMHpvlm and pvll match the expression of Esr1 and Vglut2. Scale bars: 300 μm (first column) and 150 μm (second column).



Supplementary Figure 14

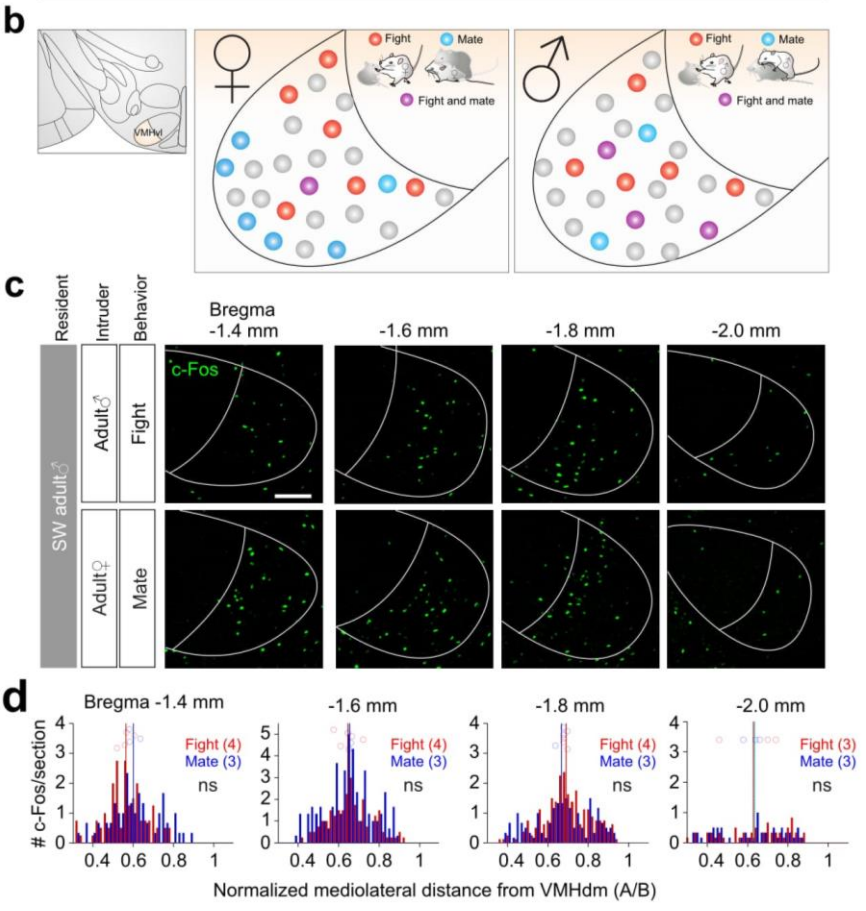
Projections of Esr1^{+} cells in the female VMHvl.

(a) Experimental scheme. **(b)** mCherry (red) expressing cells in the VMHvl and major terminal fields of VMHvl Esr1^{+} neurons at various brain regions. LS: lateral septum, AVPV: anteroventral periventricular nucleus, MPN: medial preoptic nucleus, PVH: paraventricular nucleus of hypothalamus, AHN: anterior hypothalamic nucleus, PVT: paraventricular thalamus, AMY: amygdala, SPFp: subparafascicular nucleus thalamus, parvicellular part. PAG: periaqueductal gray. Coronal brain atlas is from Allen Brain Atlas (http://www.brain-map.org). Scale bars: 300 μm

a

Strain	Manipulation	Resident	Intruder	Attack	Investigation	Figure
SW, WT	Silencing (hM4Di)	Lactating♀	Adult♂	↓	→	Fig. S2
SW, *Esr1*^{cre}	Silencing (hM4Di)	Lactating♀	Juvenile♂	↓	→	Fig. 3
			Adult♂	↓	→	Fig. 3
		Virgin♀	Juvenile♂	↓	→	Fig. S6
	Activation (ChR)	Virgin♀	Adult♀	↑	↑	Fig. 4
			Adult♂	↑	↑	Fig. 4

Strain	Manipulation	Resident	Intruder	Attack	Mount	Investigation	Figure
C57, *Esr1*^{cre}	Silencing (hM4Di)	Lactating♀	Juv♂	↓	—	→	Fig. S6
	Activation (ChR)	Virgin♀	Adult♀	→	↑	↑	Fig. S8
			Adult♂	→	↑	↑	Fig. S8
		Lactating♀	Adult♀	↑	—	↑	Fig. S9
			Adult♂	↑	—	↑	Fig. S9



Supplementary Figure 15

The sexually dimorphic organization of aggression-related and mating-related populations in the VMHvl.

