

**SUPPLEMENTARY MATERIAL**

**FOR**

**PHARMACOGENOMICS OF METABOLIC EFFECTS OF**

**ROSIGLITAZONE**

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**Supplementary table 1. Primer sequences used for real-time PCR validation of microarray results.**

<b>Gene</b>	<b>Primer sequence</b>
ADAM metallopeptidase domain 7	FWD 5'-CCATCTGCTCTTCCCTGTGT-3' REV 5'-AAGGCTTCTCCCCACTCTGT-3'
Aquaporin 9	FWD 5'-GGTTTGAGGTCTTCACAGTTGG-3' REV 5'-CTTCGAGTGATGCATTTGGA-3'
Carnitine palmitoyltransferase 1B	FWD 5'-TTATCGAGTTCAGAAACGAACG-3' REV 5'-TGGTGTGTCTCCTGGTCTCA-3'
Catechol-O-methyltransferase	FWD 5'-GAGATCTTCACGGGGTTTCA-3' REV 5'-TGTTATTTGGCGTCTGGACA-3'
Caveolin 1	FWD 5'-GACATCTCTACAGTGTTC-3' REV 5'-ACACGGCTGATGCACTGAAT-3'
Leptin	FWD 5'-TCCTATGTTCAAGCTGTGCC-3' REV 5'-GTGTGAACACATGGCTCTCT-3'
Prostaglandin D2 synthase	FWD 5'-GCTTCCACTCCCTCTCAGTG-3' REV 5'-AGAAGCTGGGCTCTGCTGTA-3'

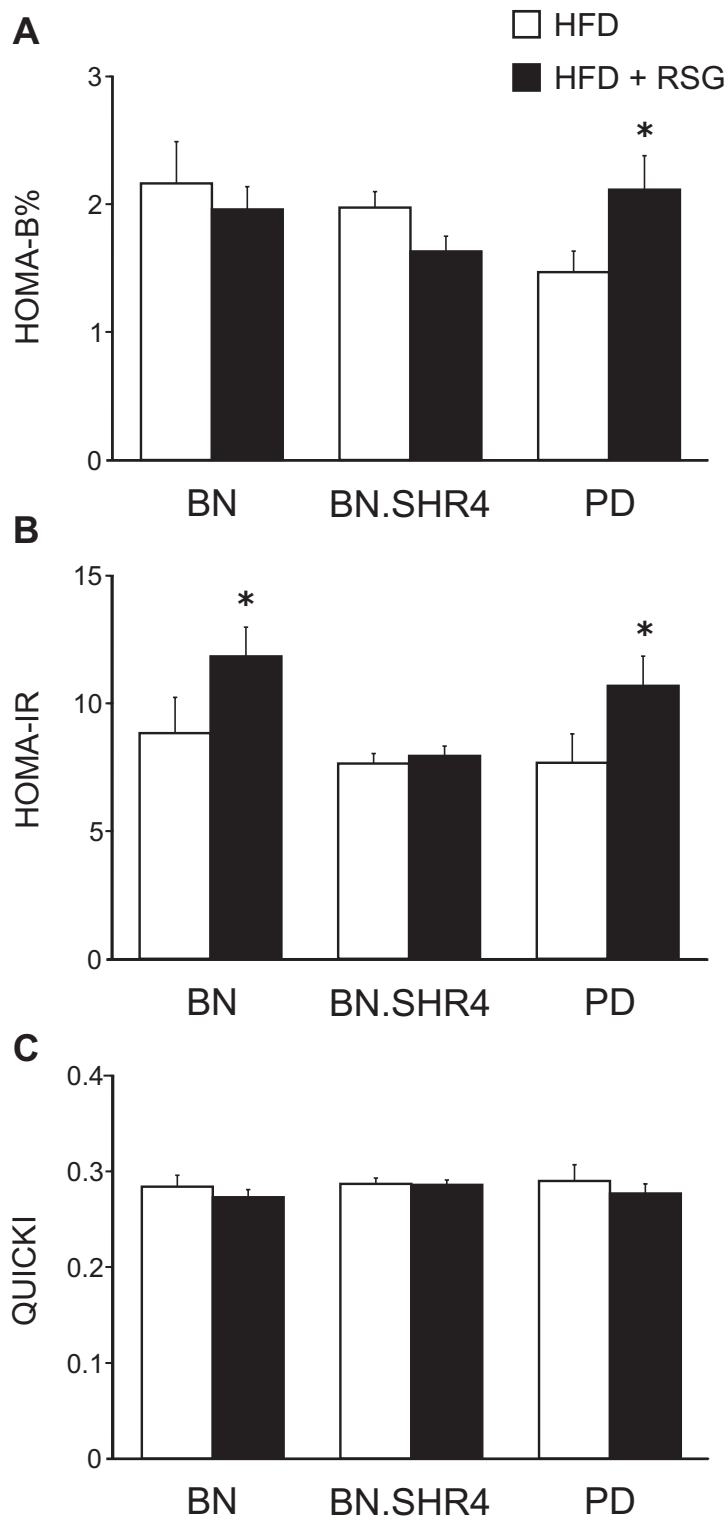
FWD: forward primer, REV: reverse primer.

