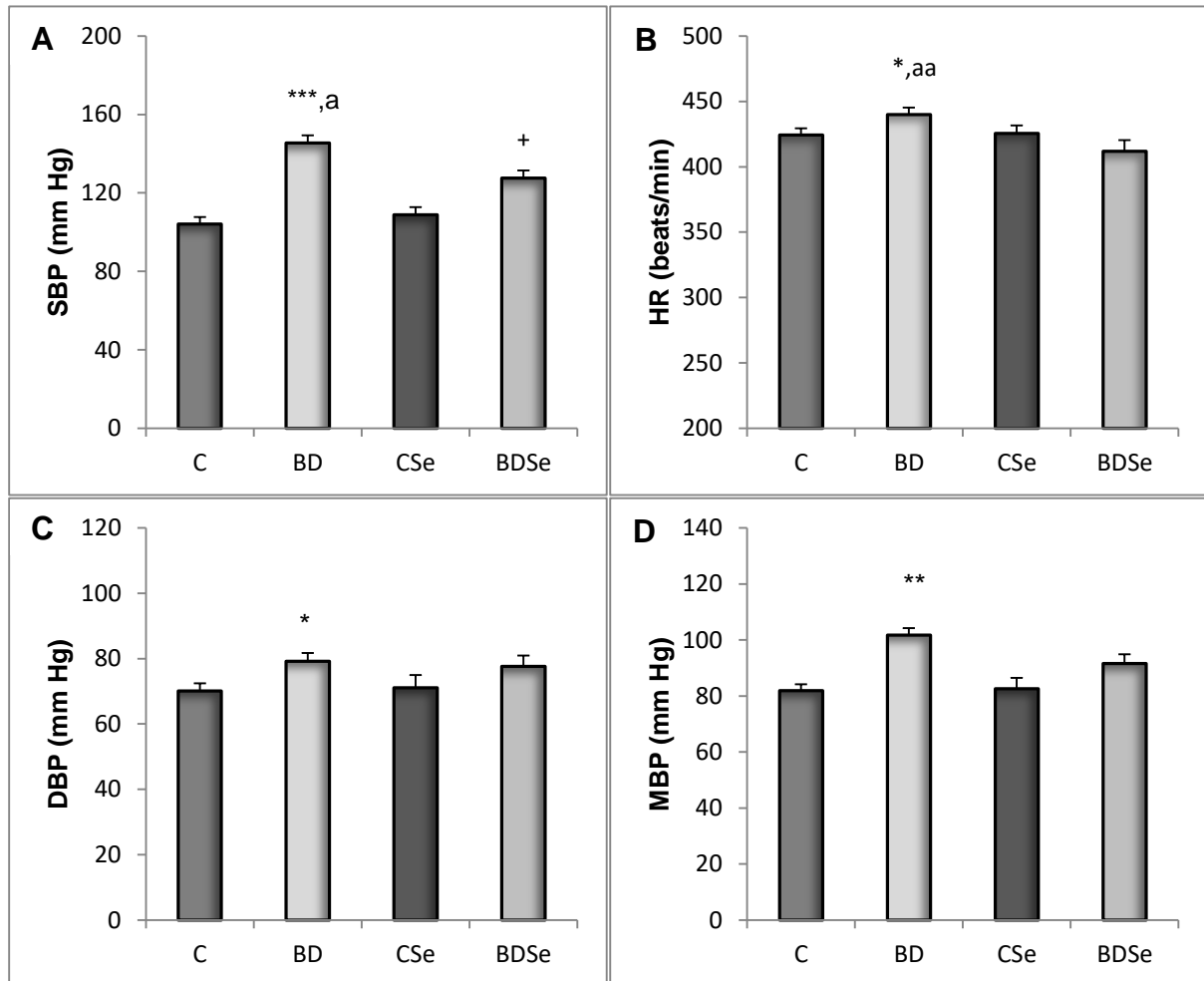
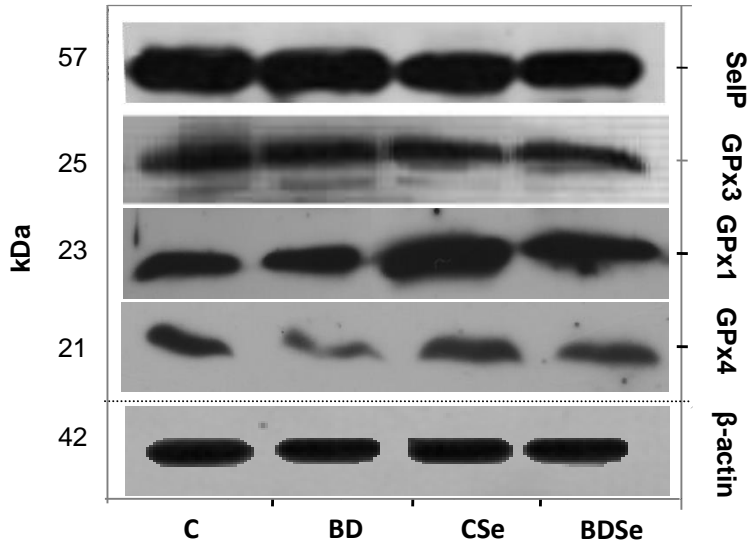