(a) Summary of all the functional manipulation experiments in our study. **(b)** Schematic illustrating topographic organization of aggression and mating related populations in the VMHvl of male and female mice. **(c)** Representative images showing fighting or mating induced c-Fos (green) in the VMHvl of SW male mice. Scale bar: 150 μm. **(d)** Spatial distributions of fighting and mating induced c-Fos in the male VMHvl are similar. The distributions of the mediolateral distances of c-Fos^{+} cells at different Bregma levels after mating (blue) or fighting (red) in males. Dashed line indicates the median value of the mediolateral distance of each group. Unpaired *t*-test. All *p* values above 0.1.

Supplementary table 1

Resident \ Intruder	Adult♂	Juvenile♂	Adult♀
Virgin♀(SW)	Mate	Attack 78.9% (30/38) Mount 0% (0/38)	Attack 60% (6/10) Mount 0% (0/10)
Virgin♀(C57)	Mate	Attack 0% (0/10) Mount 30% (3/10)	Attack 0% (0/10) Mount 60% (6/10)
Lactating♀(SW)	Attack 88.5% (23/26) Mount 0% (0/26)	Attack 94.1% (16/17) Mount 0% (0/17)	Attack 80% (8/10) Mount 0% (0/10)
Lactating♀(C57)	Attack 42.1% (8/19) Mount 0% (0/19)	Attack 68.4 (13/19) Mount 0% (0/19)	Attack 44.4% (4/9) Mount 0% (0/9)

Supplementary Table 1, Related to Figure 1. Probability of attack or mount when a female mouse encounters an adult male, a juvenile male or an adult female intruder in her home cage. All test females are singly housed for at least one week. All intruders are C57BL/6N background.

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Supplementary Table 2

	TEST USED		n			DESCRIPTIVE STATS (AVERAGE, VARIANCE)		P VALUE		DEGREES OF FREEDOM & F/t/z/R/ETC VALUE	
FIGURE NUMBER	WHICH TEST?	SECTION & PARAGRAPH #	EXACT VALUE	DEFINED?	SECTION & PARAGRAPH #	REPORTED?	SECTION & PARAGRAPH #	EXACT VALUE	SECTION & PARAGRAPH #	VALUE	SECTION & PARAGRAPH #
1a middle	Unpaired t-test	Fig. legend	5, 6	virgin female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig. legend	p = 0.0003	Fig and Fig. legend	t(9)=5.5717	n/a
1a right	Paired t-test	Fig. legend	6	virgin female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig. legend	p = 0.0014	Fig and Fig. legend	t(5)=6.3436	n/a
1b middle	Unpaired t-test	Fig. legend	3, 5	lactating female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig. legend	p = 0.0034	Fig and Fig. legend	t(6)=4.6890	n/a
1b right	Paired t-test	Fig. legend	5	lactating female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig. legend	p = 0.0428	Fig and Fig. legend	t(4)=2.9298	n/a
1c middle	Unpaired t-test	Fig. legend	3, 4	lactating female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig. legend	p = 0.0037	Fig and Fig. legend	t(5)=5.1078	n/a
1c right	Paired t-test	Fig. legend	4	lactating female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig. legend	p = 0.0078	Fig and Fig. legend	t(3)=6.3687	n/a
1d middle	Unpaired t-test	Fig. legend	5, 3	virgin female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig. legend	p = 0.0006	Fig and Fig. legend	t(6)=6.5737	n/a
1d right	Paired t-test	Fig. legend	3	virgin female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig. legend	p = 0.0007	Fig and Fig. legend	t(2)=38.5744	n/a
2d right	Pearson product-moment correlation	Fig. legend	n=731	seconds	Fig and Fig. legend	individual data plots	Fig. legend	p = 0.0859	Fig and Fig. legend	R = 0.0636	Fig.
2j	Paired t-test	Fig. legend	12, 12, 11, 12, 5	virgin female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig. legend	p =0.4881, p=0.00032, p=0.000077, p=0.000031, p=0.0036	Fig and Fig. legend	t(11)=0.7174, t(11)=5.1444, t(10)=6.4108, t(11)=6.7634, t(4)=6.1375	n/a
2k	Paired t-test	Fig. legend	6, 6, 6, 6, 6, 5, 6	lactating female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig. legend	p=0.3771, p=0.0185, p=0.0178, p=0.0014, p=0.0019, p=0.5860, p=0.1310	Fig and Fig. legend	t(5)=0.9688, t(5)=3.4375, t(5)=3.4708, t(5)=6.3677, t(5)=5.9439, t(4)=0.5915, t(5)=1.8048	n/a
2l	Paired t-test	Fig. legend	6	lactating female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig. legend	p=0.0245	Fig and Fig. legend	t(5)=3.1816	n/a
2m	Paired t-test	Fig. legend	11, 6, 6	virgin or lactating female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig. legend	p=0.0212, p=0.0077 , p=0.0054	Fig and Fig. legend	t(10)=2.7309, t(5)=4.3084, t(5)=4.6828	n/a
2n	Paired t-test	Fig. legend	5	virgin female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig. legend	p= 0.0440	Fig and Fig. legend	t(4)=2.9020	n/a
result, para 4	Paired t-test	result, para4	6	lactating female mice	result, para4	error bars are mean +/- SEM	result, para4	p=0.040	result, para4	t(5)=2.7613	n/a

