Supplementary Information for

High fat diet alters male seminal plasma composition to impair female immune adaptation for pregnancy in mice

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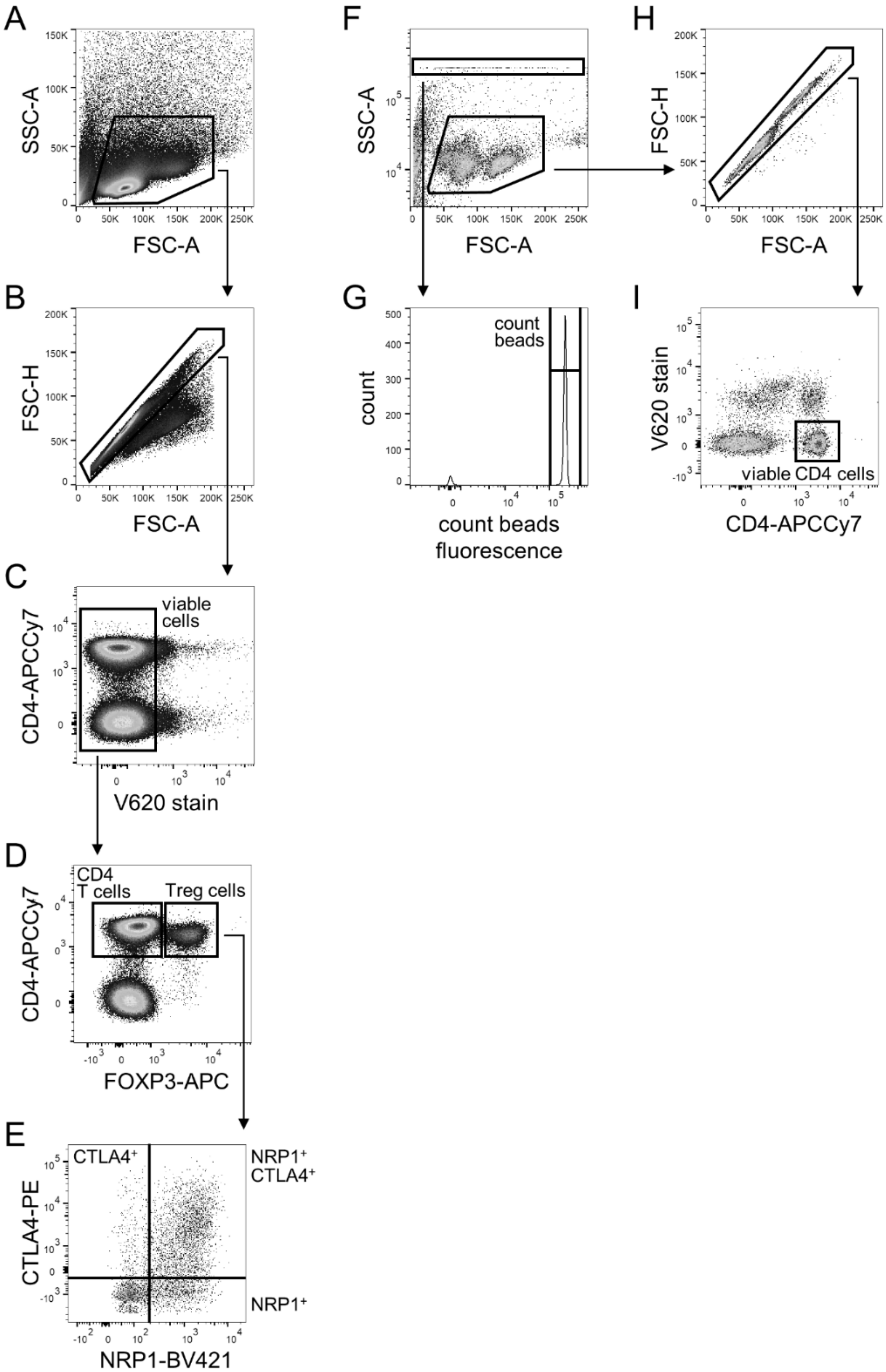
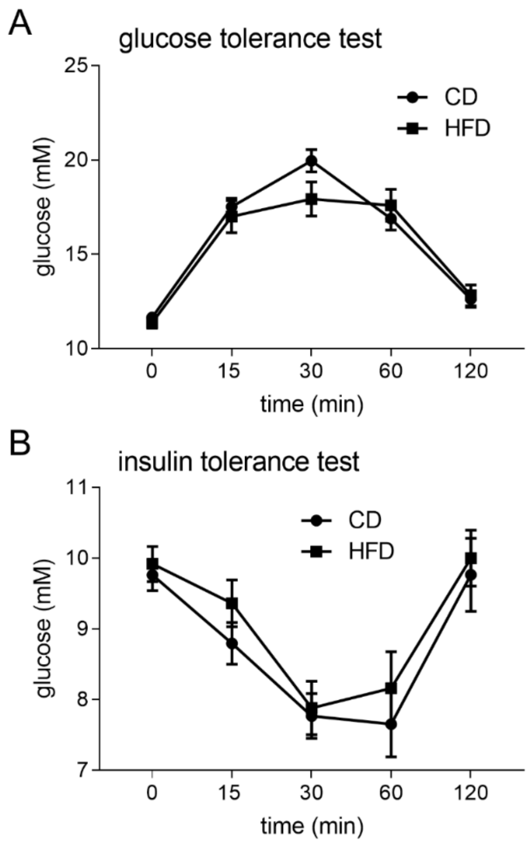
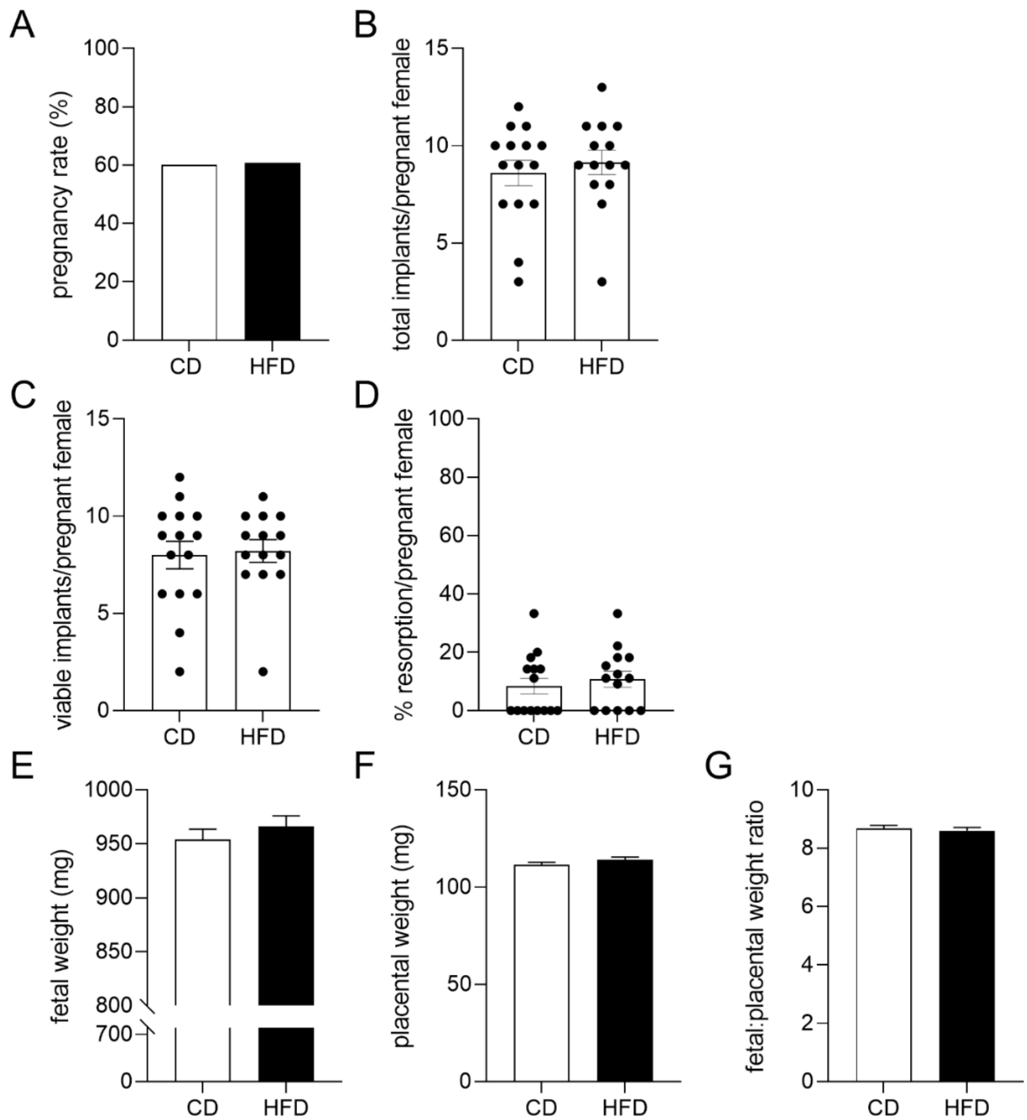


