

**Figure S1.** Bodyweight and cholesterol levels acute carbogen treatment. (A). Bodyweight before (t=0) and 28 days after surgery (t=28) of control and one-time carbogen treated mice. (B). Plasma cholesterol levels before (t=0) and 28 days after surgery (t=28) of control and one-time carbogen treated mice.



**Figure S2.** Bodyweight and cholesterol levels chronic carbogen treatment. (A). Bodyweight before (t=0) and 28 days after surgery (t=28) of control and prolonged carbogen treated mice. (B). Plasma cholesterol levels before (t=0) and 28 days after surgery (t=28) of control and prolonged carbogen treated mice.



**Supplemental figure 3.** Total wall gene expression. (A) Expression of Hif1a, Cxcl12, Vegfa, Epas1 and II6 in the mice from the control and one-time carbogen treated groups.



**Supplemental figure 4.** BMM gene expression. (A) mRNA expression of Ccl2, Tnf and Epas1 in control BMM and BMM treated with the ROS mimic t-BHP.



**Supplemental figure 5.** BMM 8OHdG IHC staining. Representative pictures of BMM treated with t-BHP are shown. Examples images stained for DAPI (blue), Mac3 (green) and 8OHdG (red) as well as a merged image are shown.