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result, para 4	Paired t-test	result, para4	6	lactating female mice	result, para4	error bars are mean +/- SEM	result, para4	p=0.88	result, para4	t(5)=0.1626	n/a
3e	Two-way repeated measure ANOVA	Fig. legend	13, 10	lactating female mice, hM4Di and control	Fig and Fig. legend	error bars are mean +/- SEM	Fig. legend	at different time points, p = 0.0016; between groups, p = 0.0389; and interaction, p = 0.0156.	n/a	at different time points, F(5,105) = 4.2; between groups, F(1,21) = 4.85; and interaction F(5,105) = 2.95.	n/a
3e	Holm-Sidak post-hoc multiple comparisons	Fig. legend	13, 10	lactating female mice, hM4Di and control	Fig and Fig. legend	error bars are mean +/- SEM	Fig. legend	p value on Postpartum Day 2: 1; Day 3: 0.0046; Day 4: 1; Day 5: 0.0357; Day 6: 0.9215 and Day 7: 0.0530.	Fig and Fig. legend	n/a	n/a
3f left	Paired t-test	Fig. legend	13	lactating female mice, hM4Di	Fig and Fig. legend	error bars are mean +/- SEM	Fig. legend	p = 1.08 x 10-4	Fig and Fig. legend	t(12)=5.6484	n/a
3f right	Paired t-test	Fig. legend	10	lactating female mice, control	Fig and Fig. legend	error bars are mean +/- SEM	Fig. legend	p = 0.7507	Fig and Fig. legend	t(9)=0.3277	n/a
3g left	Paired t-test	Fig. legend	11	lactating female mice, hM4Di	Fig and Fig. legend	error bars are mean +/- SEM	Fig. legend	p= 0.0306	Fig and Fig. legend	t(10)=2.5161	n/a
3g right	Paired t-test	Fig. legend	5	lactating female mice, control	Fig and Fig. legend	error bars are mean +/- SEM	Fig. legend	p = 0.7596	Fig and Fig. legend	t(4)=0.3277	n/a
3h	Two-way repeated measure ANOVA	Fig. legend	13, 10	lactating female mice, hM4Di and control	Fig and Fig. legend	error bars are mean +/- SEM	Fig. legend	at different time points, p = 0.0006; between groups, P=0.4782 ; and interaction, P=0.9904.	n/a	at different time points, F (5, 105) = 4.741 ; between groups, F (1, 21) = 0.5214; and interaction F (5, 105) = 0.1078	n/a
3i	Paired t-test	Fig. legend	13	lactating female mice, hM4Di	Fig and Fig. legend	error bars are mean +/- SEM	Fig. legend	p = 0.6674	Fig and Fig. legend	t(12)=0.4405	n/a
3j	Paired t-test	Fig. legend	13	lactating female mice, hM4Di	Fig and Fig. legend	error bars are mean +/- SEM	Fig. legend	p = 0.4747	Fig and Fig. legend	t(12)=0.7380	n/a
3k	Pearson product-moment correlation	Fig. legend	12	lactating female mice, hM4Di	Fig and Fig. legend	individual data plots	Fig. legend	p=0.0081	Fig and Fig. legend	R=-0.72	Fig.
4g	Paired t-test	Fig. legend	12	virgin female mice, ChR2	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p = 2.27 x 10-4, p=9.86x 10-4	Fig and Fig. legend	t(11)=5.3688, t(11)= 4.4453	n/a
4 h	Paired t-test	Fig. legend	12	virgin female mice, ChR2	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p=0.0492, p=0.0128	Fig and Fig. legend	t(11)=2.2097, t(11)=2.9666	n/a