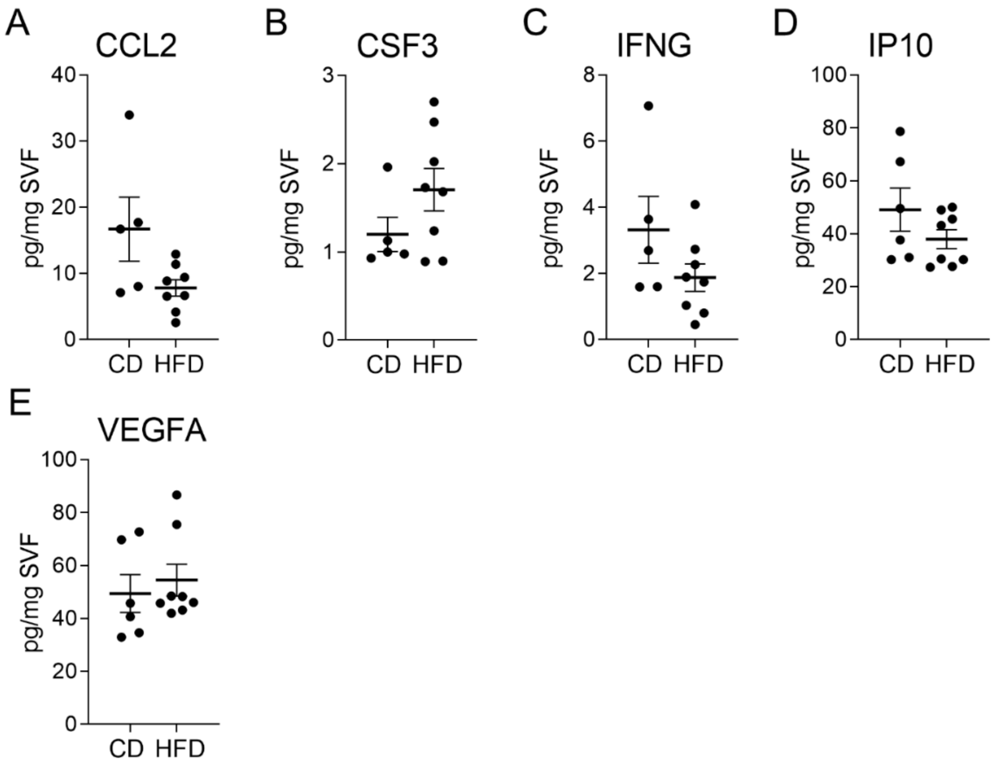
Supplemental Figure S1. Gating strategy for flow cytometry. T cell phenotypes were assessed by flow cytometry with ***(A, B)*** gates established on scatter plots to include lymphocytes and exclude debris and doublets. ***(C)*** Viable $CD4^+$ T cells were identified and applied to a ***(D)*** FOXP3 vs. CD4 plot to define $CD4^+FOXP3^+$ Treg cells. ***(E)*** Treg cells were then applied to a NRP1 vs. CTLA4 plot to assessed expression of the Treg cell suppression marker CTLA4, within both the $NRP1^+$ thymic Treg (tTreg) and $NRP1^-$ peripheral Treg (pTreg) cell populations, ***(F)*** Total cell counts were achieved using count beads, with all events plotted on a histogram to identify and enumerate count beads based on their very high scatter and (***G***) fluorescence. ***(F, H)*** Scatter plots were used to detect lymphocytes and exclude debris and doublets, ***(I)*** with cells applied to a viability vs. CD4 plot to identify and quantify viability of $CD4^+$ T cells.



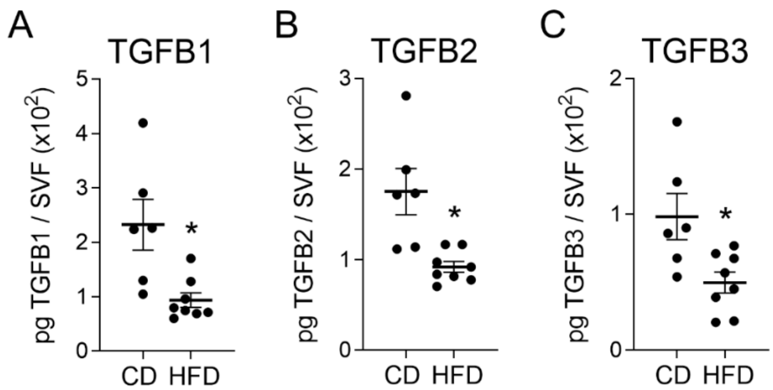
Supplemental Figure S2. Effect of paternal high fat diet on male response to glucose and insulin challenge. C57Bl/6 males were fed a control diet (CD), or high fat diet (HFD) for 10 weeks, then their response to glucose and insulin challenge was assessed (n = 22-23 males /group). ***(A)*** Glucose tolerance as assessed by glucose tolerance test (GTT, 2 g/kg). ***(B)*** Insulin tolerance as assessed by the insulin tolerance test (ITT, 0.75 IU). Data are mean ± SEM. Differences between groups were assessed by unpaired t-tests. A significant effect of diet was concluded when $P < 0.05$.



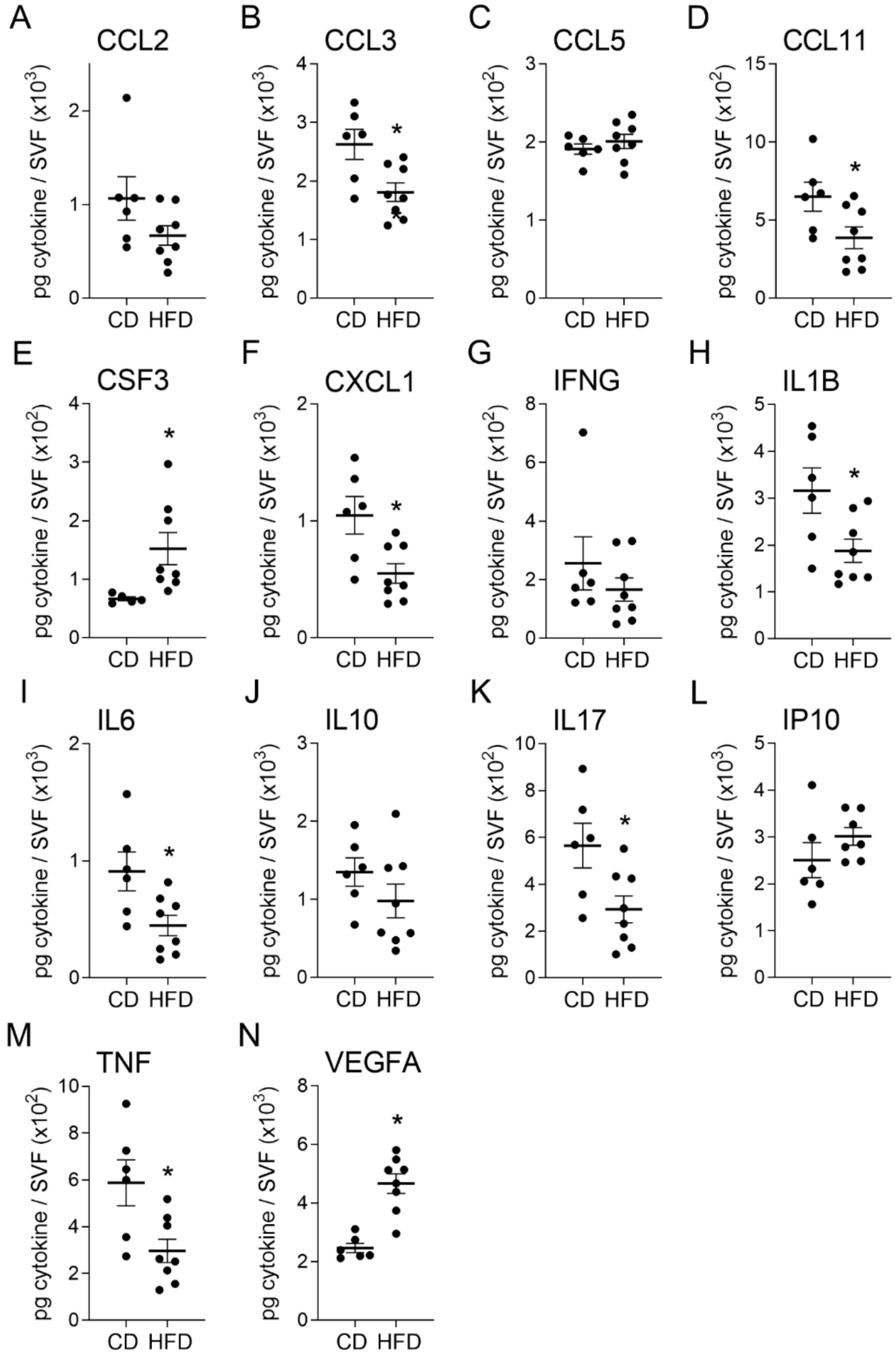
Supplemental Figure S3. Effect of paternal high fat diet on female pregnancy outcomes. Intact uterus was recovered from BALB/c females on d 17.5 pc after mating with high fat diet (HFD) or control diet (CD) C57/Bl6 males (n = 14-15 females/group; each mated with a different individual male). The proportion of mated females with at least 1 viable implant (***A***); the proportion of implantation sites per pregnant female undergoing resorption (***B***); the number of viable implantation sites per mated mouse (***C***); fetal weight (***D***); placental weight (***E***), and fetal:placental weight ratio (***F***) are shown. Table 3. Data are shown as mean ± SEM, with symbols depicting values from individual mice (***B, C***), or estimated marginal mean ± SEM (***D, E, F***). The effect of male diet was assessed by Chi-square analysis (***A***); by unpaired t-test (***B, C***), or by mixed model analysis using the mother as subject and litter size as co-variate (***D-F***). A significant effect of diet was concluded when $P < 0.05$. *indicates significant differences between CD-fed and HFD-fed mice.



