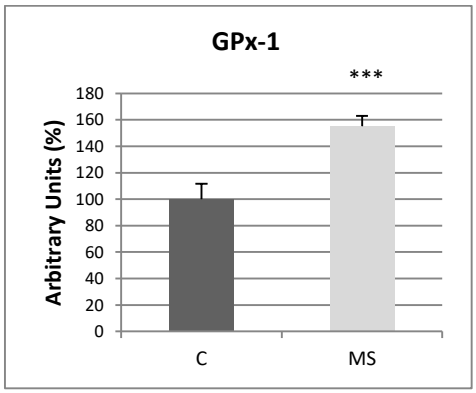
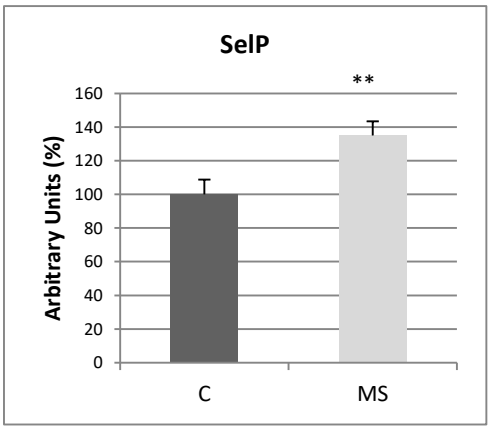
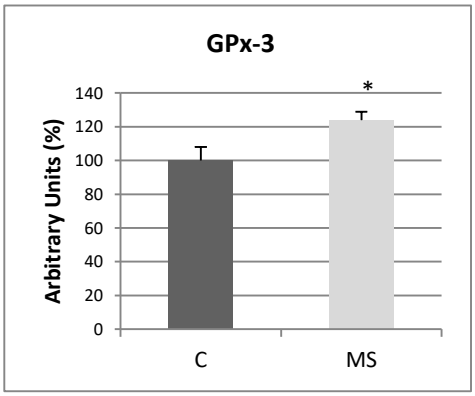
| | | C | MS |
|---|---|---|---|
| PREGNANT DAMS | **Initial body weight** (g) | 194.1 ± 6.1 | 190.9 ± 5.7 |
| | **Solid Kcal intake** (Kcal/day) | 74.1 ± 1.7 | 73.2 ± 4.3 |
| | **Se intake** (µg/day) | 1.85 ± 0.04 | 1.83 ± 0.11 |
| | **Serum glucose** (mg/dl) | 124.8 ± 2.4 | 327.5 ± 6.9*** |
| | **Systolic Blood Pressure** (mmHg) | 110.2 ± 3.3 | 133.6 ± 4.2*** |
| LACTATING DAMS | **Solid kcal intake** (kcal/day) | 179.7 ± 11.8 | 145.7 ± 9.3 * |
| | **Se intake** (µg/day) | 5.1 ± 0.3 | 4.3 ± 0.2 * |
| | **Weight gain** (g) | 49.4 ± 2.9 | 40.3 ± 2.1 * |
| | **Serum glucose** (mg/dl) | 214.8 ± 6.3 | 221.8 ± 5.9 |
| | **Systolic Blood Pressure** (mmHg) | 116.42 ± 3.3 | 122.56 ± 0.9* |
| OFFSPRING 21day old | | | |
| | **Milk intake** (µg/30 min sucklig) | 0.51 ± 0.03 | 0.39 ± 0.03** |
| | **Se intake by milk** (µg/30 min sucklig) | 0.132± 0.002 | 0.102 ± 0.003** |
| | **Weight** (g) | 34.7 ± 0.7 | 26.50± 0.5 *** |
| | **Kidney weight** (g) | 0.53 ± 0.07 | 0.46± 0.03 |
| | **Kidney somatic index (KSI)** | 1.52± 0.05 | 1.71± 0.06 * |
| | **Protein in kidney** (mg/ml) | 7.2± 0.4 | 6.1± 0.3 * |
| | **Se in kidney** (µg/g dry tissue) | 0.59± 0.03 | 0.91± 0.03*** |
| | **Serum glucose** (mg/dl) Pups 28 days old | 148.4 ± 6.4 | 156.5 ± 5.9 |
| | **Systolic Blood Pressure** (mmHg) Pups 28 days old | 109.2 ± 2.3 | 116.6 ± 1.2* |