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4 i	Two-way repeated measure ANOVA	Fig. legend	adult male intruder, 8 stimulation sites; adult female intruder, 6 stimulation sites	virgin female mice, ChR2	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	behavior: p = 4.66 x 10-6; between intruder types: p = 0.97; the interaction term: p = 0.73.	n/a	behavior:F(1,12) = 61.37; between intruder types: F(1, 12) = 0.0010; the interaction term: F(1,12) = 0.12.	n/a
4 i	Holm-Sidak post-hoc multiple comparisons	Fig. legend	adult male intruder, 8 sadult male intruder, 8 stimulation sites; adult female intruder, 6 stimulation sites	virgin female mice, ChR2	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p values for male intruder: 0.0023; female intruder: 0.0055.	Fig and Fig. legend	n/a	n/a
4j left	Paired t-test	Fig. legend	12	virgin female mice, control	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p = 0.7363	Fig and Fig. legend	t(11)=0.3454	n/a
4j right	Paired t-test	Fig. legend	12	virgin female mice, control	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p = 0.5863	Fig and Fig. legend	t(11)=0.5606	n/a
5c	One-way repeated measure ANOVA	Fig. legend	18	single untis	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p = 9.51 x 10-11	n/a	F (3, 51) =27.61	n/a
5c	Holm-Sidak post-hoc multiple comparisons	Fig. legend	18	single untis	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p values for baseline vs. no contact: 4.51 x 10-4; baseline vs. investigate: 3.73 x 10-4; baseline vs. attack: 6.24 x 10-5; no contact vs. investigate: 0.00339; no contact vs. attack: 2.59 x 10-4; investigate vs. attack: 0.00139.	Fig and Fig. legend	n/a	n/a
5f	One-way repeated measure ANOVA	Fig. legend	9	single untis	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p = 3.38 x 10-5	n/a	F (3, 24) = 12.804	n/a

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5f	Holm-Sidak post-hoc multiple comparisons	Fig. legend	9	single untis	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p values for baseline vs. no contact: 0.0146; baseline vs. investigation: 0.0140; baseline vs. mounted: 0.0168; no contact vs. investigation: 0.0363; no contact vs. mounted: 0.0466; investigation vs. mounted: 0.0677.	Fig and Fig. legend	n/a	n/a
5g	Pearson product-moment correlation	Fig. legend	21	single untis	Fig and Fig. legend	individual data plots	Fig and Fig. legend	p=0.95	Fig and Fig. legend	R=-0.016	Fig.
5h	Pearson product-moment correlation	Fig. legend	103	single untis	Fig and Fig. legend	individual data plots	Fig and Fig. legend	p=0.85	Fig and Fig. legend	R=-0.02	Fig.
5i	Pearson product-moment correlation	Fig. legend	5	5 virgin female mice	Fig and Fig. legend	individual data plots	Fig and Fig. legend	p=0.013	Fig and Fig. legend	R=0.95	Fig.
6b	One-way ANOVA	Fig. legend	4 mice each	virgin and lactating female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p = 2.58 x 10-6	n/a	F (4, 15) = 23.51	n/a
6b	Tukey's multiple comparisons	Fig. legend	4 mice each	virgin and lactating female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p values at for F-F (Virgin) vs. M-M: 0.4691; F-F (Virgin) vs. F-M: <0.0001; F-F (Virgin) vs. M-F: <0.0001; F-F (Virgin) vs. F-F (Lactation): 0.3091; M-M vs. F-M: 0.0006; M-M vs. M-F: 0.0002; M-M vs. F-F (Lactation): 0.9975; F-M vs. M-F: 0.9848; F-M vs. F-F (Lactation): 0.0011 ; M-F vs. F-F (Lactation): 0.0004.	Fig and Fig. legend	n/a	n/a
7e	Paired t-test	Fig. legend	4	virgin SW female mice; object	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p =0.1455	Fig and Fig. legend	t(3)=1.9552	n/a
7e	Paired t-test	Fig. legend	6	virgin SW female mice; adult male intruder	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p=0.0052	Fig and Fig. legend	t(5)=4.7386	n/a