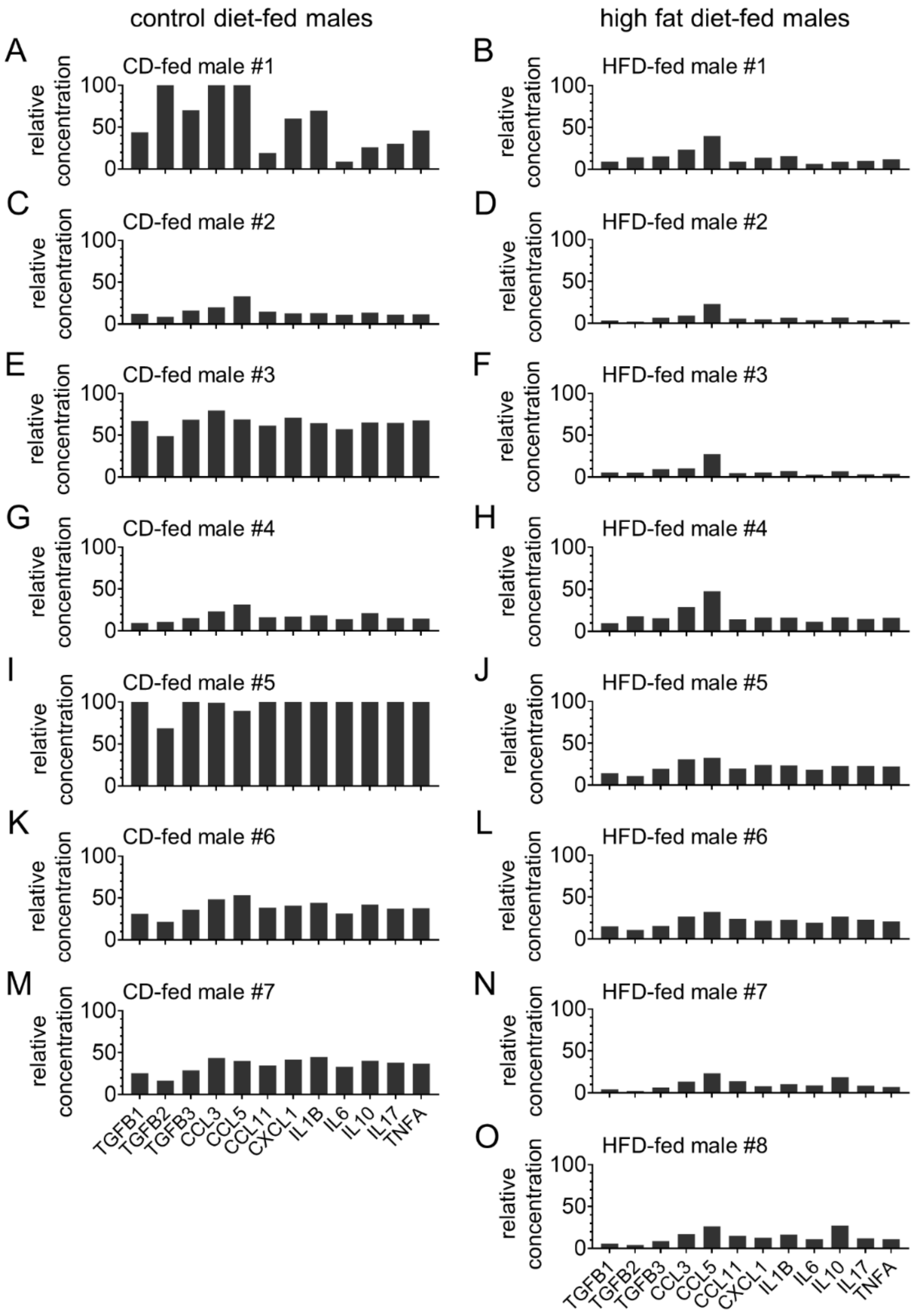
Supplemental Figure S4. Effect of high fat diet on concentrations of seminal vesicle fluid cytokines. Seminal vesicle fluid was collected from C57Bl/6 males fed control diet (CD) or high fat diet (HFD) (n = 6-8 males / group). Concentrations of the following cytokines (pg / mg seminal vesicle fluid, SVF) were assessed using multiplex microbead analysis: ***(A)*** monocyte chemoattractant protein-1 (CCL2); ***(B)*** granulocyte colony-stimulating factor (CSF3); ***(C)*** interferon-gamma (IFNG); ***(D)*** interferon gamma-induced protein 10 (IP10), and ***(E)*** vascular endothelial growth factor (VEGF). Data are shown as mean ± SEM, and symbols depict values from individual mice. Differences between groups were assessed by unpaired t-test. A significant effect of diet was concluded when $P < 0.05$.



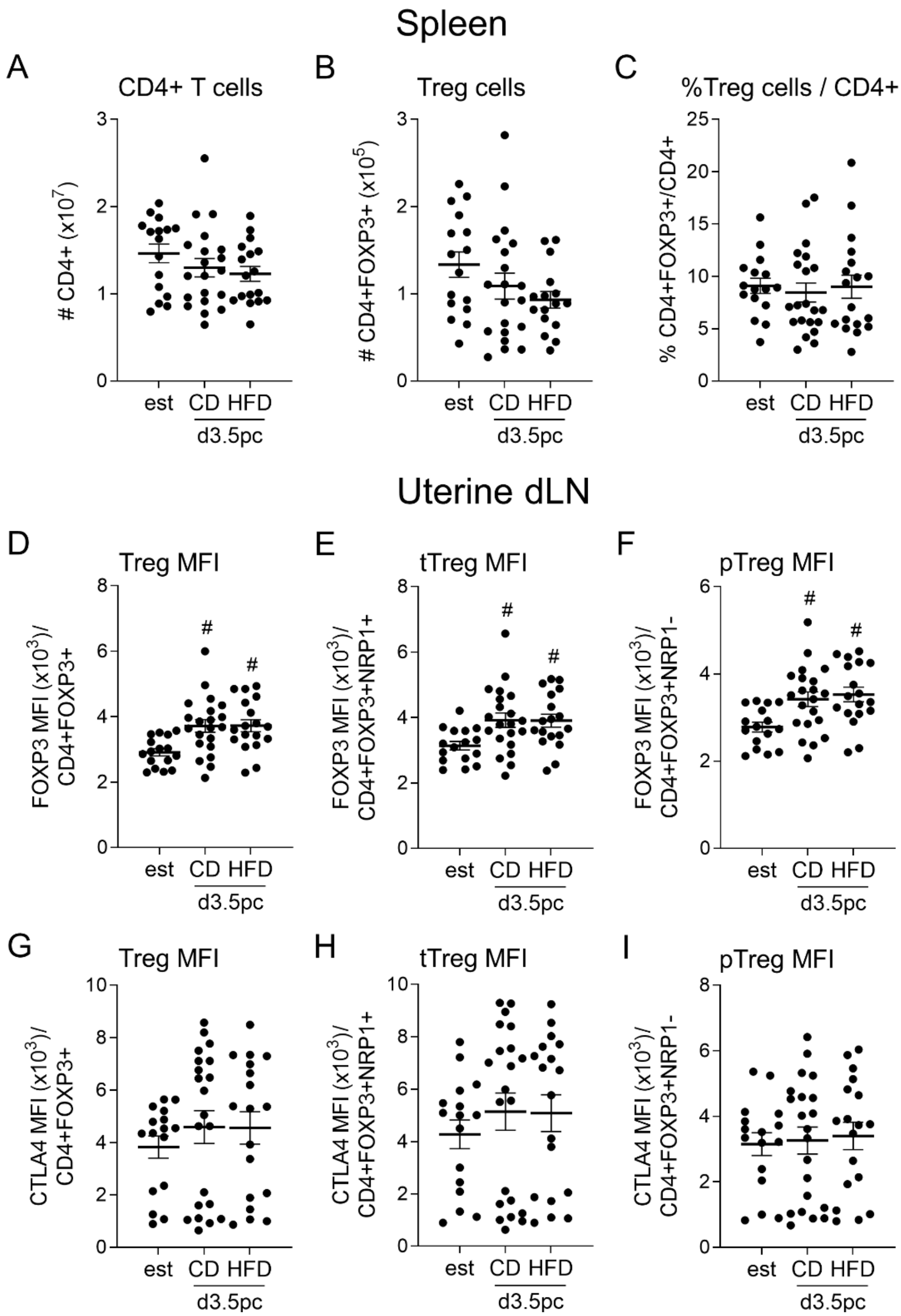
Supplemental Figure S5. Effect of high fat diet on total content of TGFB isoforms in seminal vesicle fluid. Seminal vesicle fluid was collected from C57Bl/6 males fed control diet (CD) or high fat diet (HFD) (n = 6-8 males / group). Total content (pg / seminal vesicle fluid (SVF) extract) of ***(A)*** TGFB1, ***(B)*** TGFB2, and ***(C)*** TGFB3 were determined using multiplex microbead analysis and weight of SVF extract. Data is shown as mean ± SEM cytokine per seminal vesicle extract (pg/SVF x 10^2), and symbols depict values from individual mice. Differences between groups were assessed by unpaired t-test. A significant effect of diet was concluded when $P < 0.05$. *indicates significant differences between CD-fed and HFD-fed mice.



Supplemental Figure S6. Effect of high fat diet on total content of cytokines in seminal vesicle fluid. Seminal vesicle fluid was collected from C57Bl/6 males fed control diet (CD) or high fat diet (HFD) (n = 7-8 males / group). Total content (pg / seminal vesicle fluid (SVF) extract) of the following cytokines were determined using multiplex microbead analysis and weight of SVF extract: ***(A)*** monocyte chemoattractant protein-1 (CCL2), ***(B)*** macrophage inflammatory protein 1-alpha (CCL3), ***(C)*** regulated on activation, normal T cell expressed and secreted (CCL5); ***(D)*** eotaxin (CCL11); ***(E)*** *g*ranulocyte colony-stimulating factor (CSF3); ***(F)*** growth-regulated alpha protein precursor (CXCL1); ***(G)*** interferon-gamma (IFNG); ***(H)*** interleukin 1 beta (IL1B); ***(I)*** IL6; ***(J)*** IL10; ***(K)*** IL17; ***(L)*** interferon gamma-induced protein 10 (IP10), ***(M)*** tumor necrosis factor (TNF), and ***(N)*** vascular endothelial growth factor alpha (VEGFA). Data are shown as mean ± SEM cytokine per seminal vesicle extract (pg/SVF), and symbols depict values from individual mice. Differences between groups were assessed by unpaired t-test. A significant effect of diet was concluded when $P < 0.05$. *indicates significant differences between CD-fed and HFD-fed mice.