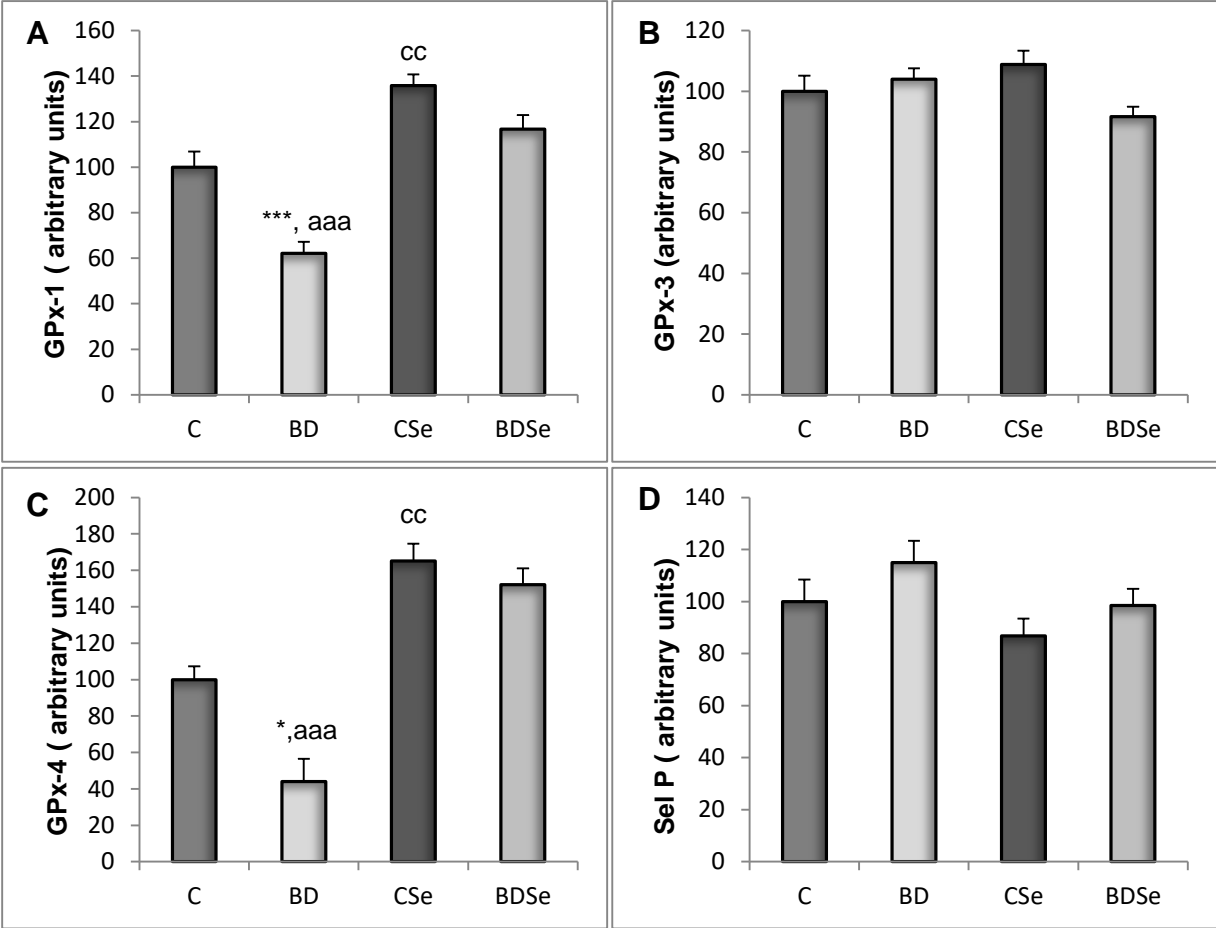