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7e	Paired t-test	Fig. legend	4	virgin C57BL/6 female mice; adult male intruder	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p=1.78 x 10-4	Fig and Fig. legend	t(3)=23.0683	n/a
7e	Paired t-test	Fig. legend	6	virgin SW female mice; juvenile male intruder	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p=0.0086	Fig and Fig. legend	t(5)=4.1816	n/a
7e	Paired t-test	Fig. legend	4	virgin SW female mice; adult female intruder	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p=0.0316	Fig and Fig. legend	t(3)=3.8170	n/a
7e	Paired t-test	Fig. legend	5	Lactating SW female mice; juvenile male intruder	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p=0.0224	Fig and Fig. legend	t(4)=3.6192	n/a
7e	Paired t-test	Fig. legend	5	Lactating SW female mice; adult female intruder	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p=0.0211	Fig and Fig. legend	t(4)=3.6846	n/a
7e	Paired t-test	Fig. legend	7	Lactating SW female mice; adult male intruder	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p=3.70 x 10-4	Fig and Fig. legend	t(6)=7.1758	n/a
7e	Paired t-test	Fig. legend	3	Lactating C57 female mice; juvenile male intruder	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p=0.0280	Fig and Fig. legend	t(2)=5.8542	n/a
result, para 16	Paired t-test	result, para17	6	virgin female mice	result, para17	error bars are mean +/- SEM	result, para17	p=0.0125	result, para17	t(5)=3.8129	n/a
result, para 16	Paired t-test	result, para17	4	virgin female mice	result, para17	error bars are mean +/- SEM	result, para17	p=0.037	result, para17	t(3)=3.6096	n/a
8f left	Paired t-test	Fig. legend	3	virgin female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p=0.0167	Fig and Fig. legend	t(2)=7.6501	n/a
8f right	Paired t-test	Fig. legend	3	virgin female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p= 0.7544	Fig and Fig. legend	t(2)=0.3584	n/a
8j left	One-way ANOVA	Fig. legend	3, 5, 4	virgin female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	F (2, 9) = 84.93	Fig and Fig. legend	P<0.0001	n/a
8j left	Tukey's multiple comparisons	Fig. legend	3, 5, 4	virgin female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	object vs fight:p=0.2732; object vs mate:p<0.0001; fight vs mate:p<0.0001	Fig and Fig. legend	n/a	n/a
8j right	One-way ANOVA	Fig. legend	5, 5, 4	virgin female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	F (2, 11) = 29.93	Fig and Fig. legend	P<0.0001	n/a
8j right	Tukey's multiple comparisons	Fig. legend	5, 5, 4	virgin female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	object vs fight:p=0.0004; object vs mate:p<0.0001; fight vs mate:p=0.1830	Fig and Fig. legend	n/a	n/a

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s1b left	One-way ANOVA	Fig. legend	4, 6, 4	virgin SW female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	F (2, 11) = 7.736	Fig and Fig. legend	P=0.0080	n/a
s1b left	Tukey's multiple comparisons	Fig. legend	4, 6, 4	virgin SW female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	object vs juvenile :p=0.0080; object vs adult female:p=0.0302; juvenile vs adult female:p=0.8770	Fig and Fig. legend	n/a	n/a
s1b middle	One-way ANOVA	Fig. legend	3, 5, 5, 3, 7	Lactating SW female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	F (4, 18) = 15.07	Fig and Fig. legend	P<0.0001	n/a
s1b middle	Tukey's multiple comparisons	Fig. legend	3, 5, 5, 3, 7	Lactating SW female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	object vs juvenile:p=0.0018; object vs adult female:p=0.0184; object vs adult male(inves):p=0.6409; object vs adult male:p<0.0001; juv vs adult female:p=0.7093; juv vs adult male (inves):p=0.0462; juv vs adult male:p=0.1724; adult female vs adult male(inves):p=0.3235; adult female vs adult male:p=0.0116; adult male (inves) vs adult male:p=0.0005	Fig and Fig. legend	n/a	n/a
s1b right	Unpaired t-test	Fig. legend	3, 3	Lactating C57 female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p=0.0023	Fig and Fig. legend	t(4)=6.8818	n/a
s2f	Two-way repeated measure ANOVA	Fig. legend	8 each	lactating female mice, hM4Di and control	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	at different time points, p = 0.0003; between groups, p = 0.0258; and interaction, p = 0.0291.	n/a	at different time points, F(5,70) = 5.33; between groups, F(1,14) = 6.22; and interaction F(5,70) = 2.66.	n/a
s2f	Holm-Sidak post-hoc multiple comparisons	Fig. legend	8 each	lactating female mice, hM4Di and control	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p value on Postpartum Day 2: 0.4186; Day 3: 0.0078; Day 4: 0.9998; Day 5: 0.0252; Day 6: 1 and Day 7: 0.9349.	Fig and Fig. legend	n/a	n/a