Supplemental Figure S7. Effect of high fat diet on relative concentrations of cytokines in individual seminal vesicle fluid samples, shown as bar graphs. Seminal vesicle fluid was collected from C57Bl/6 males fed control diet (CD) or high fat diet (HFD) (n = 7-8 males / group). Concentrations of TGFB1, TGFB2, TGFB3, macrophage inflammatory protein 1-alpha (CCL3), regulated on activation, normal T cell expressed and secreted (CCL5), eotaxin (CCL11), growth-regulated alpha protein precursor (CXCL1), interleukin 1 beta (IL1B), IL6, IL10, IL17, and tumor necrosis factor (TNF) (pg / mg seminal vesicle fluid, SVF) were assessed using multiplex microbead analysis in males . Data are shown as relative amount of individual cytokine in seminal vesicle fluid from individual CD-fed males (***A, C, E, G, I, K, M***), and HFD-fed males (***B, D, F, H, J, L, N, O***) expressed on a scale of 0-100, where 100 is the highest value observed.



Supplemental Figure S8. Effect of paternal high fat diet on splenic T cell parameters, and on uterine dLN Treg cell FOXP3 and CTLA4 expression, after mating. Spleen and dLN were recovered from BALB/c virgin females at estrus, or on d 3.5 pc after mating with high fat diet (HFD) or control diet (CD) C57/Bl6 males (n = 16-19 females/group; each mated with a different individual male). Spleen and dLN cells were analyzed by flow cytometry. In the spleen ***(A-C)***, the number of ***(A)*** $CD4^+$ T cells, ***(B)*** and Treg cells ($D4^+$ $FOXP3^+$ cells) were assessed, and ***(C)*** the proportion of Treg cells within the $CD4^+$ T cell population calculated. In the dLN, the expression of ***(D-F)*** FOXP3 and ***(G-I)*** CTLA4 was calculated amongst the total Treg cells ***(D, G)***, tTreg ($NRP1^+$ Treg) cells ***(E, H)***, and pTreg (NRP1- Treg) cells ***(F, I)***. Data are shown as mean ± SEM, and symbols depict values from individual mice. Differences between groups were assessed by one-way ANOVA adjusted for FDR to control for multiple comparisons. A significant effect of diet was concluded when FDR-adjusted $P < 0.05$. $^{\#}$indicates significant difference between mated females mated with CD-fed or HFD-fed males and unmated est mice; no significant differences were seen between females mated with CD-fed or HFD-fed males. Gating strategy is shown in Supplemental Fig. S2.

Supplemental Table S1. Effect of high-fat diet on body morphometry (normalized to body weight) in male mice at 19 wks

Parameter	CD	HFD	*P* value
N, males	23	23	
Adiposity (mg)			
Epididymal fat	2.66 ± 0.14	5.15 ± 0.31	< 0.01
Retroperitoneal fat	1.95 ± 0.10	2.68 ± 0.20	< 0.01
Renal fat	0.49 ± 0.05	0.93 ± 0.14	< 0.01
Sub-cutaneous fat*	3.17 ± 0.15	6.83 ± 0.48	< 0.01
Organ weights (mg)			
Brain*	1.60 ± 0.04	1.50 ± 0.04	NS
Heart*	0.59 ± 0.03	0.66 ± 0.04	NS
Lung*#	0.74 ± 0.03	0.82 ± 0.03	NS
Thymus*	0.18 ± 0.01	0.34 ± 0.01	< 0.05
Kidney#	1.42 ± 0.03	1.49 ± 0.05	NS
Adrenal*#	0.03 ± 0.00	0.03 ± 0.00	NS
Liver	6.14 ± 0.15	7.14 ± 0.30	< 0.05
Spleen	0.30 ± 0.02	0.38 ± 0.01	NS
Pancreas	0.52 ± 0.02	0.52 ± 0.04	NS
Testicles#	0.59 ± 0.03	0.59 ± 0.04	NS
Seminal vesicles#	0.89 ± 0.04	0.94 ± 0.04	NS
Muscle weight (mg)			
Biceps*#	0.21 ± 0.03	0.21 ± 0.02	NS
Triceps*#	0.71 ± 0.05	0.76 ± 0.03	NS
Quadriceps*#	1.25 ± 0.04	1.25 ± 0.04	NS
Gastrocnemius*#	0.95 ± 0.05	0.97 ± 0.04	NS

Males were fed control diet (CD) or high-fat diet (HFD) for 14 wks prior to necropsy at 19 wks. Values are mean ± SEM of the weight of each organ or fat deposit normalised to body weight. Differences between groups were assessed by unpaired t-test. A significant effect of diet was concluded when $P < 0.05$. NS = not significant. *Tissues in which weights were acquired for only a subset of mice (n = 8 / group). #Combined weight of left and right organs.

Supplemental Table S2. Inflammatory genes differentially regulated in the endometrium of virgin estrus females (est) and females mated with control diet-fed males (CD)

Target Name	Fold-change (CD vs est)	FDR-adjusted *P* value
Ccl20_Mm01268754_m1	571	1.13E-08
Cxcl2_Mm00436450_m1	232	2.50E-06
Cxcl5_Mm00436451_g1	166	1.46E-11
S100a9_Mm00656925_m1	163	1.96E-07
S100a8_Mm01220132_g1	122	1.49E-06
Cxcl3_Mm01701838_m1	94.0	1.57E-09
Cxcl1_Mm00433859_m1	85.3	3.42E-07
Trem1_Mm00451738_m1	83.7	5.99E-05
Il6_Mm01210732_g1	80.5	1.23E-07
Il8rb_Mm00438258_m1	77.0	5.97E-06
S100a8_Mm00496696_g1	73.1	3.97E-06
Cxcl1_Mm04207460_m1	70.5	7.19E-07
Il17c_Mm00521397_m1	53.7	1.60E-08
Il6_Mm01210733_m1	44.8	1.60E-08
Il6_Mm00446190_m1	37.4	8.03E-09
Il17a_Mm00439618_m1	35.1	7.40E-02
Csf2_Mm01290062_m1	29.2	1.91E-06
Orm1_Mm00435456_g1	26.7	2.28E-07
Saa3_Mm00441203_m1	24.8	2.34E-04
Nos2_Mm00440502_m1	18.8	7.65E-07
Cxcl10_Mm00445235_m1	18.1	6.39E-07
Ccl2_Mm00441242_m1	17.5	4.96E-06
Tnf_Mm00443258_m1	14.7	9.10E-07
Csf2_Mm00438328_m1	14.3	1.23E-05
Ccl22_Mm00436439_m1	13.7	1.38E-04
Ccl17_Mm00516136_m1	13.6	3.28E-05
Cxcl11_Mm00444662_m1	12.7	2.14E-05
Mefv_Mm00490258_m1	11.5	3.05E-05
Reg3g_Mm00441127_m1	10.6	1.88E-05
Il1rn_Mm01337566_m1	9.67	7.54E-07
Il8ra_Mm00731329_s1	9.61	3.45E-04
Il1f6_Mm00457645_m1	9.40	2.50E-06
Adora1_Mm01308023_m1	9.20	3.38E-06
Cd40_Mm00441891_m1	8.87	3.79E-07
Tnfrsf11b_Mm01205928_m1	7.86	6.85E-06
Cd70_Mm00441914_m1	7.16	2.92E-03
Il1f10_Mm00462022_g1	7.05	3.02E-05
Osm_Mm01193966_m1	6.84	1.83E-03
Fgf23_Mm00445621_m1	6.48	4.93E-02
Tnc_Mm00495662_m1	6.04	1.34E-02
Ptgs2_Mm00478374_m1	5.91	1.66E-02
Ccr1_Mm00438260_s1	5.78	1.86E-04

Ccl7_Mm01308393_g1	5.75	2.78E-03
Cd80_Mm00711660_m1	5.54	1.88E-03
Ccl7_Mm00443113_m1	5.34	1.95E-03
Tnfaip3_Mm00437121_m1	4.91	2.08E-05
Il27_Mm00461164_m1	4.78	8.42E-04
Ccl19_Mm00839967_g1	4.53	1.75E-02
Sele_Mm00441278_m1	4.27	6.19E-03
Camp_Mm00438285_m1	4.20	1.27E-02
Nlrp3_Mm00840904_m1	4.15	6.57E-03
Tnfrsf9_Mm00441899_m1	3.71	1.11E-04
Ccl4_Mm00443111_m1	3.52	3.17E-03
Ccr7_Mm01301785_m1	3.51	7.40E-03
Csf2rb_Mm00655745_m1	3.48	8.14E-03
Ccl24_Mm00444701_m1	3.27	2.06E-02
Selp_Mm00441295_m1	3.14	7.13E-02
Ltb_Mm00434774_g1	3.11	3.93E-04
Itgb2l_Mm00492710_m1	2.95	7.40E-02
Il1f9_Mm00463327_m1	2.89	2.39E-02
Ela2_Mm00469310_m1	2.84	4.33E-02
Fpr1_Mm00442803_s1	2.67	1.65E-02
Csf1_Mm00432686_m1	2.63	7.22E-05
Gpr17_Mm02619401_s1	2.54	5.07E-02
Ccr8_Mm00843415_s1	2.54	1.24E-02
Ptafr_Mm02621061_m1	2.50	3.34E-04
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Csf3_Mm00438335_g1	2.47	9.36E-03
Mmp25_Mm01309189_m1	2.36	4.33E-02
Il1f5_Mm00497802_m1	2.34	2.74E-02
Chst4_Mm00488783_s1	2.28	8.55E-02
Cd14_Mm00438094_g1	2.23	6.73E-03
Csf3_Mm00438334_m1	2.22	2.88E-02
Irak3_Mm00518541_m1	2.18	1.66E-04
Kit_Mm00445212_m1	2.08	1.11E-02
Ctla4_Mm00486849_m1	2.01	9.34E-02
Il12a_Mm00434165_m1	1.96	9.29E-02
Tnfsf15_Mm00770031_m1	1.93	1.44E-02
Clec7a_Mm01183349_m1	1.89	6.12E-02
Cd274_Mm00452054_m1	1.86	5.22E-02
Ccr8_Mm99999115_s1	1.82	9.50E-02
Nfam1_Mm00546934_m1	1.78	8.67E-03
Aif1_Mm00479862_g1	1.68	1.67E-03
Il7r_Mm00434295_m1	1.67	3.41E-02
Pxdn_Mm00625468_m1	0.66	3.93E-02
B2m_Mm00437762_m1	0.64	7.73E-02
Siva1_Mm00834449_g1	0.64	2.31E-02
Ccl25_Mm00436443_m1	0.63	3.33E-02
Ifngr1_Mm00599890_m1	0.63	2.90E-02
Icosl_Mm00497237_m1	0.63	9.36E-02

