

Supplemental Table S1. Experimental Design Metadata

| Offspring Sample ID | Maternal ID <sup>a</sup> | Offspring Sex | Maternal Age | % Maternal Body Fat <sup>b</sup> | years on WSD | Offspring Collection <sup>c</sup> | Offspring Insulin (μU/mL) | Experimental Group <sup>d</sup> |
|---------------------|--------------------------|---------------|--------------|----------------------------------|--------------|-----------------------------------|---------------------------|---------------------------------|
| T100                | Dam12                    | M             | 7.3          | 9                                | NA           | 2014                              | 6.1                       | Group 1                         |
| T101                | Dam10                    | M             | 9.1          | 17                               | NA           | 2014                              | 4.0                       | Group 1                         |
| T102                | Dam13                    | F             | 7.7          | 10                               | NA           | 2014                              | 2.8                       | Group 1                         |
| T103                | Dam01                    | F             | 13.1         | 11                               | NA           | 2014                              | 3.3                       | Group 1                         |
| T104                | Dam18                    | F             | 8.1          | 24                               | NA           | 2015                              | 18.2                      | Group 1                         |
| T105                | Dam18                    | F             | 10           | 24                               | NA           | 2017                              | 12.8                      | Group 1                         |
| T106                | Dam05                    | M             | 14           | 21                               | NA           | 2017                              | 4.7                       | Group 1                         |
| T107                | Dam07                    | F             | 12.9         | 23                               | NA           | 2017                              | 3.6                       | Group 1                         |
| T108                | Dam06                    | M             | 13.1         | 20                               | NA           | 2017                              | 5.2                       | Group 1                         |
| T109                | Dam09                    | F             | 12.1         | 25                               | NA           | 2017                              | 6.4                       | Group 1                         |
| T201                | Dam09                    | M             | 9            | 13                               | NA           | 2014                              | 30.6                      | Group 2                         |
| T202                | Dam07                    | M             | 9.9          | 16                               | NA           | 2014                              | 9.8                       | Group 2                         |
| T203                | Dam06                    | M             | 11.1         | 15                               | NA           | 2015                              | 7.4                       | Group 2                         |
| T204                | Dam05                    | F             | 12.2         | 15                               | NA           | 2015                              | 18.2                      | Group 2                         |
| T205                | Dam09                    | F             | 10.2         | 20                               | NA           | 2015                              | 38.5                      | Group 2                         |
| T300                | Dam19                    | F             | 6.2          | 22                               | 1.8          | 2014                              | 5.2                       | Group 3                         |
| T304                | Dam14                    | M             | 7.7          | 11                               | 1.2          | 2015                              | 3.1                       | Group 3                         |
| T305                | Dam23                    | M             | 6            | 9                                | 1.2          | 2015                              | 3.6                       | Group 3                         |
| T306                | Dam17                    | M             | 7.6          | 13                               | 1.3          | 2015                              | 6.0                       | Group 3                         |
| T307                | Dam28                    | M             | 5.2          | 23                               | 1.4          | 2015                              | 5.2                       | Group 3                         |
| T308                | Dam25                    | M             | 6            | 16                               | 2.6          | 2015                              | 1.9                       | Group 3                         |
| T309                | Dam27                    | F             | 8.3          | 24                               | 4.6          | 2015                              | 13.6                      | Group 3                         |
| T311                | Dam14                    | F             | 10           | 26                               | 3.4          | 2017                              | 4.6                       | Group 3                         |
| T312                | Dam27                    | M             | 7.2          | 26                               | 3.5          | 2017                              | 5.1                       | Group 3                         |
| T313                | Dam22                    | M             | 8.1          | 27                               | 3.5          | 2017                              | 4.8                       | Group 3                         |
| T400                | Dam20                    | F             | 6.1          | 13                               | 1.5          | 2014                              | 13.1                      | Group 4                         |
| T401                | Dam11                    | F             | 7.2          | 12                               | 1.7          | 2014                              | 3.5                       | Group 4                         |
| T402                | Dam16                    | F             | 7.1          | 15                               | 1.7          | 2014                              | 13.1                      | Group 4                         |
| T404                | Dam26                    | M             | 5.1          | 15                               | 1.7          | 2014                              | 11.4                      | Group 4                         |
| T405                | Dam22                    | M             | 6.1          | 9                                | 1.6          | 2015                              | 9.5                       | Group 4                         |
| T406                | Dam20                    | M             | 7.4          | 17                               | 2.8          | 2015                              | 11.6                      | Group 4                         |
| T407                | Dam21                    | F             | 7.8          | 10                               | 1.5          | 2015                              | 9.5                       | Group 4                         |
| T408                | Dam11                    | F             | 8.3          | 10                               | 2.7          | 2015                              | 7.3                       | Group 4                         |
| T500                | Dam24                    | M             | 8.3          | 30                               | 4.6          | 2017                              | 4.3                       | Group 5                         |
| T501                | Dam15                    | M             | 10.2         | 40                               | 3.5          | 2017                              | 2.2                       | Group 5                         |
| T502                | Dam02                    | F             | 12.2         | 35                               | 5.8          | 2014                              | 4.3                       | Group 5                         |
| T503                | Dam04                    | F             | 12.3         | 30                               | 5.8          | 2014                              | 2.3                       | Group 5                         |
| T504                | Dam03                    | F             | 12.4         | 33                               | 5.9          | 2014                              | 10.1                      | Group 5                         |
| T505                | Dam08                    | F             | 12.9         | 35                               | 8.5          | 2017                              | 10.1                      | Group 5                         |
| T506                | Dam17                    | F             | 9.8          | 34                               | 3.5          | 2017                              | 6.5                       | Group 5                         |

a- Relatedness analyses were grouped by maternal ID, paternal ID is unknown

b- Rearing cohort determined by year necropsy was performed

c- Experimental Groups match those in the experimental Design: Group 1: Maternal &amp; Post-weaning Control, Group 2 = Maternal Control, Post-weaning Western-style, Group 3: Maternal Western-style and Lean, Post-weaning Control, Group 4: Maternal &amp; Post-weaning Western-style, Group 5: Maternal Western-style and Obese, Post-weaning Control.