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s2g	Paired t-test	Fig. legend	8 each	lactating female mice, hM4Di and control	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	hM4Di: p = 0.0030; control: p=0.5504	Fig and Fig. legend	hM4Di: t(7)=4.4557; control:t(7)=0.6272	n/a
s2h	Paired t-test	Fig. legend	8 each	lactating female mice, hM4Di and control	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	hM4Di: p = 0.8241; control: p=0.5125	Fig and Fig. legend	hM4Di:t(7)=0.2307; control:t(7)=0.6898	
s2i	Two-way repeated measure ANOVA	Fig. legend	8 each	lactating female mice, hM4Di and control	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	at different time points, p = 0.9739; between groups, p = 0.4197; and interaction, p = 0.8857.	n/a	at different time points, F(5,70) = 0.17; between groups, F(1,14) = 0.69; and interaction F(5,70) = 0.34.	n/a
s2j	Paired t-test	Fig. legend	8	lactating female mice, hM4Di	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p = 0.3964	Fig and Fig. legend	t(7)=0.9032	n/a
s2k	Pearson product-moment correlation	Fig. legend	9 each	lactating female mice, hM4Di	Fig and Fig. legend	individual data plots	Fig and Fig. legend	anterior VMhvl: p=0.76; posterior VMHvl: p=0.0071; Arc:p=0.61	Fig and Fig. legend	anterior VMhvl: R=-0.12; posterior VMHvl: R=-0.82; Arc:R=0.20	Fig.
s3c	Paired t-test	Fig. legend	6	Virgin female mice GCamp	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p=0.6319	Fig and Fig. legend	t(5)=0.5097	n/a
s3f	Paired t-test	Fig. legend	4	lactating female mice GCamp	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p= 0.0416	Fig and Fig. legend	t(3)=3.4278	n/a
s4b	Paired t-test	Fig. legend	4 each	Virgin or lactating C57BL/6 female mice GCamp	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p=0.0786 p=4.89x 10-4 p=0.0461 p=0.0446 p=0.0367 p=0.0301	Fig and Fig. legend	t(3)=2.6254 t(3)=16.4530 t(3)=3.2893 t(3)=3.3337 t(3)=3.6019 t(3)=3.8935	n/a
s5f	Paired t-test	Fig. legend	13, 12, 14, 4	YFP and mcherry signals during various behaviors	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p values for investigation on juvenile: p=0.5252; attack juvenile:p=0.8119; investigation on adult male: p=0.5970; mounted by adult male: p=0.8845	Fig and Fig. legend	t values for investigation on juvenile: t(12)=0.6544;attack juvenile: t(11)=0.2437; investigation on adult male: t(13)=0.5419; mounted by adult male: t(3)=0.1580	n/a
s6d left	Paired t-test	Fig. legend	8, 6	virgin female mice, hM4Di and control	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	hM4Di: p = 0.0039; control: p=0.8404	Fig and Fig. legend	hM4Di: t(7)=4.2285; control: t(5)=0.2122	n/a
s6d right	Paired t-test	Fig. legend	8, 6	virgin female mice, hM4Di and control	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	hM4Di: p = 0.0033; control: p=0.3993	Fig and Fig. legend	hM4Di: t(7)=4.3610; control: t(5)= 0.9210	n/a
s6e	Paired t-test	Fig. legend	8, 6	virgin female mice, hM4Di and control	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	hM4Di: p = 0.6921; control:p= 0.8621	Fig and Fig. legend	hM4Di: t(7)=0.4128; control: t(5)=0.1828	n/a