Il15_Mm00434210_m1	0.62	2.40E-02
Alox5_Mm01182740_g1	0.61	7.15E-03
H47_Mm00502826_m1	0.61	3.78E-02
Il17d_Mm01313472_m1	0.61	9.29E-02
Gdf9_Mm00433565_m1	0.60	5.19E-03
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Cmtm7_Mm00506011_m1	0.58	4.51E-03
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Egfr_Mm00433023_m1	0.56	2.78E-02
Acvr1_Mm01331069_m1	0.56	3.16E-02
Cd1d1_Mm00783541_s1	0.56	7.13E-02
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Itgb6_Mm01269869_m1	0.52	1.79E-02
Il23r_Mm00519943_m1	0.52	1.10E-02
Hmox1_Mm00516005_m1	0.52	3.31E-03
Ifnar1_Mm00439544_m1	0.51	3.35E-03
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Il13ra1_Mm00446726_m1	0.47	3.52E-02
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5730403B10Rik_Mm00481784_m1	0.45	7.71E-05
Ccr9_Mm02620030_s1	0.45	3.72E-03
Il12rb1_Mm00434189_m1	0.45	1.12E-03
Sdcbp_Mm00489742_m1	0.45	4.94E-03
Akt1_Mm01331626_m1	0.45	1.24E-03
Mapk14_Mm00442497_m1	0.45	1.09E-03
Il3ra_Mm00434273_m1	0.44	4.28E-04
Stat3_Mm01219775_m1	0.44	1.90E-03
Tnfrsf14_Mm00619239_m1	0.44	5.60E-04
Hprt1_Mm01318743_m1	0.44	7.04E-04
Cd46_Mm00487625_m1	0.44	2.60E-02
P2rx7_Mm00440578_m1	0.44	1.84E-04
Cmklr1_Mm01700212_m1	0.44	3.25E-03
Abcf1_Mm01275245_m1	0.44	2.01E-04

Jun_Mm00495062_s1	0.44	9.04E-03
B4galt1_Mm00480752_m1	0.44	3.62E-03
Timm50_Mm00508510_m1	0.44	1.09E-03
Il6ra_Mm00439653_m1	0.43	6.60E-03
Cdk5_Mm01164910_m1	0.43	1.13E-03
Spred1_Mm00473782_m1	0.43	1.55E-04
Acvrl1_Mm00437432_m1	0.43	4.71E-04
Il17ra_Mm00434214_m1	0.43	2.72E-05
Anxa1_Mm00440225_m1	0.42	3.18E-03
Bcl6_Mm00477633_m1	0.42	7.72E-03
Bmp6_Mm01332882_m1	0.42	4.93E-03
Tlr1_Mm01208874_m1	0.42	7.62E-06
Wnt16_Mm00446420_m1	0.42	4.28E-03
Sod1_Mm01700393_g1	0.42	1.10E-04
Tnfsf14_Mm00444567_m1	0.42	1.90E-02
Pdgfb_Mm00440677_m1	0.42	1.88E-04
Pycard_Mm00445747_g1	0.42	8.25E-03
Gusb_Mm03003537_s1	0.42	6.58E-04
Hdac9_Mm01293999_m1	0.42	1.90E-02
Pten_Mm00477208_m1	0.42	7.85E-05
Plaa_Mm00554584_m1	0.42	2.57E-04
Cxcr6_Mm02620517_s1	0.41	3.19E-04
Gdf3_Mm00433563_m1	0.41	8.51E-02
Nup85_Mm01243354_m1	0.41	1.36E-04
Nr3c1_Mm00433832_m1	0.41	7.72E-04
Rhoa_Mm00834507_g1	0.41	2.57E-04
Hmbs_Mm00660262_g1	0.41	3.45E-04
Nfatc3_Mm01249200_m1	0.41	3.77E-04
Casp1_Mm00438023_m1	0.41	5.83E-03
Hif1a_Mm01283760_m1	0.41	2.24E-04
Myd88_Mm00440338_m1	0.41	3.36E-04
Rhoa_Mm01228062_g1	0.41	2.97E-05
Bre_Mm00513816_m1	0.40	2.69E-03
Cmtm4_Mm00463816_m1	0.40	2.50E-03
Hdac5_Mm00515941_g1	0.40	3.07E-03
Tgm2_Mm00436987_m1	0.40	9.37E-03
Bmp15_Mm00437797_m1	0.40	1.80E-03
Casp8_Mm00802247_m1	0.40	2.17E-03
Hdac7_Mm00469520_m1	0.40	1.65E-03
Cmtm6_Mm00509048_m1	0.40	5.62E-04
Tfrc_Mm00441941_m1	0.40	1.88E-03
Stat6_Mm01160477_m1	0.40	3.38E-03
Glmn_Mm00504709_m1	0.39	1.87E-03
Bmp7_Mm00432105_m1	0.39	7.82E-02
Gusb_Mm01197698_m1	0.39	6.01E-04
Malt1_Mm00555961_m1	0.39	3.73E-03
Nfe2l1_Mm00599712_m1	0.39	9.01E-03
Olr1_Mm00454586_m1	0.39	3.65E-02

Tlr3_Mm00628112_m1	0.39	1.24E-03
Il18rap_Mm00516053_m1	0.39	1.51E-03
Nfrkb_Mm00555264_m1	0.39	1.80E-03
Oit1_Mm00455341_m1	0.38	5.08E-03
Ywhaz_Mm01158417_g1	0.38	1.21E-04
Ccrl1_Mm02620636_s1	0.38	1.18E-03
Cklf_Mm00459364_m1	0.38	1.40E-04
Trp53_Mm01731287_m1	0.38	5.44E-04
Ptpn6_Mm00469153_m1	0.37	8.48E-04
Tlr4_Mm00445273_m1	0.37	9.48E-05
Acvr2b_Mm00431664_m1	0.37	1.64E-03
Hdac4_Mm01299557_m1	0.37	8.95E-05
Irf3_Mm00516779_m1	0.37	5.15E-04
Gsk3b_Mm00444911_m1	0.37	1.30E-03
Bmp7_Mm00432101_m1	0.37	5.83E-02
Igf1_Mm00439560_m1	0.37	4.93E-02
Il18_Mm00434225_m1	0.37	1.18E-03
Il1r1_Mm00434237_m1	0.37	1.13E-03
Il9_Mm00434305_m1	0.37	9.48E-02
Bmp1_Mm00802225_m1	0.37	4.03E-05
S100b_Mm00485897_m1	0.37	3.78E-02
Bmp6_Mm00432095_m1	0.36	1.81E-03
Plp2_Mm02342686_g1	0.36	1.57E-03
Rac1_Mm01201657_g1	0.36	2.79E-04
Gdf5_Mm00433564_m1	0.36	6.40E-02
Gdf15_Mm00442228_m1	0.36	4.21E-03
Spred2_Mm00835803_g1	0.36	9.86E-04
Fabp4_Mm01295675_g1	0.36	1.20E-02
Ipo8_Mm01255158_m1	0.36	1.86E-04
Bmp7_Mm00432102_m1	0.36	4.65E-02
Irak1_Mm00434254_m1	0.36	4.66E-05
Ndst1_Mm00447005_m1	0.36	2.18E-04
Rhoa_Mm01601614_g1	0.35	7.65E-05
Ephx2_Mm00514706_m1	0.35	1.31E-03
Map2k3_Mm00435950_m1	0.35	4.17E-05
Gusb_Mm00446953_m1	0.35	1.75E-04
Slurp1_Mm00445117_m1	0.35	7.20E-02
Hdac4_Mm01299565_m1	0.34	1.06E-03
Cr1l_Mm00785297_s1	0.34	3.62E-04
F11r_Mm00554113_m1	0.34	7.58E-04
Fgf11_Mm00679875_m1	0.34	3.93E-04
Trpv1_Mm01246302_m1	0.34	4.78E-02
Lta4h_Mm00521826_m1	0.34	1.60E-04
Rcan1_Mm00627762_m1	0.34	1.44E-02
Hdac4_Mm01299543_m1	0.34	5.65E-04
Tlr6_Mm02529782_s1	0.33	7.16E-05
Irak4_Mm00459443_m1	0.33	6.37E-04
Nfatc4_Mm01323917_m1	0.33	1.13E-04

