**Dyslipidemia, Insulin Resistance, and Impairment of Placental Metabolism in the Offspring of Obese Mothers**

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**Running Title: Maternal obesity, and placental and fetal metabolism**

**Keywords:** maternal obesity, lipid profile, placental function, metabolomics, insulin resistance.

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**Supplemental Data**

**Table S1.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Maternal blood (n=33)** | | | | | | **Cord Blood (n=26)** | | | | | |
| **NW** | | | **OB** | | | **NW** | | | **OB** | | |
|  | **M** | **F** |  | **M** | **F** |  | **M** | **F** |  | **M** | **F** |
| **Plasma Insulin**  **(µIU/mL)** |  | **9.59**  **(1.94-43.46)** | **13.9**  **(2.45-21.29)** |  | **17.27**  **(1.8-38.17)** | **12.6**  **(7.09-16.40)** |  | **6.34**  **(3.32-10.45)** | **6.38**  **(2.45-9.69)** |  | **10.2\***  **(3.03-12.87)** | **12.52\***  **(1.24-5.32)** |
| **Blood Glucose**  **(mg/dL)** |  | **78**  **(44-94)** | **85**  **(49-92)** |  | **79**  **(68-99)** | **65**  **(45-88)** |  | **90.5**  **(69-93)** | **99.5**  **(77-105)** |  | **72.0**  **(38-110)** | **91.00**  **(58-115)** |
| **HOMA-IR** |  | **1.72**  **(0.21-8.37)** | **2.16**  **(0.29-4.57)** |  | **3.38**  **(0.44-7.26)** | **1.97**  **(0.99-3.46)** |  | **1.32**  **(0.75-1.94)** | **1.36**  **(0.5-2.54)** |  | **2.00^**  **(0.82-2.83)** | **3.06\***  **(1.24-5.32)** |

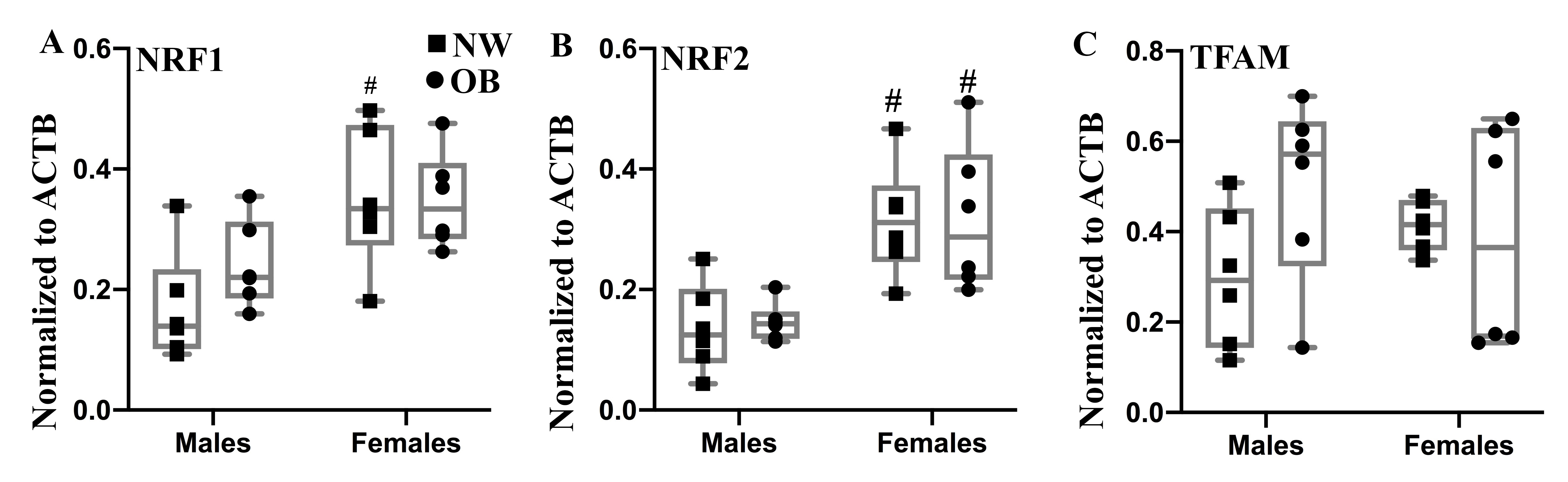
**Table S1**. Plasma Insulin, Glucose, and Homeostasis Model Assessment of Insulin Resistance (HOMA-IR) values for maternal and cord blood samples from NW and OB women separated by fetal sex. Data are presented as median (range). \*, p<0.05, and ^, p<0.1 NW vs. OB

**Table S2.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Maternal blood (n=33)** | | | | | | **Cord Blood (n=26)** | | | | | |
| **NW** | | | **OB** | | | **NW** | | | **OB** | | |
|  | **M** | **F** |  | **M** | **F** |  | **M** | **F** |  | **M** | **F** |
| **TC**  **(mg/dL)** |  | 253  (223-304) | 252  (197-329) |  | 218^  (149-282) | 230  (174-256) |  | 58  (48-65) | 60  (49-70) |  | 49^  (33-67) | 50  (45-68) |
| **HDLcalc**  **(mg/dL)** |  | 69  (28-101) | 70  (52-96) |  | 54  (29-77) | 68  (50-92) |  | 25  (19-29) | 27  (20-34) |  | 17\*  (13-31) | 22\*  (17-29) |
| **LDL-calc**  **(mg/dL)** |  | 146  (90-210) | 136  (101-189) |  | 131^  (75-184) | 109^  (86-156) |  | 28  (22-32) | 25  (24-32) |  | 25  (17-36) | 23  (19-33) |
| **TRIG**  **(mg/dL)** |  | 207  (140-538) | 229  (120-403) |  | 218  (149-282) | 192  (148-382) |  | 21  (16-37) | 21  (18-33) |  | 22  (16-56) | 28  (24-31) |

**Table S2. Lipid analysis data separated by fetal sex**. TC, total cholesterol; HDL-c, High- density lipoprotein cholesterol; LDL-c, Low-density lipoprotein cholesterol; TG, triglycerides. Data are presented as median (range). \*, p<0.05; ^ p<0.1 NW vs. OB.

**Figure S1.**

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**Figure S1.** Placental expression of PGC-1a target genes NRF1 (A), NRF2 (B), and TFAM (C) measured by western blot and normalized to the expression of ACTB. N=6/group/sex. #, p<0.05 females vs. males within the same group of maternal adiposity.