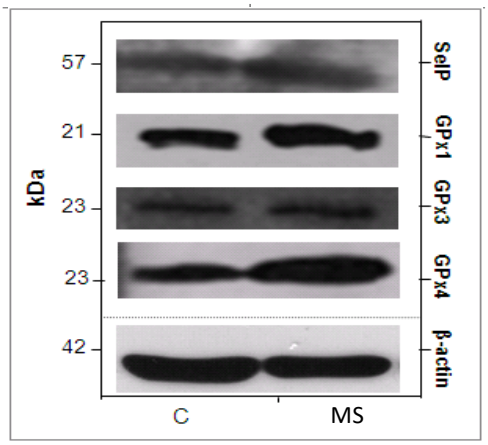
**Table 1. Nutritional parameters in dams and pups**. The results are expressed as mean ± SEM and analysed by Student´s t-test. The number of animals in each group of dams is 6, and in pups is 8. Statistic difference between groups was expressed as *p* value: C vs MS: * p<0.05, ** p<0.01, *** p<0.001.

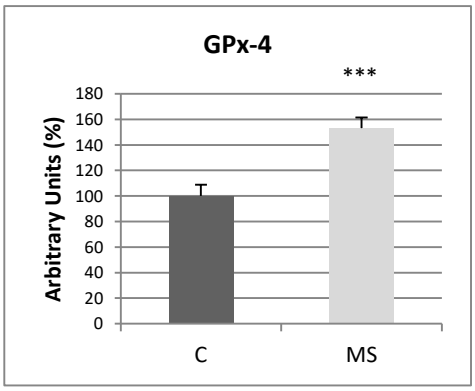
**Figure 1. Expression of selenoproteins (GPx1, GPx3, GPx4 and SelP), in kidney of 21d old pups. Representative western blots of these proteins (normalized to β-actin).**




The results are expressed as mean ± SEM and analysed by Student´s t-test. The number of animals in each group is 8. Statistic difference between groups was expressed as *p* value: C vs MS: * $p<0.05$, ** $p<0.01$, *** $p<0.001$.

**Figure 2. Oxidative balance in the kidneys of 21d old pups: SOD activity, CAT activity, GPx activity , GR activity and lipid oxidation.**

The results are expressed as mean ± SEM and analysed by Student´s t-test. The number of animals in each group is 8. Statistic difference between groups was expressed as *p* value: C vs MS: * p<0.05, ** p<0.01, *** p<0.001.