Itgam_Mm00434455_m1	0.33	3.59E-03
Trip6_Mm00600041_m1	0.33	7.71E-05
Fam3c_Mm00506835_m1	0.33	6.51E-05
Il6st_Mm00439665_m1	0.33	9.32E-05
Bad_Mm00432042_m1	0.33	1.29E-05
Il1rl2_Mm00519250_m1	0.33	1.62E-04
Hdac5_Mm00515917_m1	0.32	6.88E-04
Lrp8_Mm00474028_m1	0.32	1.83E-03
H2-Q10_Mm01275264_g1	0.32	5.87E-04
Krt1_Mm00492992_g1	0.32	2.14E-02
Tirap_Mm00446502_m1	0.32	5.67E-04
Hdac5_Mm01246076_m1	0.32	2.24E-04
Ppia_Mm02342430_g1	0.31	5.66E-06
Vps45_Mm00496940_m1	0.31	2.94E-04
Pik3r1_Mm00803160_m1	0.31	1.50E-04
Tnfrsf25_Mm01263821_m1	0.31	3.59E-06
Fabp4_Mm00445878_m1	0.30	4.87E-03
Polr2a_Mm00839493_m1	0.30	3.29E-04
Ppia_Mm02342429_g1	0.30	6.01E-06
Krt8_Mm00835759_m1	0.30	2.69E-04
Tlr1;Tlr6_Mm00441868_s1	0.30	7.22E-05
Alox5ap_Mm00802100_m1	0.30	3.57E-04
Cdkn1a_Mm00432448_m1	0.29	1.17E-04
Crh_Mm01293920_s1	0.29	2.34E-03
Rbm4_Mm01227862_m1	0.29	5.55E-05
Ppia;E030024N20Rik_Mm03024003_g1	0.29	7.54E-07
Nono_Mm00834875_g1	0.29	4.53E-04
Pla2g4c_Mm01195718_m1	0.29	2.08E-05
Hmgb1_Mm00849805_gH	0.29	1.62E-04
Ctf1_Mm00432772_m1	0.29	1.88E-04
F2rl1_Mm00433160_m1	0.28	4.31E-04
Scgb3a1_Mm00468033_g1	0.28	9.48E-03
Tnfrsf18_Mm00437136_m1	0.28	1.35E-04
Hsp90ab1_Mm00833431_g1	0.28	1.91E-05
P2ry1_Mm00435471_m1	0.27	1.84E-04
Ubc_Mm01201237_m1	0.27	6.50E-06
Il17rb_Mm00444704_m1	0.26	1.22E-03
Scube1_Mm00491651_m1	0.25	4.16E-02
Jak2_Mm01208489_m1	0.25	9.79E-05
Jak3_Mm00439962_m1	0.24	1.30E-03
Crp_Mm00432680_g1	0.24	9.18E-02
Kitl_Mm00442972_m1	0.24	1.94E-05
Gpx1_Mm00656767_g1	0.24	1.29E-05
Bmp8b_Mm00432115_g1	0.23	6.39E-06
Tlr1_Mm00446095_m1	0.23	5.73E-05
Erbb2_Mm00658541_m1	0.23	3.18E-03
Gal_Mm00439056_m1	0.22	7.18E-03
Bmp5_Mm00432091_m1	0.22	1.55E-03

Cftr_Mm00445197_m1	0.21	1.88E-04
Tnfrsf19_Mm00443506_m1	0.21	9.97E-05
Fgf12_Mm00802587_m1	0.20	2.04E-04
Stat4_Mm00448890_m1	0.20	1.23E-07
F3_Mm00438853_m1	0.19	3.76E-06
Cfhr1_Mm00502018_m1	0.19	2.43E-03
Stat5b_Mm00839889_m1	0.18	1.41E-06
Areg_Mm00437583_m1	0.18	1.88E-03
Krt7_Mm00466676_m1	0.17	2.50E-06
Lifr_Mm00442942_m1	0.17	1.85E-04
Lifr_Mm00442940_m1	0.17	1.90E-04
Crlf1_Mm00517026_m1	0.16	1.67E-03
Il13ra2_Mm00515166_m1	0.15	5.26E-03
Il31ra_Mm00519844_m1	0.13	1.96E-07
Thpo_Mm00437040_m1	0.13	9.62E-06
Fam3b_Mm00508056_m1	0.12	9.48E-05
Bmp8a_Mm00432109_m1	0.12	2.01E-04
A2m_Mm00558642_m1	0.10	3.92E-03
Cd97_Mm00516248_m1	0.10	4.32E-10

Males were fed control diet (CD, n = 16) for 10 weeks prior to mating with females and collection of endometrial tissue at 8 h after mating. Unmated virgin estrus (est, n = 13) females were controls. Expression of inflammatory genes in endometrial tissue was measured using OpenArray technology. A significant effect of mating was concluded when genes met the threshold criteria of 0.67 ≥ fold-change ≥ 1.5, FDR-adjusted $P \leq 0.1$.

Supplemental Table S3. Endometrial inflammatory genes differentially regulated between virgin estrus females and females mated with high fat diet (HFD)-fed males

Target Name	Fold-change (HFD vs est)	FDR-adjusted *P* value
Ccl20_Mm01268754_m1	798	1.79E-09
S100a9_Mm00656925_m1	306	1.96E-07
Cxcl2_Mm00436450_m1	280	1.07E-06
Cxcl5_Mm00436451_g1	277	4.32E-10
Trem1_Mm00451738_m1	255	9.32E-06
S100a8_Mm01220132_g1	248	1.27E-06
Cxcl3_Mm01701838_m1	184	1.57E-09
Il8rb_Mm00438258_m1	153	3.09E-06
Il6_Mm01210732_g1	140	1.60E-08
S100a8_Mm00496696_g1	138	2.70E-06
Il6_Mm01210733_m1	104	1.57E-09
Cxcl1_Mm00433859_m1	97.1	1.03E-07
Cxcl1_Mm04207460_m1	79.2	2.41E-07
Il17c_Mm00521397_m1	72.3	1.60E-08
Csf2_Mm01290062_m1	65.1	8.06E-08
Il6_Mm00446190_m1	63.6	5.52E-09
Orm1_Mm00435456_g1	43.2	1.36E-07
Il17a_Mm00439618_m1	33.0	8.04E-02
Csf2_Mm00438328_m1	29.9	7.19E-07
Nos2_Mm00440502_m1	28.6	3.79E-07
Il8ra_Mm00731329_s1	22.5	1.66E-04
Tnf_Mm00443258_m1	21.5	2.37E-07
Reg3g_Mm00441127_m1	21.0	3.79E-07
Saa3_Mm00441203_m1	18.2	1.88E-04
Mefv_Mm00490258_m1	17.8	1.80E-06
Il1rn_Mm01337566_m1	17.5	8.88E-08
Ccl22_Mm00436439_m1	15.3	8.23E-05
Cd40_Mm00441891_m1	15.3	8.62E-08
Osm_Mm01193966_m1	15.2	3.73E-05
Tnc_Mm00495662_m1	14.5	2.12E-04
Il1f6_Mm00457645_m1	13.5	4.05E-07
Fgf23_Mm00445621_m1	13.3	9.91E-03
Tnfrsf11b_Mm01205928_m1	13.2	3.66E-06
Adora1_Mm01308023_m1	13.0	7.19E-07
Cxcl10_Mm00445235_m1	12.9	2.50E-06
Cd80_Mm00711660_m1	10.8	2.04E-04
Ccl17_Mm00516136_m1	10.4	2.65E-05
Cxcl11_Mm00444662_m1	10.1	1.88E-05
Il1f10_Mm00462022_g1	9.79	1.67E-06
Ccr1_Mm00438260_s1	9.50	7.22E-05
Ccl2_Mm00441242_m1	8.37	2.79E-04
Nlrp3_Mm00840904_m1	7.00	7.35E-04
Ptgs2_Mm00478374_m1	6.83	1.04E-02
Tnfaip3_Mm00437121_m1	6.83	1.81E-06

Hc_Mm00439275_m1	6.46	5.37E-03
Il27_Mm00461164_m1	5.98	2.12E-04
Tnfrsf9_Mm00441899_m1	5.63	7.52E-06
Csf2rb_Mm00655745_m1	5.59	8.48E-04
Ccl4_Mm00443111_m1	5.28	4.32E-05
Ccl19_Mm00839967_g1	4.78	1.64E-03
Sele_Mm00441278_m1	4.72	2.53E-03
Ccr7_Mm01301785_m1	4.59	1.89E-03
Camp_Mm00438285_m1	4.32	1.75E-03
Fpr1_Mm00442803_s1	4.29	1.49E-03
Selp_Mm00441295_m1	4.13	1.65E-02
Cd70_Mm00441914_m1	4.00	3.02E-02
Ccrl2_Mm00516914_g1	4.00	8.23E-05
Il1f9_Mm00463327_m1	3.51	8.18E-03
Mmp25_Mm01309189_m1	3.46	2.88E-03
Ccl7_Mm01308393_g1	3.43	3.16E-02
Il1b_Mm01336189_m1	3.37	2.97E-02
Csf1_Mm00432686_m1	3.23	4.24E-05
Ccl24_Mm00444701_m1	3.23	2.17E-02
Itgb2l_Mm00492710_m1	3.17	1.53E-02
Ccl3_Mm00441258_m1	3.03	3.12E-02
Il1f5_Mm00497802_m1	2.85	1.89E-03
Ltb_Mm00434774_g1	2.84	7.93E-04
Clec7a_Mm01183349_m1	2.81	3.52E-03
Il1b_Mm99999061_mH	2.80	7.21E-02
Ifnb1_Mm00439552_s1	2.75	3.24E-02
Ccr1l1_Mm00432606_s1	2.73	2.46E-02
Ptafr_Mm02621061_m1	2.60	3.07E-03
Tnfrsf8_Mm00437140_m1	2.58	1.17E-02
Kit_Mm00445212_m1	2.52	2.43E-03
Tnfsf15_Mm00770031_m1	2.51	1.80E-03
Cd274_Mm00452054_m1	2.48	3.07E-03
Tnfsf4_Mm00437214_m1	2.41	9.24E-02
Ela2_Mm00469310_m1	2.39	8.86E-02
Ctla4_Mm00486849_m1	2.39	3.93E-02
Cd14_Mm00438094_g1	2.38	3.18E-03
Nfam1_Mm00546934_m1	2.37	4.60E-04
Il7r_Mm00434295_m1	2.28	1.09E-03
Irak3_Mm00518541_m1	2.18	5.97E-05
Aif1_Mm00479862_g1	2.13	7.65E-05
Cd86_Mm00444543_m1	2.07	2.55E-02
Csf3_Mm00438335_g1	2.06	2.64E-02
Chst1_Mm00517855_m1	2.05	7.20E-02
Tnfsf13b_Mm00446347_m1	2.01	1.12E-02
Fcer1g_Mm02343757_m1	2.00	2.21E-02
Hgf_Mm01135193_m1	1.96	9.94E-02
Lilrb3_Mm01700366_m1	1.96	7.91E-02
Tlr13_Mm01233819_m1	1.95	3.56E-02