**Supplementary table 2. Two-way ANOVA results.**

<b>Trait</b>	<b>p STRAIN</b>	<b>p TREATMENT</b>	<b>p S*T</b>
Triglycerides	<b>0.02</b>	<i>0.31</i>	<i>0.12</i>
Cholesterol	<b>&lt;0.0001</b>	<i>0.78</i>	<i>0.31</i>
FPG	<b>0.02</b>	<b>&lt;0.0001</b>	<b>0.009</b>
AUC (OGTT)	<i>0.06</i>	<b>&lt;0.0001</b>	<i>0.68</i>
Insulin	<i>0.11</i>	<i>0.11</i>	<i>0.10</i>
HOMA B%	<i>0.32</i>	<i>0.83</i>	<b>0.026</b>
HOMA IR	<b>0.030</b>	<b>0.009</b>	<i>0.23</i>
QUICKI	<i>0.11</i>	<b>0.009</b>	<i>0.23</i>
Free fatty acids (0 min)	<b>0.002</b>	<i>0.25</i>	<i>0.30</i>
Free fatty acids (60 min)	<b>0.002</b>	<i>0.11</i>	<i>0.76</i>
Initial body weight	<b>&lt;0.0001</b>	<i>0.54</i>	<i>0.18</i>
Final body weight (b.w.)	<b>&lt;0.0001</b>	<i>0.71</i>	<i>0.15</i>
Adiposity index	<b>&lt;0.0001</b>	<b>0.04</b>	<b>0.01</b>
Heart weight/100g b.w.	<b>0.009</b>	<i>0.75</i>	<i>0.94</i>
Kidney weight/100g b.w.	<i>0.16</i>	<i>0.52</i>	<i>0.50</i>
Liver weight/100g b.w.	<b>&lt;0.0001</b>	<i>0.43</i>	<b>0.04</b>
Muscle weight/100g b.w.	<b>&lt;0.0001</b>	<i>0.40</i>	<i>0.20</i>
Liver cholesterol	<b>0.0004</b>	<b>0.007</b>	<b>0.009</b>
Liver triglyceride	<b>0.004</b>	<i>0.88</i>	<i>0.30</i>
Muscle cholesterol	<b>&lt;0.0001</b>	<i>0.59</i>	<i>0.82</i>
Muscle triglyceride	<b>0.007</b>	<i>0.97</i>	<i>0.39</i>
Lipogenesis (insulin -)	<b>&lt;0.0001</b>	<i>0.09</i>	<b>0.01</b>
Lipogenesis (insulin +)	<b>&lt;0.0001</b>	<i>0.08</i>	<b>&lt;0.0001</b>
Glycogenesis (insulin -)	<i>0.13</i>	<i>0.92</i>	<i>0.25</i>
Glycogenesis (insulin +)	<b>0.012</b>	<i>0.92</i>	<i>0.09</i>
Glucose oxidation (insulin -)	<i>0.15</i>	<b>0.03</b>	<i>0.14</i>
Glucose oxidation (insulin +)	<b>0.001</b>	<i>0.09</i>	<b>0.01</b>
Plasma SOD	<i>0.44</i>	<i>0.08</i>	<i>0.54</i>
Liver SOD	<b>&lt;0.001</b>	<b>&lt;0.001</b>	<b>0.009</b>
Plasma CAT	<i>0.62</i>	<i>0.24</i>	<i>0.76</i>
Liver CAT	<b>&lt;0.001</b>	<i>0.59</i>	<i>0.20</i>
Plasma GSH-Px	<i>0.69</i>	<b>0.001</b>	<i>0.47</i>
Liver GSH-Px	<b>0.0002</b>	<i>0.20</i>	<i>0.37</i>
Plasma GSH	<i>0.62</i>	<b>0.006</b>	<i>0.28</i>
Liver GSH	<i>0.78</i>	<i>0.44</i>	<i>0.29</i>
Plasma TBARS	<i>0.52</i>	<b>0.01</b>	<i>0.79</i>
Liver TBARS	<i>0.42</i>	<b>0.0007</b>	<i>0.72</i>
Plasma CD	<i>0.08</i>	<b>&lt;0.001</b>	<b>0.01</b>
Liver CD	<i>0.54</i>	<i>0.76</i>	<i>0.63</i>

S\*T: STRAIN\*TREATMENT factor interaction, AUC: area under the glycaemic curve, CAT: Catalase, CD: conjugated dienes, FPG: fasting plasma glucose, GSH-Px: Glutathione peroxidase, GSH: Glutathione, HOMA B%: homeostasis model assessment of percent  $\beta$ -cell function index, HOMA IR homeostasis model assessment of insulin resistance index, OGTT: oral glucose tolerance test, QUICKI: quantitative insulin sensitivity check index, SOD: Superoxide dismutase, TBARS: Thiobarbituric acid reactive substances.





**Supplementary Figure 1. Insulin resistance indices.** The homeostasis model assessment (HOMA) of percent  $\beta$ -cell function (HOMA-B%) (top), HOMA of insulin resistance index (HOMA-IR) (middle) and quantitative insulin sensitivity check index (QUICKI) (bottom) in control (HFD, white bars) and rosiglitazone-treated (HFD + RSG, black bars) adult male rats of BN, BN.SHR4 and PD rat strains. The significance levels only for intra-strain rosiglitazone effect are shown (post-hoc Tukey's HSD) as follows: \*... $p < 0.05$ .