**Supplemental File 1a. Multiple comparisons of body weight after surgery over time.**

\*p<0.05, \*\*p<0.01, \*\*\*p<0.001, \*\*\*\*p<0.0001. Two-Way ANOVA with Fisher’s LSD test.

Low fat diet (LFD), High fat diet (HFD), Vertical sleeve gastrectomy (VSG), Weight-Matched (WM)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Weeks after surgery | | | | | | | | | | |
| 0 | 0.5 | 1 | 1.5 | 2 | 2.5 | 3 | 3.5 | 4 | 4.5 | 5 |
| LFD-Sham vs. HFD-Sham | \*\*\*\* | \*\*\*\* | \*\*\*\* | \*\*\*\* | \*\*\*\* | \*\*\*\* | \*\*\*\* | \*\*\*\* | \*\*\*\* | \*\*\*\* | \*\*\*\* |
| LFD-Sham vs. HFD-VSG | \*\*\*\* | \*\*\*\* | \*\*\*\* | \*\*\*\* | \*\*\* | \*\*\* | \*\* | \*\*\* | \*\* | \*\*\* | \*\*\*\* |
| LFD-Sham vs. WM-Sham | \*\*\*\* | \*\*\*\* | \*\*\*\* | \*\*\*\* | \*\*\* | \*\* | \*\* | \*\* | \* | \* | \*\* |
| HFD-Sham vs. HFD-VSG | ns | ns | \*\*\* | \*\*\*\* | \*\*\*\* | \*\*\*\* | \*\*\*\* | \*\*\*\* | \*\*\*\* | \*\*\*\* | \*\*\*\* |
| HFD-Sham vs. WM-Sham | ns | ns | \* | \*\* | \*\*\*\* | \*\*\*\* | \*\*\*\* | \*\*\*\* | \*\*\*\* | \*\*\*\* | \*\*\*\* |
| HFD-VSG vs. WM-Sham | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns |

**Supplemental File 1b.** **Multiple comparisons of tumor volume over time.**

\*p<0.05, \*\*p<0.01, \*\*\*p<0.001, \*\*\*\*p<0.0001. Two-Way ANOVA with Fisher’s LSD test.

Low fat diet (LFD), High fat diet (HFD), Vertical sleeve gastrectomy (VSG), Weight-Matched (WM)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Weeks after tumor implantation | | | | |
| 1 | 1.5 | 2 | 2.5 | 3 |
| LFD-Sham vs. HFD-Sham | \*\*\* | \*\* | \*\*\*\* | \*\*\* | \*\*\*\* |
| LFD-Sham vs. HFD-VSG | \* | ns | ns | \* | \*\* |
| LFD-Sham vs. WM-Sham | ns | ns | ns | ns | ns |
| HFD-Sham vs. HFD-VSG | ns | \* | \* | ns | \* |
| HFD-Sham vs. WM-Sham | \*\* | \*\* | \*\*\*\* | \*\*\* | \*\*\*\* |
| HFD-VSG vs. WM-Sham | ns | ns | ns | \*\* | \*\* |

**Supplemental File 1c. Conserved differentially expressed genes in subcutaneous adipose/mammary fat pad in obese and bariatric surgery patients and mice.**

|  |
| --- |
| **Gene symbol** |
| Ret |
| Ddah1 |
| Hp |
| Lpgat1 |
| Nek6 |
| Ankrd50 |
| Sparc |
| Tuft1 |
| Rab20 |
| Chka |
| Dgki |
| Lep |
| Tgm1 |
| Itga1 |
| Tmem125 |
| Cd200 |
| Slc7a4 |
| Msc |
| Usf2 |
| Ephb3 |
| Cntn2 |
| Lgals7 |
| Mast4 |
| Tusc1 |
| Aldoc |
| Klhl5 |
| Arhgap20 |
| Setd7 |
| Thoc2 |
| Nap1l1 |
| Nkiras1 |
| Cmtm8 |
| Serpinf1 |
| Psme4 |
| Col4a1 |
| Clca2 |
| Nrp2 |
| Ficd |
| Kctd10 |
| Rtn4rl1 |
| Eif4b |
| Vgll3 |
| Slc15a4 |
| Slc35g1 |
| Pde8a |
| Mid1 |
| Tarsl2 |
| Sema3c |
| Pcdh7 |
| Vps13a |
| Amn1 |
| Ido1 |
| Npr3 |
| Srsf4 |