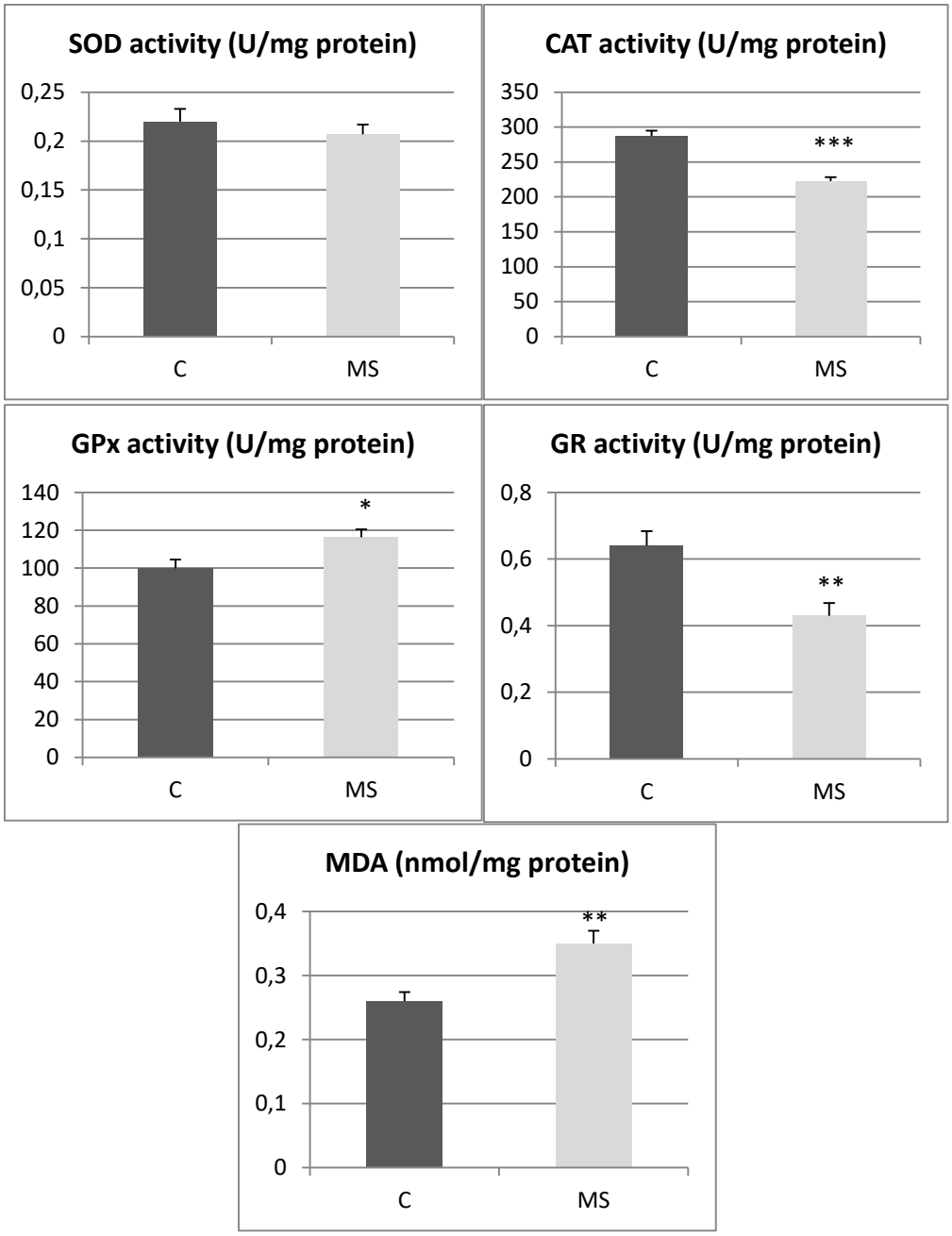


**Figure 3. Kidneys energetic and inflammatory profile in 21d old pups. Expression of AMPK-t, AMPK-p and active NFkB. Representative western blots of these proteins (normalized to β-actin).**

The results are expressed as mean ± SEM and analysed by Student´s t-test. The number of animals in each group is 8. Statistic difference between groups was expressed as *p* value: C vs MS: * p<0.05, ** p<0.01, *** p<0.001.