**Figure 1: Systolic Blood Pressure (SBP: A), Heart Rate activity (HR: B), Diastolic blood Pressure (DBP: C) and Mean Blood Pressure (MBP: D).**



The results are expressed as mean  $\pm$  SEM and analysed by a multifactorial analysis of variance (one-way ANOVA) followed by the Tukey's test. The number of animals in each group is 8. Groups: C: control group, BD: binge drinking group, CSe: control selenium supplemented group, and BDSe: binge drinking selenium supplemented group. Statistic difference between groups was expressed as: BD vs C: \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ ; BD vs BDSe: <sup>a</sup> $p < 0.05$ , <sup>aa</sup> $p < 0.01$ ; BDSe vs CSe: + $p < 0.05$ .

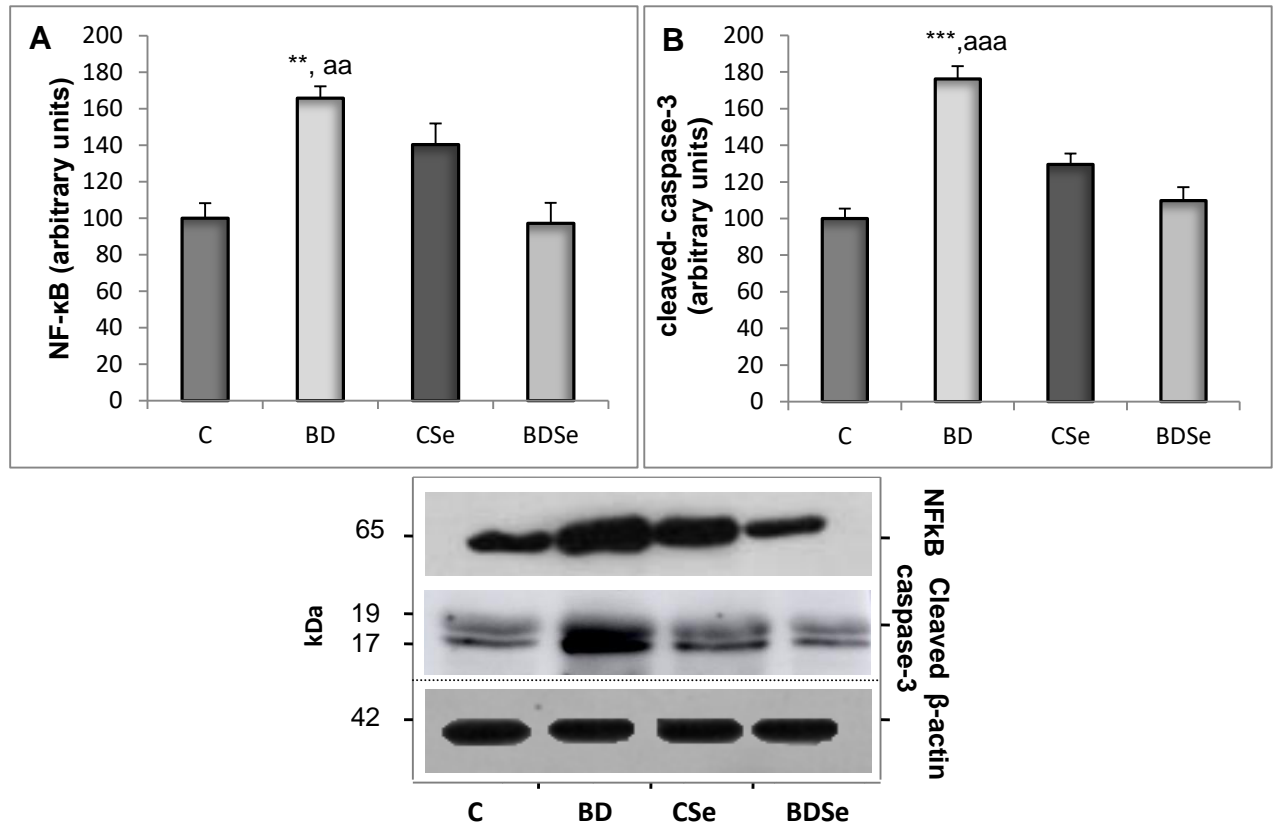
**Figure 2: Expression of heart selenoproteins (GPx1: A; GPx3: B; GPx-4: C; SelP: D). Representative western blots of selenoproteins (normalized to  $\beta$ -actin).**



