

**Supplementary Table 1 – Anthropometric and biochemical variables of subjects with obesity before and after the consumption for 2 months of Genistein (50 mg/day) or Placebo**

|                                 | Before      |             |         | After              |                    |             |
|---------------------------------|-------------|-------------|---------|--------------------|--------------------|-------------|
|                                 | Placebo     | Genistein   | p-value | Placebo            | Genistein          | p-value     |
|                                 | n = 23      | n = 22      |         | n = 23             | n = 22             |             |
| Age ( years)                    | 43.0 ± 2.28 | 42.6 ± 1.9  | 0.89    |                    |                    |             |
| Body weight (kg)                | 87.4 ± 2.50 | 88.9 ± 2.93 | 0.70    | 85.6 ± 2.48        | 88.7 ± 2.84        | 0.57        |
| BMI (kg/m <sup>2</sup> )        | 34.5 ± 0.98 | 34.6 ± 0.86 | 0.89    | 33.7 ± 0.96        | 34.2 ± 0.77        | 0.71        |
| Waist circumference (cm)        | 101 ± 2.06  | 102 ± 2.20  | 0.89    | 99.4 ± 2.11        | 100 ± 2.06         | 0.72        |
| Fat percentage (%)              | 43.0 ± 1.61 | 44.2 ± 1.32 | 0.60    | 42.3 ± 1.66        | 43.7 ± 1.34        | 0.53        |
| Fat-free mass percentage (%)    | 57.0 ± 1.57 | 55.6 ± 1.34 | 0.50    | 57.6 ± 1.57        | 55.8 ± 1.34        | 0.40        |
| Systolic blood pressure (mmHg)  | 112 ± 2.02  | 111 ± 3.43  | 0.80    | 109 ± 2.31         | 108 ± 3.34         | 0.81        |
| Diastolic blood pressure (mmHg) | 78.2 ± 1.41 | 76.4 ± 2.49 | 0.52    | 75.1 ± 1.52        | 76.4 ± 2.49        | 0.96        |
| Glucose (mg/dL)                 | 104 ± 2.77  | 99.1 ± 2.43 | 0.18    | 104 ± 3.64         | 99.1 ± 2.43        | 0.18        |
| (mmol/L)                        | 5.72 ± 0.16 | 5.45 ± 0.13 | 0.18    | 5.72 ± 0.20        | 5.45 ± 0.13        | 0.18        |
| Insulin (μU/L)                  | 15.3 ± 1.75 | 14.7 ± 1.41 | 0.78    | <b>18.3 ± 1.76</b> | <b>13.9 ± 1.42</b> | <b>0.05</b> |
| HOMA IR index                   | 4.87 ± 0.59 | 3.50 ± 0.40 | 0.49    | <b>4.87 ± 0.59</b> | <b>3.49 ± 0.40</b> | <b>0.05</b> |
| HbA1C %                         | 5.94 ± 0.12 | 5.73 ± 0.13 | 0.24    | 5.87 ± 0.14        | 5.68 ± 0.62        | 0.35        |
| Triglycerides (mg/dL)           | 213 ± 35.1  | 200 ± 21.6  | 0.74    | 186 ± 18.2         | 191 ± 21.0         | 0.74        |
| (mmol/L)                        | 2.34 ± 0.38 | 2.2 ± 0.23  | 0.74    | 2.04 ± 0.20        | 2.10 ± 0.23        | 0.74        |
| Total Cholesterol (mg/dL)       | 184 ± 9.52  | 194 ± 9.11  | 0.42    | 184 ± 910.0        | 187 ± 9.23         | 0.79        |
| (mmol/L)                        | 4.60 ± 0.23 | 4.85 ± 0.22 | 0.42    | 4.60 ± 0.22        | 4.67 ± 0.23        | 0.79        |
| HDL Cholesterol (mg/dL)         | 35.7 ± 1.76 | 34.9 ± 2.08 | 0.78    | 38.1 ± 2.16        | 35.6 ± 2.24        | 0.43        |
| (mmol/L)                        | 0.89 ± 0.04 | 0.86 ± 0.05 | 0.78    | 0.95 ± 0.05        | 0.89 ± 0.05        | 0.43        |
| LDL Cholesterol (mg/dL)         | 111 ± 8.16  | 125 ± 7.14  | 0.23    | 115 ± 7.95         | 123 ± 6.97         | 0.45        |
| (mmol/L)                        | 2.77 ± 0.20 | 3.12 ± 0.17 | 0.23    | 2.87 ± 0.19        | 3.07 ± 0.17        | 0.45        |
| C-Reactive Protein (mg/L)       | 5.46 ± 0.90 | 4.60 ± 0.64 | 0.44    | <b>4.91 ± 0.67</b> | <b>3.37 ± 0.43</b> | <b>0.06</b> |
| Leptin (μg/L)                   | 32.4 ± 3.89 | 31.3 ± 4.00 | 0.85    | 29.7 ± 3.37        | 26.6 ± 2.58        | 0.47        |
| Adiponectin (μg/mL)             | 8.17 ± 1.04 | 9.89 ± 1.81 | 0.41    | 11.8 ± 2.16        | 12.9 ± 2.54        | 0.74        |

BMI, body mass index; HOMA-IR, homeostasis model assessment for insulin resistance. Values are given as mean ± SEM (n= 45). Differences between the two groups were evaluated by independent sample Student's t-test.