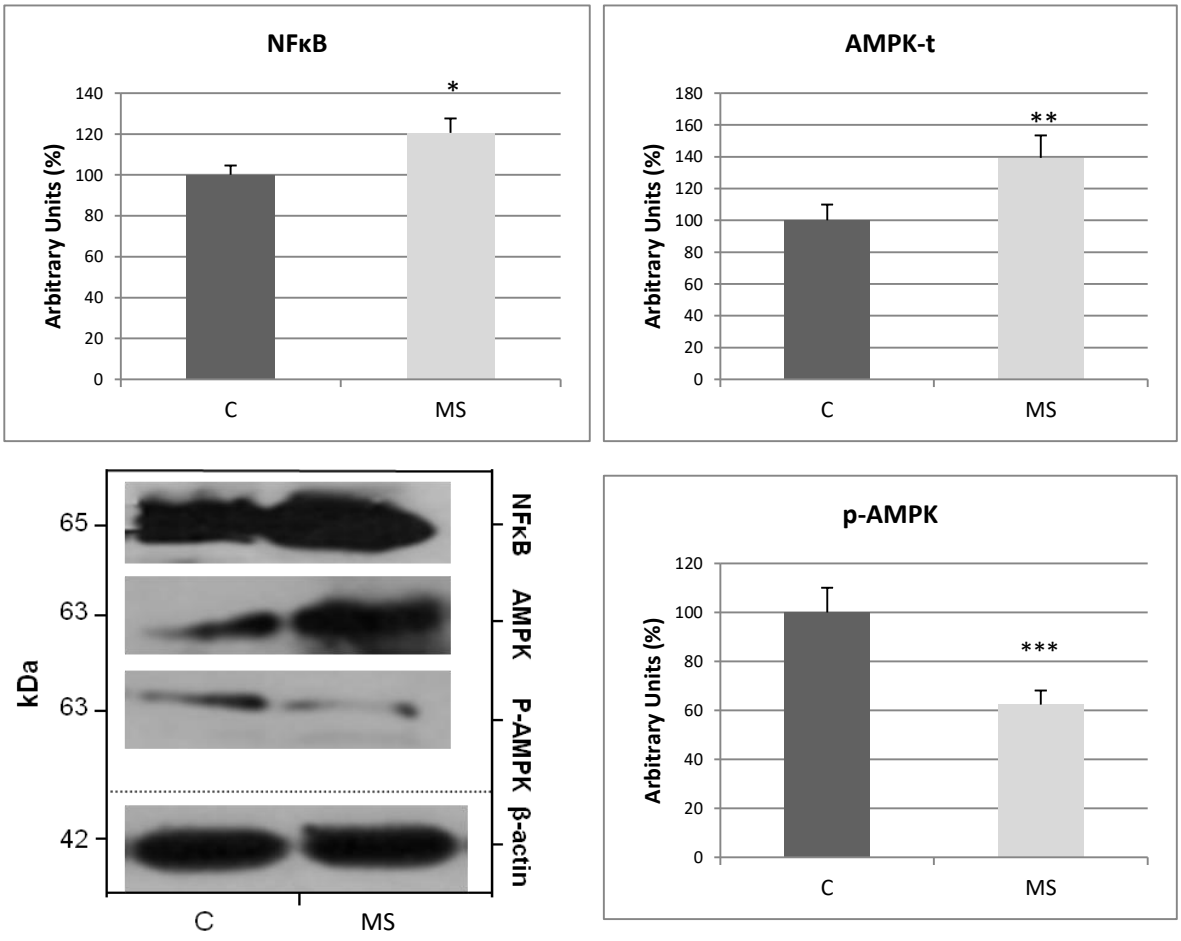
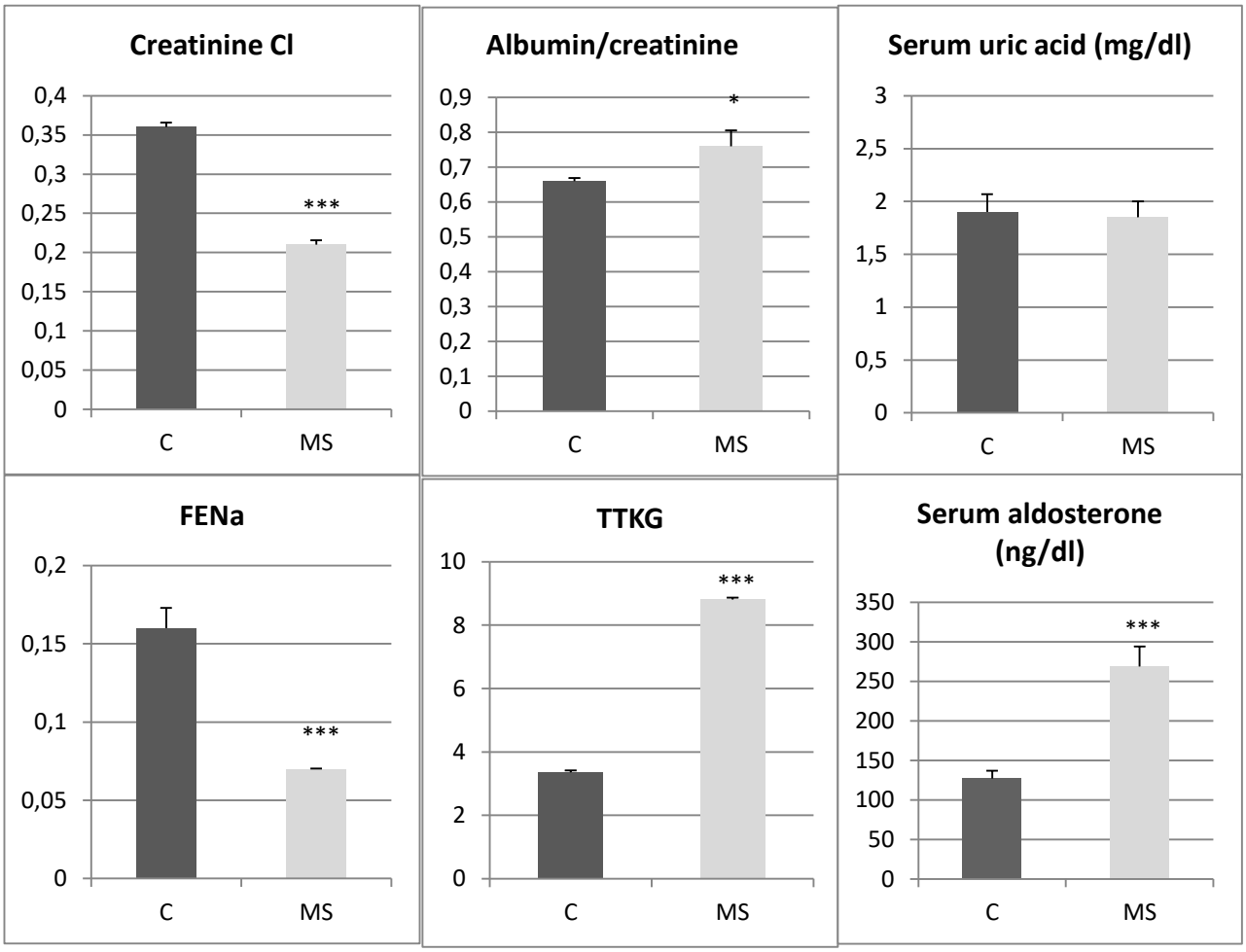