The results are expressed as mean  $\pm$  SEM and analysed by a multifactorial analysis of variance (one-way ANOVA) followed by the Tukey's test. The number of animals in each group is 8. Groups: C: control group, BD:

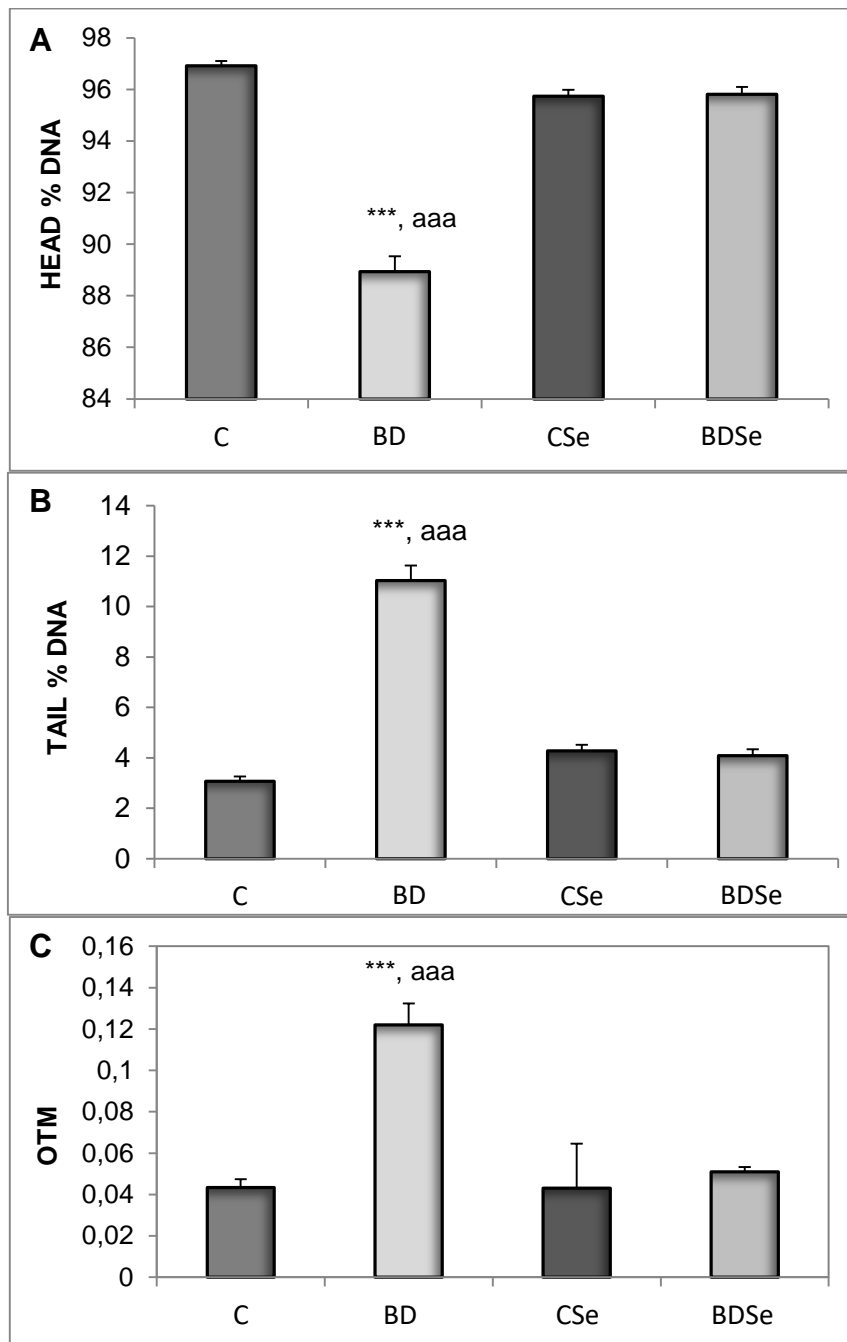
binge drinking group, CSe: control selenium supplemented group, and BDSe: binge drinking selenium supplemented group. Statistic difference between groups was expressed as: BD vs C: \* $p < 0.05$ , \*\*\* $p < 0.001$ ; BD vs BDSe: <sup>aaa</sup> $p < 0.001$ .

