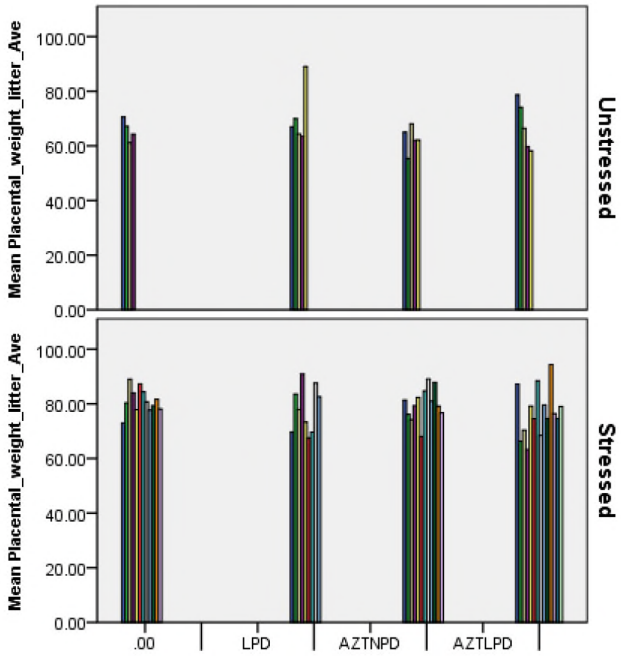
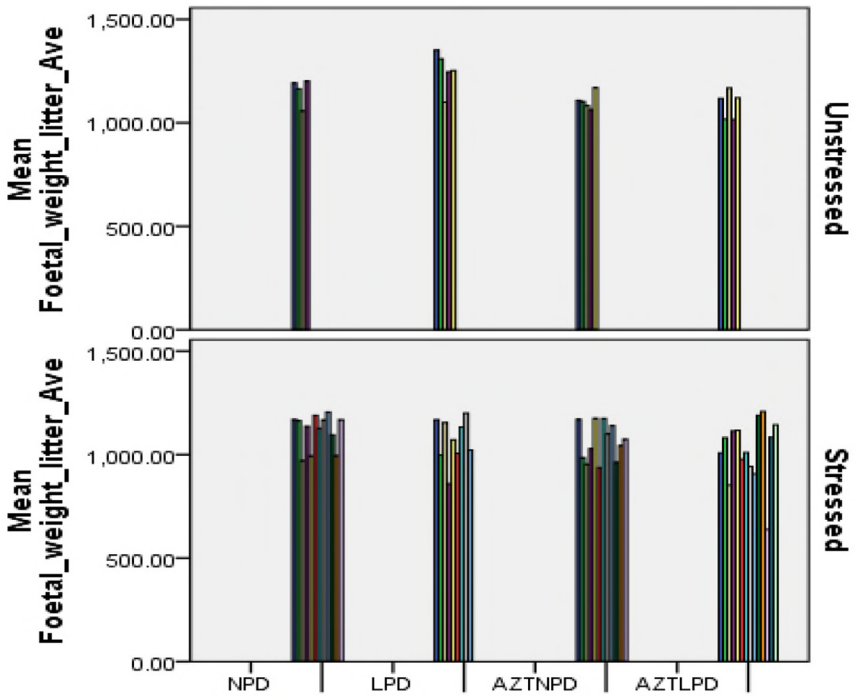
# Acute nutritional stress during pregnancy affects placental efficiency, fetal growth and adult glucose homeostasis