**Table 2. Results in 21d old pups: Creatinine, $Na^+$, $K^+$, Urea and Selenium in serum and urine, and their relative clearances. Urinary flow, osmolality and serum osmolality.**

| Parameters | | C | MS |
|---|---|---|---|
| SERUM | Creatinine (mg/dL) | 0.19 ± 0.01 | 0.33 ± 0.02 *** |
| | $Na^+$ (mmol/L) | 140.5 ± 0.7 | 143.3 ± 0.9 * |
| | $K^+$ (mmol/L) | 6.4 ± 0.4 | 6.6 ± 0.6 |
| | Urea (mg/dL) | 25.9 ± 2.8 | 49.1 ± 4.9 ** |
| | Selenium (µg/L) | 314.6 ± 18.1 | 304.3 ± 25.1 |
| | Osmolality (mosm/L) | 301.3 ± 30.1 | 306.6 ± 30.6 |
| URINE | Urinary flow (ml/day) | 4.5 ± 0.4 | 2.1 ± 0.2 *** |
| | Creatinine (mg/dL) | 24.9 ± 2.3 | 28.7 ± 1.1 |
| | $Na^+$ (mmol/L) | 20.1 ± 0.6 | 8.5 ± 0.4 *** |
| | $K^+$ (mmol/L) | 28.5 ± 1.9 | 51.6 ± 0.9 *** |
| | Urea (mg/dL) | 1567 ± 105 | 3807 ± 201 *** |
| | Selenium (ng/day) | 10.7 ± 0.6 | 3.1 ± 0.3 *** |
| | Osmolality (mosm/L) | 0.19 ± 0.02 | 0.41 ± 0.04 *** |
| | Albumin (mg/dL) | 16.6 ± 1.4 | 23.4 ± 1.4 ** |
| RELATIVE CLEARANCES | CL $Na^+$ /CL creatinine | 0.122 ± 0.011 | 0.045 ± 0.004 *** |
| | CL $K^+$/CL creatinine | 3.8 ± 0.4 | 5.5 ± 0.6 * |
| | CL Urea/CL creatinine | 52 ± 5 | 69 ± 7 |
| | CL Se/CL creatinine | 0.059 ± 0.006 | 0.014 ± 0.001 *** |

The results are expressed as mean ± SEM and analysed by Student´s t-test. The number of animals in each group is 8. Statistic difference between groups was expressed as *p* value: C vs MS: * $p<0.05$, ** $p<0.01$, *** $p<0.001$.

**Figure 4. Results in 21d old pups: renal function parameters: creatinine clearance, albumin/creatinine ratio, serum uric acid, fractional excretion of $Na^+$ (FENa), transtubular $K^+$ excretion (TTKG) and serum aldosterone levels.**




The results are expressed as mean ± SEM and analysed by Student´s t-test. The number of animals in each group is 8. Statistic difference between groups was expressed as *p* value: C vs MS: * $p<0.05$, *** $p<0.001$.