**Figure 3. Expression of heart NF $\kappa$ Bp65 and cleaved-caspase-3. Representative western blots of these proteins (normalized to  $\beta$ -actin).**



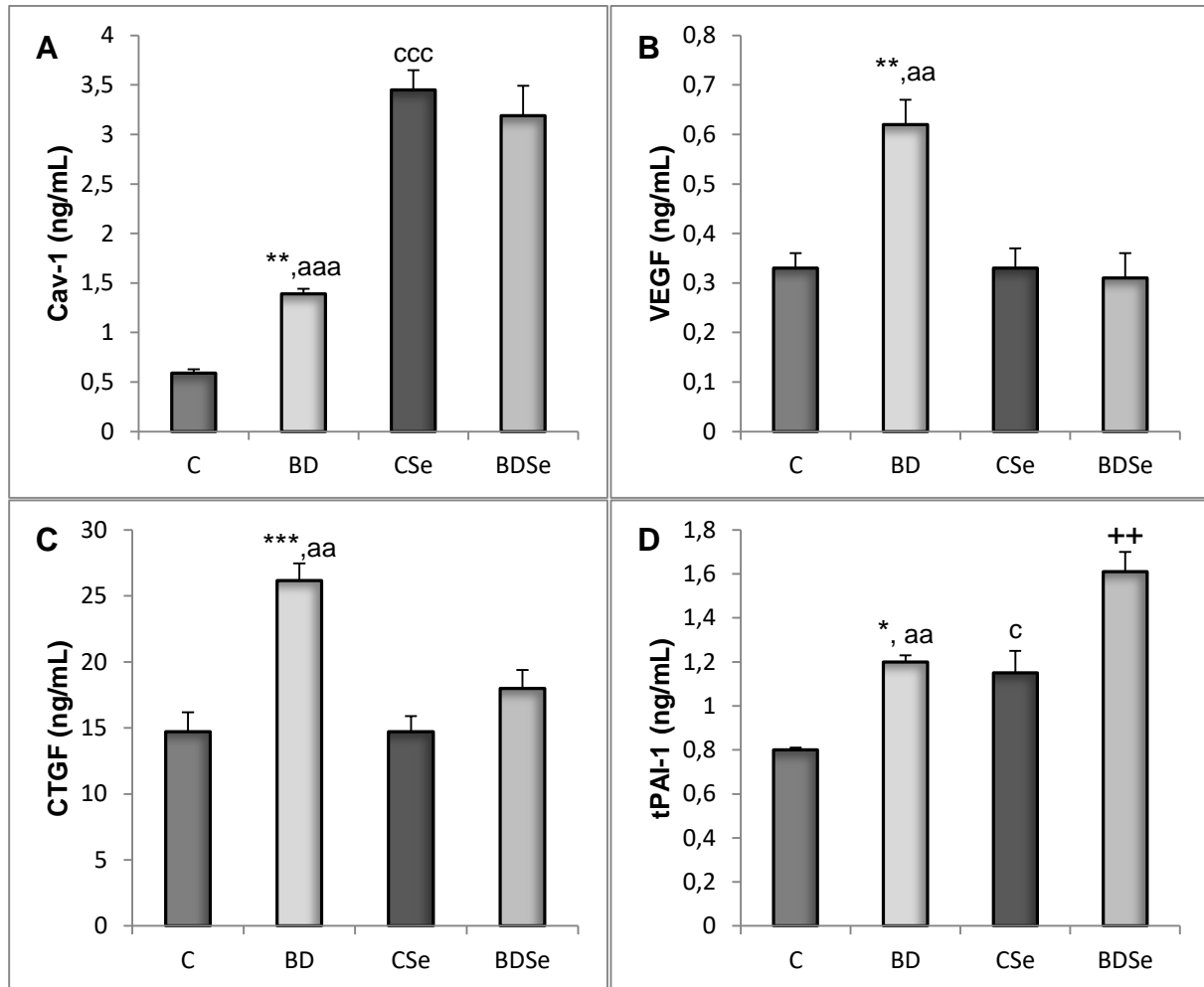
The results are expressed as mean  $\pm$  SEM and analysed by a multifactorial analysis of variance (one-way ANOVA) followed by the Tukey's test. The number of animals in each group is 8. Groups: C: control group, BD: binge drinking group, CSe: control selenium supplemented group, and BDSe: binge drinking selenium supplemented group. Statistic difference between groups was expressed as: BD vs C: \*\* $p < 0.01$ , \*\*\* $p < 0.001$ ; BD vs BDSe: <sup>aa</sup> $p < 0.01$ , <sup>aaa</sup> $p < 0.001$ .

Figure 4. Percentage of DNA in the head (A) and the tail (B), and OTM (C) in lymphocytes.