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s6i left	Paired t-test	Fig. legend	5	Lactating female mice, hM4Di	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p = 0.0431	Fig and Fig. legend	t(4)=2.9240	n/a
s6i right	Paired t-test	Fig. legend	5	Lactating female mice, hM4Di	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p = 0.0297	Fig and Fig. legend	t(4)=186.3783	n/a
s6j left	Paired t-test	Fig. legend	5	Lactating female mice, hM4Di	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p = 0.7879	Fig and Fig. legend	t(4)=0.2877	n/a
s6j right	Paired t-test	Fig. legend	4	Lactating female mice, hM4Di	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p = 0.7246	Fig and Fig. legend	t(3)=0.3869	n/a
s8e left	Paired t-test	Fig. legend	10	virgin female mice, ChR2	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p=3.44 x 10-4 p=6.56x 10-4	Fig and Fig. legend	t(9)=5.5768 t(9)=5.0874	n/a
s8e right	Paired t-test	Fig. legend	10	virgin female mice, ChR2	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p=0.0631 p=0.0202	Fig and Fig. legend	t(9)=2.1198 t(9)=2.8163	n/a
s8f	One-way ANOVA	Fig. legend	5, 4, 6	virgin female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	F (2, 12) = 5.825	n/a	P=0.0171	n/a
s8f	Tukey's multiple comparisons	Fig. legend	5, 4, 6	virgin female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	object vs investigate: p=0.3626; object vs mount: p= 0.0135; investigate vs mount: p=0.2395	Fig and Fig. legend	n/a	n/a
s9f left	Paired t-test	Fig. legend	5	lactating female mice, ChR2	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p=0.0047 p=0.0260	Fig and Fig. legend	t(4)=5.6938 t(4)=3.4539	n/a
s9f right	Paired t-test	Fig. legend	5	Lactating female mice, ChR2	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p=0.0258 p=0.0458	Fig and Fig. legend	t(4)=3.4605 t(4)=2.8622	n/a
s10c	One-way repeated measure ANOVA	Fig. legend	6	Virgin SW female mice, ChR2	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	F (3, 15) = 1.12	n/a	p=0.3712	n/a
s10d	One-way repeated measure ANOVA	Fig. legend	6	Virgin SW female mice, ChR2	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	F (3, 15) = 2.01	n/a	p=0.1553	n/a
s10g	One-way repeated measure ANOVA	Fig. legend	5	Lactating C57BL/6 female mice, ChR2	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	F (3, 12) = 0.39	n/a	p=0.7644	n/a
s10h	One-way repeated measure ANOVA	Fig. legend	5	Lactating C57BL/6 female mice, ChR2	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	F (3, 12) = 0.53	n/a	p=0.6733	n/a
s11a	One-way repeated measure ANOVA	Fig. legend	22	single units	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	F (2, 42) = 2.75	n/a	p = 0.0756	n/a

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s11b	One-way repeated measure ANOVA	Fig. legend	26	single units	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	F (3, 75) = 3.73	n/a	p = 0.0148	n/a
s11b	Holm-Sidak post-hoc multiple comparisons	Fig. legend	26	single units	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p values for baseline vs. no contact: 0.415; baseline vs. investigation: 0.238; baseline vs. attack: 0.137; no contact vs. investigation: 0.358; no contact vs. attack: 0.263; investigation vs. attack: 0.332.	n/a	n/a	n/a
s11c	Pearson product-moment correlation	Fig. legend	103 each	single units	Fig and Fig. legend	individual data plots	Fig and Fig. legend	p=0.28 p=0.84 p=0.77	Fig and Fig. legend	R=-0.11 R=-0.020 R=0.029	Fig.
s11d	Pearson product-moment correlation	Fig. legend	103	single units	Fig and Fig. legend	individual data plots	Fig and Fig. legend	p = 5.68 x 10-7	Fig and Fig. legend	R=0.47	Fig.
s11e	Pearson product-moment correlation	Fig. legend	103	single units	Fig and Fig. legend	individual data plots	Fig and Fig. legend	p = 2.05 x 10-29	Fig and Fig. legend	R=0.85	Fig.
s12b	Unpaired t-test	Fig. legend	fight, and mate animals: -1.4mm: 5, 6;-1.6 mm: 5, 6; -1.8mm: 7, 6; -2.0 mm: 3, 3	virgin and lactating SW female mice	Fig and Fig. legend	mean presented by dashed line	Fig and Fig. legend	-1.4mm: p = 0.2094;-1.6 mm: p = 0.0002; -1.8mm: p = 7 x 10-5 ; -2.0 mm: p = 0.0010	Fig and Fig. legend	t(9)=1.3518, t(9)=6.1381, t(11)=6.1657, t(4)=8.5979	n/a
s12c	Unpaired t-test	Fig. legend	fight, and mate animals: -1.4mm: 3, 3;-1.6 mm: 3, 3; -1.8mm: 3, 4; -2.0 mm: 4, 4	virgin and lactating C57BL/6 female mice	Fig and Fig. legend	mean presented by dashed line	Fig and Fig. legend	-1.4mm: p = 0.4211;-1.6 mm: p = 0.0113; -1.8mm: p = 0.0015 ; -2.0 mm: p = 0.0465	Fig and Fig. legend	t(4)=0.8956, t(4)=4.4441, t(5)=6.3277, t(6)=2.5011	n/a
s12d left	Unpaired t-test	Fig. legend	-1.4mm: 3, 4;-1.6 mm: 3, 6; -1.8mm: 4, 6; -2.0 mm: 3, 6	virgin SW female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	-1.4mm: p = 0.0003;-1.6 mm: p = 0.0228; -1.8mm: p = 0.0020; -2.0 mm: p = 0.0118	Fig and Fig. legend	t(5)=8.7001, t(7)=2.9055, t(8)=4.5061, t(7)=3.3793	n/a
s12d right	Unpaired t-test	Fig. legend	-1.4mm: 3, 5;-1.6 mm: 3, 5; -1.8mm: 3, 7; -2.0 mm: 3, 4	lactating SW female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	-1.4mm: p = 0.0088;-1.6 mm: p = 0.0001; -1.8mm: p = 0.0079; -2.0 mm: p = 0.0078	Fig and Fig. legend	t(6)=3.8136, t(6)=8.5879, t(8)=3.5168, t(5)=4.2898	n/a