Pglyrp1_Mm00437150_m1	1.90	9.89E-02
Csf3_Mm00438334_m1	1.87	7.33E-02
Tgfb1_Mm01178820_m1	1.86	7.83E-05
Nod2_Mm00467543_m1	1.85	4.76E-02
Ccl6_Mm01302419_m1	1.83	7.83E-02
Ltb4r1_Mm00521839_m1	1.71	9.50E-02
Serping1_Mm00437834_m1	1.53	2.25E-02
Ifngr1_Mm00599890_m1	0.67	5.98E-02
Nfx1_Mm00458401_m1	0.66	4.01E-02
Pxdn_Mm00625468_m1	0.65	9.13E-03
Acvr1_Mm01331069_m1	0.63	5.76E-02
Erap1_Mm00472842_m1	0.63	3.56E-02
Il15_Mm00434210_m1	0.63	8.52E-02
Nup85_Mm01243354_m1	0.62	2.37E-02
Ifnk_Mm02529417_s1	0.62	1.79E-02
Cx3cl1_Mm00436454_m1	0.61	2.40E-02
Icosl_Mm00497237_m1	0.60	2.48E-02
Fos_Mm00487425_m1	0.60	4.55E-02
Itgb6_Mm01269869_m1	0.60	4.08E-02
Pla2g7_Mm00479105_m1	0.59	6.09E-02
Tnfrsf4_Mm00442039_m1	0.59	1.57E-02
Hprt1_Mm00446968_m1	0.59	3.98E-02
Cntnap1_Mm00489702_m1	0.59	7.20E-02
Ifngr2_Mm00492626_m1	0.58	5.40E-02
Pxmp2_Mm00477269_m1	0.58	1.02E-02
Grn_Mm00433848_m1	0.58	7.30E-02
Hprt1_Mm01324427_m1	0.57	1.76E-02
Clcf1_Mm00480200_m1	0.57	2.31E-02
Cxcr3_Mm99999054_s1	0.57	6.33E-02
Ltbr_Mm00440235_m1	0.56	5.32E-03
H47_Mm00502826_m1	0.56	2.01E-02
Gdf9_Mm00433565_m1	0.55	1.88E-03
Gusb_Mm01197698_m1	0.55	7.22E-03
Muc1_Mm00449604_m1	0.55	4.16E-02
Hprt1_Mm01318743_m1	0.55	1.86E-02
Cxcr7_Mm02619632_s1	0.54	5.07E-03
Dnajc8_Mm00552449_m1	0.53	1.93E-03
Ik_Mm00803668_m1	0.53	1.26E-02
Mapkapk2_Mm01288465_m1	0.52	1.98E-03
Socs2_Mm00850544_g1	0.52	1.14E-02
Timm50_Mm00508510_m1	0.52	3.35E-03
Sod1_Mm01344232_g1	0.52	1.41E-03
Adipoq_Mm00456425_m1	0.52	5.62E-02
Gusb_Mm03003537_s1	0.51	2.57E-03
Tnfrsf1a_Mm01182929_m1	0.51	2.93E-05
Gpr68_Mm00558545_s1	0.51	4.37E-04
Cd24a_Mm00782538_sH	0.51	3.81E-02
Abcb1a_Mm00440761_m1	0.50	6.33E-02

Unc13d_Mm01252606_m1	0.49	3.45E-03
Il3ra_Mm00434273_m1	0.49	3.76E-04
Apoa1_Mm00437569_m1	0.49	1.25E-02
Bcl10_Mm00784755_s1	0.49	1.40E-02
Casp8_Mm00802247_m1	0.48	1.43E-02
Klf6_Mm00516184_m1	0.48	2.24E-02
Ddx58_Mm00554529_m1	0.48	1.04E-02
Il23r_Mm00519943_m1	0.47	2.32E-04
Blnk_Mm01197846_m1	0.47	1.69E-02
Hmbs_Mm00660262_g1	0.47	6.97E-04
Actb_Mm00607939_s1	0.47	3.69E-05
Egfr_Mm01187858_m1	0.47	3.52E-03
Il10rb_Mm00434157_m1	0.47	5.83E-03
Ifih1_Mm00459183_m1	0.47	3.20E-02
Tfrc_Mm00441941_m1	0.47	3.98E-03
Akt1_Mm01331626_m1	0.46	1.36E-04
Sod1_Mm01700393_g1	0.46	4.63E-04
Cklf_Mm00459364_m1	0.46	1.50E-02
Plaa_Mm00554584_m1	0.46	3.42E-04
Mapk8_Mm00489514_m1	0.46	9.32E-05
Pgk1_Mm00435617_m1	0.46	6.78E-03
Bre_Mm00513816_m1	0.46	4.51E-03
Egfr_Mm00433023_m1	0.46	9.86E-04
C3_Mm00437858_m1	0.46	1.32E-02
Tbp_Mm00446973_m1	0.46	2.90E-04
Zfp36_Mm00457144_m1	0.46	3.31E-04
Il13ra1_Mm00446726_m1	0.45	3.45E-02
Olr1_Mm00454586_m1	0.45	8.04E-02
Il12rb1_Mm00434189_m1	0.45	2.65E-05
Jak1_Mm00600614_m1	0.45	2.97E-05
Aimp1_Mm01320868_m1	0.45	2.06E-03
Alox5_Mm01182740_g1	0.45	2.98E-03
Ifnar1_Mm00439544_m1	0.44	3.29E-04
Hif1a_Mm01283760_m1	0.44	2.90E-04
Ltbp4_Mm00723639_g1	0.44	3.22E-03
Xcl1_Mm00434772_m1	0.44	2.13E-02
Sdcbp_Mm00489742_m1	0.43	3.56E-03
Txlna_Mm01185793_m1	0.43	4.77E-05
Pycard_Mm00445747_g1	0.43	1.06E-02
Areg_Mm00437583_m1	0.43	6.78E-02
Anxa1_Mm00440225_m1	0.43	2.87E-03
Csf2ra_Mm00438331_g1	0.43	9.99E-04
Mapk14_Mm00442497_m1	0.43	7.12E-04
Aimp1_Mm00433034_m1	0.42	1.04E-03
Map2k6_Mm00803694_m1	0.42	3.04E-02
Prdx5_Mm00465365_m1	0.42	7.18E-03
Glmn_Mm00504709_m1	0.42	1.06E-03
Nod1_Mm00805062_m1	0.42	4.51E-03

Lefty1;Lefty2_Mm03024199_gH	0.42	2.24E-03
Apoa1_Mm00437568_g1	0.41	1.18E-03
Flt3l_Mm00442801_m1	0.41	8.03E-03
Atrn_Mm00437746_m1	0.41	4.03E-05
Bmp15_Mm00437797_m1	0.41	2.43E-03
Gpx4_Mm00515041_m1	0.41	5.81E-05
Irak1_Mm00434254_m1	0.41	9.95E-05
Hmox1_Mm00516005_m1	0.41	2.06E-04
Irak2_Mm00549143_m1	0.41	1.16E-03
Bmp2_Mm01340178_m1	0.41	8.67E-03
Gapdh_Mm99999915_g1	0.41	2.43E-04
Trp53_Mm01731287_m1	0.41	7.06E-05
Cd46_Mm00487625_m1	0.41	3.04E-02
Il13ra1_Mm01302068_m1	0.41	6.73E-03
Rhoa_Mm00834507_g1	0.41	5.65E-04
Spred1_Mm00473782_m1	0.41	8.26E-05
Casp1_Mm00438023_m1	0.40	6.73E-03
Lrp8_Mm00474028_m1	0.40	4.32E-03
Abcf1_Mm01275245_m1	0.40	1.50E-05
Afap1l2_Mm00525039_m1	0.40	3.24E-03
Nfatc3_Mm01249200_m1	0.40	1.50E-05
Rela_Mm00501346_m1	0.40	2.85E-04
B4galt1_Mm00480752_m1	0.39	3.57E-04
Tnfrsf1a_Mm00441875_m1	0.39	3.76E-05
Il18_Mm00434225_m1	0.39	2.27E-03
Malt1_Mm00555961_m1	0.39	1.99E-04
Tlr3_Mm00628112_m1	0.38	2.24E-04
Irf3_Mm01203177_m1	0.38	2.65E-05
Il6ra_Mm00439653_m1	0.38	7.17E-04
Acvr2b_Mm00431664_m1	0.38	2.70E-04
Pdgfb_Mm00440677_m1	0.37	5.85E-05
Gusb_Mm00446953_m1	0.37	2.08E-05
Nfe2l1_Mm00599712_m1	0.37	5.56E-06
Tnfsf14_Mm00444567_m1	0.37	9.27E-03
Tnfrsf14_Mm00619239_m1	0.37	9.64E-05
Ppia_Mm02342430_g1	0.37	5.86E-05
Cmtm4_Mm00463816_m1	0.37	1.10E-03
Il28ra_Mm00558035_m1	0.37	2.73E-04
Rac1_Mm01201657_g1	0.37	2.85E-04
Il18rap_Mm00516053_m1	0.36	1.92E-04
Bmp6_Mm01332882_m1	0.36	5.36E-03
Cdk5_Mm01164910_m1	0.36	7.22E-05
Il4ra_Mm00439634_m1	0.36	1.37E-05
Gh_Mm00433590_g1	0.36	6.15E-02
Pla2g4c_Mm01195718_m1	0.35	1.14E-04
Tgm2_Mm00436987_m1	0.35	1.98E-03
Tollip_Mm00445841_m1	0.35	1.50E-05
Stat3_Mm01219775_m1	0.35	5.73E-05