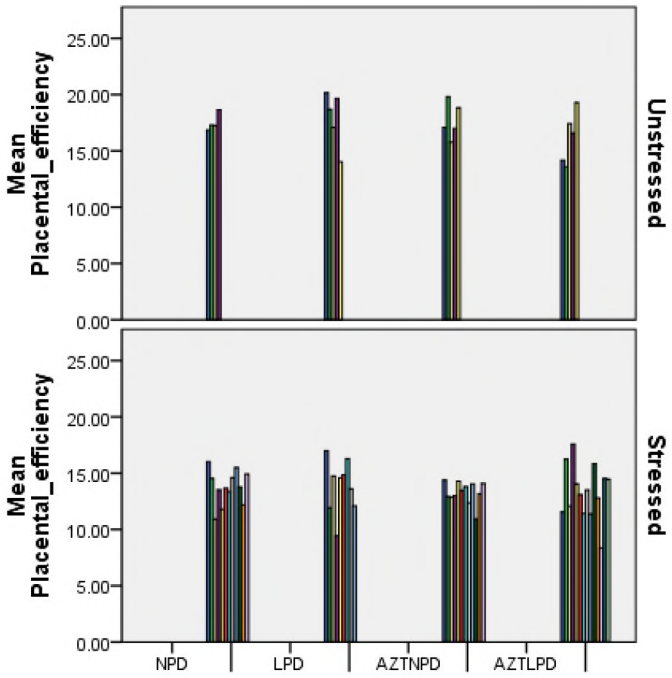
## SUPPLEMENTARY MATERIALS



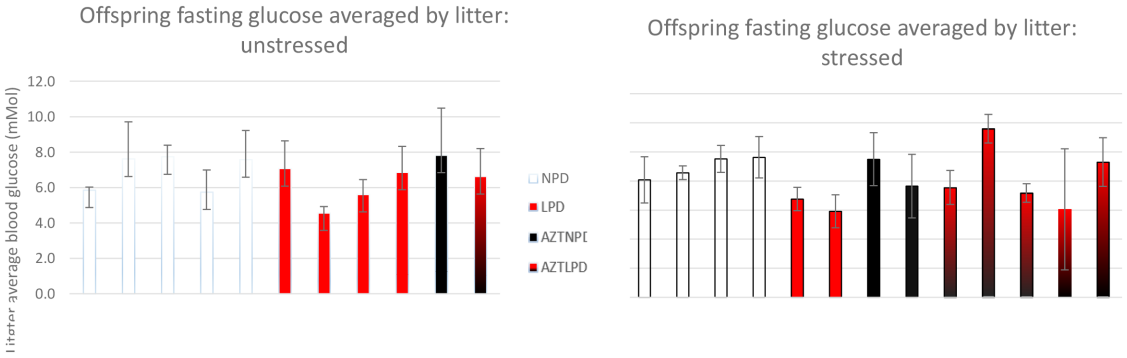

**Supplementary Figure 1: Placental weight (mg): each bar represents one litter.**




**Supplementary Figure 2: Foetal weight (mg): each bar represents one litter.**




**Supplementary Figure 3: Placental Efficiency (foetal weight/embryonic weight): each bar represents one litter.**




**Supplementary Figure 4: Fasting glucose of offspring (mmol) averaged by litter (error bars 1SD).** NB difference between stressed and unstressed is not significant using litter as the unit, but is significant when using individuals.

**Supplementary Table 1: Data corresponds that that presented in Figure 4**

| Culture conditions | Be Wo | | | MEFs | | |
|---|---|---|---|---|---|---|
| | Mean uM | N | Std. Deviation | Mean uM | N | Std. Deviation |
| Glucose (baseline) | 3.4 | 1177 | 1.22 | 2.3 | 1390 | 0.24 |
| Low Glucose | 3.7 | 1641 | 1.11 | 2.5 | 1988 | 0.32 |
| Galactose | 3.4 | 1796 | 0.98 | 2.3 | 1372 | 0.33 |
| Glucose 5% FCS | 3.8 | 1691 | 1.14 | 2.5 | 1493 | 0.31 |
| Low Glucose 5% FCS | 3.7 | 1367 | 1.02 | 2.6 | 1384 | 0.33 |
| Glucose - 6mM Glut | 3.6 | 1439 | 1.12 | 2.4 | 2069 | 0.26 |
| No amino acids | 4.0 | 1297 | 1.35 | 2.7 | 1568 | 0.53 |

Mitochondrial length was in all conditions significantly longer in BeWos that MEFs (all $p<0.001$). Mitochondria were the same length at baseline (25mM glucose) and in glucose-free galactose media. In all other conditions, mitochondria were significantly longer than baseline (all $p<0.001$).