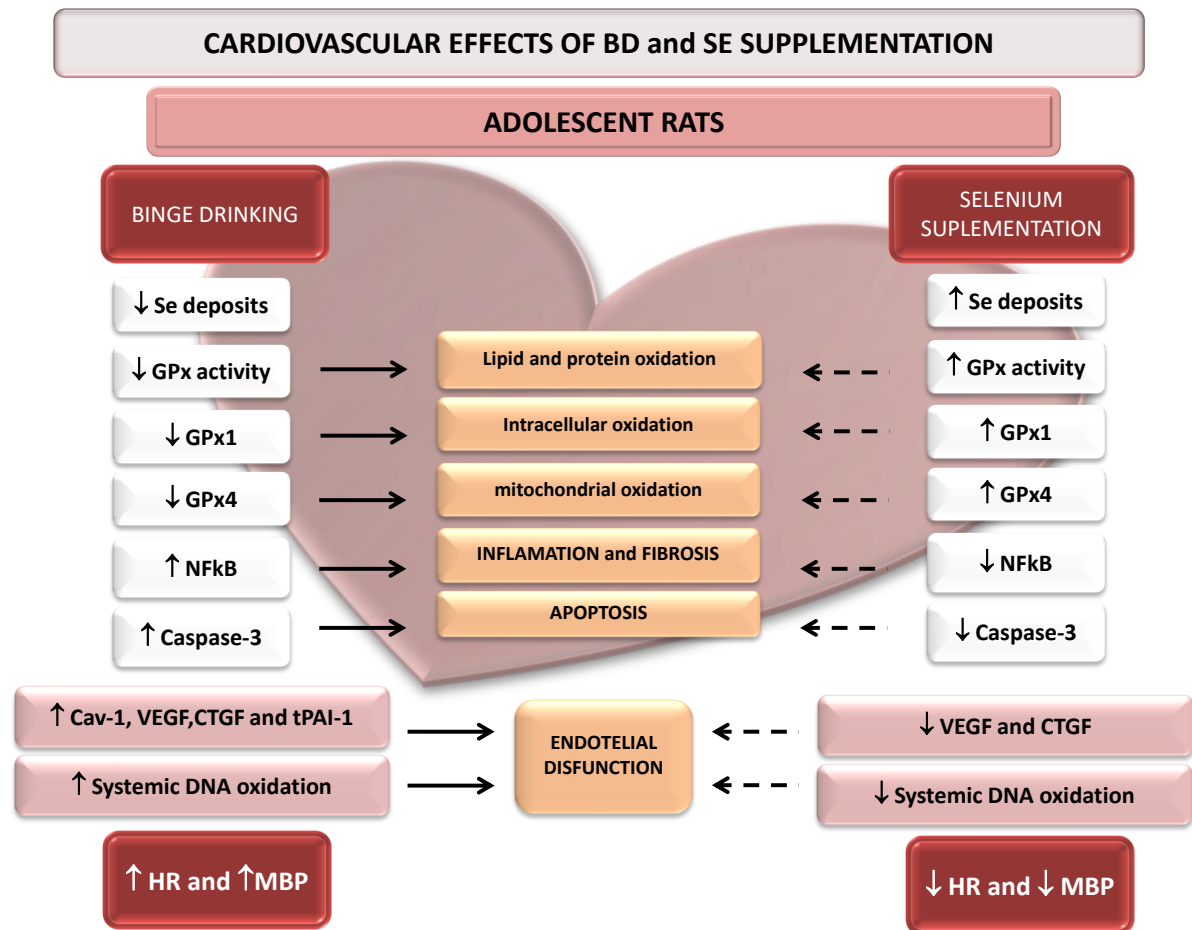


The results are expressed as mean  $\pm$  SEM and analysed by a multifactorial analysis of variance (one-way ANOVA) followed by the Tukey's test. The number of animals in each group is 8. OTM: Olive Tail Moment [OTM= (tail mean-head mean)  $\times$  tail percentage of DNA/100]. Groups: C: control group, BD: binge drinking group, CSe: control selenium supplemented group, and BDSe: binge drinking selenium supplemented group. Statistic difference between groups was expressed as: BD vs C: \*\*\*p<0.001; BD vs BDSe: <sup>aaa</sup>p<0.001.

**Figure 5. Vascular markers: Caveoline 1 (Cav-1) (A), Vascular Endothelial Growth Factor (VEGF) (B), Connective Tissue Growth Factor (CTGF) (C), Plasminogen Activator Inhibitor-1 (tPAI-1) (D).**



The results are expressed as mean  $\pm$  SEM and analysed by a multifactorial analysis of variance (one-way ANOVA) followed by the Tukey's test. The number of animals in each group is 8. Groups: C: control group, BD: binge drinking group, CSe: control selenium supplemented group, and BDSe: binge drinking selenium supplemented group. Statistic difference between groups was expressed as: BD vs C: \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ ; BD vs BDSe: <sup>aa</sup> $p < 0.01$ ; C vs CSe: <sup>c</sup> $p < 0.05$ , <sup>ccc</sup> $p < 0.001$ ; BDSe vs CSe: <sup>++</sup> $p < 0.01$ .



**Figure 6. Cardiovascular effects of Binge Drinking and selenium supplementation.** Glutathione Peroxidase (GPx), Nuclear Factor kappa-light-chain-enhancer of activated B cells (NFkB), Caveolin 1 (Cav-1), Vascular Endothelial Growth Factor (VEGF), Connective Tissue Growth Factor (CTGF), Plasminogen Activator Inhibitor-1 (tPAI-1), Heart Rate (HR), Mean Blood Pressure (MBP).