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s12e left	Paired t-test	Fig. legend	4	virgin SW female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p = 0.8645	Fig and Fig. legend	t(3)=0.1858	n/a
s12d right	Paired t-test	Fig. legend	3	lactating SW female mice	Fig and Fig. legend	error bars are mean +/- SEM	Fig and Fig. legend	p = 0.0359	Fig and Fig. legend	t(2)=5.1351	n/a
s15d	Unpaired t-test	Fig. legend	fight, and mate animals: -1.4mm: 4, 3;-1.6 mm: 4, 3; -1.8mm: 4, 3; -2.0 mm: 3, 3	male mice	Fig and Fig. legend	mean presented by dashed line	Fig and Fig. legend	-1.4mm: p = 0.2085;-1.6 mm: p = 0.8239; -1.8mm: p = 0.1345; -2.0 mm: p = 0.9449	Fig and Fig. legend	t(5)=1.4433, t(5)=0.2345, t(5)=1.7838, t(4)=0.0735	n/a

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Supplementary Note 1

To determine whether the c-Fos activation in the VMHvl observed after fighting (**Fig. 1**) is functionally relevant, we suppressed the VMHvl activity in lactating SW mice. We injected an AAV expressing hM4Di-mCherry or control fluorophore mcherry bilaterally into the VMHvl of virgin female mice (**Supplementary Fig. 2a-b**) and one week after viral injection, we paired each female with an adult male mouse until midterm pregnancy. Between postpartum day 2 to 7, we injected saline and clozapine-N-oxide (CNO, the engineered ligand of hM4Di) intraperitoneally on interleaved days (**Supplementary Fig.2c**). We confirmed that CNO application significantly reduced the spiking activity of hM4Di-mCherry expressing VMHvl cells using *in vitro* slice recording (**Supplementary Fig. 2d**). Thirty minutes after injection, we introduced a male intruder into the home cage of the test animal for 10 min and assessed aggression. On saline injected days, females attacked the intruder immediately and repeatedly (Latency (Mean ± STD): 4.2± 0.86 s; episodes: 33.3 ± 2.3; duration: 37.0± 7.3 s, N = 8 animals). After CNO injection, both the number and duration of attacks were significantly reduced (episodes: 18.0± 3.1, duration: 16.1± 4.4 s) although the latency to first attack (4.0 ± 0.71 s) did not change (**Supplementary Fig. 2e-h**). Neither the duration of investigation of the male nor the latency to retrieve pups changed after CNO injection, suggesting that the manipulation did not affect locomotion or social behaviors in general (**Supplementary Fig. 2i-j**). Post hoc histological analysis revealed that the level of aggression suppression was significantly correlated with the number of hM4Di-mCherry expressing cells in the posterior VMHvl but not the anterior VMHvl or ARC (**Supplementary Fig. 2k**).

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