Ccr9_Mm02620030_s1	0.35	3.07E-04
Il28ra_Mm01192973_m1	0.35	1.50E-04
Nfatc4_Mm01323917_m1	0.35	1.01E-04
Ywhaz_Mm01158417_g1	0.35	1.37E-05
Myd88_Mm00440338_m1	0.35	2.49E-05
Plp2_Mm02342686_g1	0.34	1.10E-04
Cmtm2b_Mm00459292_m1	0.34	9.96E-02
Nfrkb_Mm00555264_m1	0.34	2.50E-06
Stat6_Mm01160477_m1	0.34	2.83E-05
Il1r1_Mm00434237_m1	0.34	2.04E-04
Hmgb1_Mm00849805_gH	0.34	1.25E-04
Hdac5_Mm00515941_g1	0.34	9.25E-04
Ipo8_Mm01255158_m1	0.34	1.40E-06
Nr3c1_Mm00433832_m1	0.34	1.54E-04
Tlr4_Mm00445273_m1	0.34	3.10E-05
Ephx2_Mm00514706_m1	0.34	4.25E-03
Cmtm6_Mm00509048_m1	0.33	2.24E-05
Ppia_Mm02342429_g1	0.33	3.30E-05
Cxcr6_Mm02620517_s1	0.33	3.48E-04
Vps45_Mm00496940_m1	0.33	5.72E-04
Ccbp2_Mm00445551_m1	0.33	4.51E-03
Fam3c_Mm00506835_m1	0.33	2.24E-04
P2rx7_Mm00440578_m1	0.33	3.63E-05
Scgb3a1_Mm00468033_g1	0.33	1.69E-02
Tnfrsf19_Mm00443506_m1	0.33	2.15E-03
Gsk3b_Mm00444911_m1	0.32	2.83E-06
Hdac4_Mm01299557_m1	0.32	9.62E-06
Bcl6_Mm00477633_m1	0.32	8.58E-05
Bmp6_Mm00432095_m1	0.32	1.95E-03
Lta4h_Mm00521826_m1	0.32	2.50E-06
Ptpn6_Mm00469153_m1	0.32	1.25E-04
Pten_Mm00477208_m1	0.32	1.52E-05
Tlr6_Mm02529782_s1	0.32	8.96E-05
5730403B10Rik_Mm00481784_m1	0.32	6.33E-07
Igf1_Mm00439560_m1	0.32	1.24E-02
Hdac9_Mm01293999_m1	0.32	1.70E-03
Il17ra_Mm00434214_m1	0.31	1.44E-06
Tlr1_Mm01208874_m1	0.31	1.47E-04
Cr1l_Mm00785297_s1	0.31	3.81E-05
Hdac7_Mm00469527_m1	0.31	7.45E-05
Jun_Mm00495062_s1	0.31	5.15E-04
Map2k3_Mm00435950_m1	0.31	6.09E-06
C8b_Mm00804806_m1	0.31	2.46E-02
Cmklr1_Mm01700212_m1	0.31	2.17E-04
Rhoa_Mm01228062_g1	0.31	2.57E-06
Rhoa_Mm01601614_g1	0.30	1.94E-05
Ppia;E030024N20Rik_Mm03024003_g1	0.30	9.91E-07
Bmp5_Mm00432091_m1	0.30	5.00E-05

Spred2_Mm00835803_g1	0.30	2.08E-05
Polr2a_Mm00839493_m1	0.30	6.01E-06
Hdac4_Mm01299565_m1	0.30	1.02E-05
Hsp90ab1_Mm00833431_g1	0.30	9.91E-07
Irf3_Mm00516779_m1	0.30	3.76E-05
F11r_Mm00554113_m1	0.30	1.23E-05
Krt8_Mm00835759_m1	0.29	5.21E-05
Ndst1_Mm00447005_m1	0.29	8.56E-06
Nono_Mm00834875_g1	0.29	2.12E-04
Acvrl1_Mm00437432_m1	0.29	2.51E-05
Trip6_Mm00600041_m1	0.29	1.25E-05
Hdac7_Mm00469520_m1	0.29	3.05E-05
Ctf1_Mm00432772_m1	0.29	7.71E-05
Bmp8b_Mm00432115_g1	0.29	4.77E-05
Bmp1_Mm00802225_m1	0.29	1.48E-05
Irak4_Mm00459443_m1	0.29	1.67E-04
Rbm4_Mm01227862_m1	0.28	1.77E-05
Krt1_Mm00492992_g1	0.28	2.01E-02
Cdkn1a_Mm00432448_m1	0.28	5.26E-05
H2-Q10_Mm01275264_g1	0.28	2.04E-04
Tnfrsf18_Mm00437136_m1	0.27	9.53E-05
Ccrl1_Mm02620636_s1	0.27	1.92E-04
Tnfrsf25_Mm01263821_m1	0.27	6.53E-05
Alox5ap_Mm00802100_m1	0.27	2.85E-04
Bad_Mm00432042_m1	0.26	1.67E-06
Serpinf2_Mm00435868_m1	0.26	1.88E-03
Tlr1;Tlr6_Mm00441868_s1	0.26	9.48E-05
Crp_Mm00432680_g1	0.26	6.14E-02
Crh_Mm01293920_s1	0.26	5.83E-03
Wnt16_Mm00446420_m1	0.26	1.57E-04
Hdac4_Mm01299543_m1	0.25	3.27E-06
Hdac5_Mm01246076_m1	0.25	2.57E-05
Il1rapl2_Mm00472725_m1	0.25	2.14E-02
Rcan1_Mm00627762_m1	0.25	2.65E-03
Ubc_Mm01201237_m1	0.25	6.39E-07
Oit1_Mm00455341_m1	0.24	8.34E-04
Il1rl2_Mm00519250_m1	0.24	1.19E-06
Scube1_Mm00491651_m1	0.24	1.66E-02
Tirap_Mm00446502_m1	0.23	4.96E-06
Pik3r1_Mm00803160_m1	0.23	2.70E-05
Fgf12_Mm00802587_m1	0.23	2.74E-04
Kitl_Mm00442972_m1	0.23	5.85E-06
S100b_Mm00485897_m1	0.22	1.67E-03
F2rl1_Mm00433160_m1	0.22	6.39E-07
Il6st_Mm00439665_m1	0.22	1.27E-06
Jak2_Mm01208489_m1	0.22	3.11E-05
Fgf11_Mm00679875_m1	0.21	3.11E-05
Stat4_Mm00448890_m1	0.21	4.04E-07

Itgam_Mm00434455_m1	0.21	8.26E-05
Cftr_Mm00445197_m1	0.20	2.09E-06
P2ry1_Mm00435471_m1	0.20	4.01E-05
Tlr1_Mm00446095_m1	0.20	7.79E-06
Fabp4_Mm01295675_g1	0.20	1.88E-03
Krt7_Mm00466676_m1	0.20	3.91E-06
Il17rb_Mm00444704_m1	0.19	2.08E-05
Cfhr1_Mm00502018_m1	0.19	2.53E-02
Gpx1_Mm00656767_g1	0.18	6.02E-06
Hdac5_Mm00515917_m1	0.18	2.83E-05
Jak3_Mm00439962_m1	0.17	6.01E-06
Gal_Mm00439056_m1	0.17	6.78E-03
Gdf5_Mm00433564_m1	0.17	6.42E-05
Erbb2_Mm00658541_m1	0.16	2.21E-05
Stat5b_Mm00839889_m1	0.15	1.60E-08
Fabp4_Mm00445878_m1	0.15	5.65E-04
F3_Mm00438853_m1	0.12	1.19E-06
Lifr_Mm00442942_m1	0.12	1.39E-05
Lifr_Mm00442940_m1	0.12	7.90E-06
Bmp8a_Mm00432109_m1	0.09	3.66E-06
Thpo_Mm00437040_m1	0.09	8.06E-08
Fam3b_Mm00508056_m1	0.08	3.11E-05
Cd97_Mm00516248_m1	0.08	4.32E-10
Crlf1_Mm00517026_m1	0.07	5.56E-05
A2m_Mm00558642_m1	0.06	4.24E-05
Il31ra_Mm00519844_m1	0.06	1.81E-06
Il13ra2_Mm00515166_m1	0.04	3.18E-05

Males were fed high-fat diet (HFD, n = 14) for 10 weeks prior to mating with females and endometrial tissue was collected at 8 h after mating. Virgin estrus (est, n = 13) females were used as unmated controls. Mouse inflammatory gene expression was measured in endometrial tissue using OpenArray technology. A significant effect of mating was concluded when genes met the threshold criteria of 0.67 ≥ fold-change ≥ 1.5, FDR-adjusted $P \leq 0.1$.