Supplementary Figure Legends:

Supplementa1 Figure S1: Identification of rat aortic smooth muscle cells in vitro. Rat aortic smooth muscle cells (kind donation G.K. Owens) isolated as previously described were stained for the smooth muscle marker, SM actin (red) and for the endothelial cell marker VE-cadherin. In each image blue represents DAPI staining of the nucleus. Positive staining was demonstrated for SM-α-actin but not VE cadherin in 100% of cells.

Supplemental Figure S2: Proliferation in carotid VSMC nuclei in vivo following mechanical induction of proliferation in 7day ligated carotids. Positive EDU nuclear staining patterns in whole mounts of the VSMC of carotids was demonstrated using a carotid ligation to induce cellular proliferation. Mice were injected with EDU (100 µg) 24 hours post carotid ligation and carotids harvested for whole mount and staining after a further six days. Staining patterns and cell proliferation were compared at sites proximal and distal to the ligation. A higher number of VSMC near the ligation site were found to be in a proliferative state as compared to the distal site, an observation previously demonstrated in vivo (30). In each image green represents nuclei, red is EDU and arrows indicate sites of positive EDU staining.

Supplemental Figure S3: EDU detection in large vessels, small vessels and intestinal tissues. Images from mice injected with EDU. Representative images from mice treated with POVPC applied to the left common carotids, as described, show no EDU incorporation in the VSMC from the descending aorta or mesenteric artery, indicating localized induction of VSMC proliferation. In anesthetic control mice, EDU incorporated in the highly proliferative epithelial

cells of the small intestine as originally described (28). In each image green Sytox labeled nuclei and red is EDU.

Supplemental Figure S4: Staining for macrophages in treated carotids using the MAC-10 marker following application of POVPC or PGPC. Mouse carotids were stained for the macrophage marker MAC-10 under control conditions (A) and in vessels treated with POVPC (100 µg, B), or PGPC (100µg, C) for 24 hours. No staining for MAC-10 is detectable in any of the vessels, indicating that treatments and effects are not indicative of macrophage related effects. In each image green represents EL, blue represents nuclei (DAPI), red indicates MAC-10 antibody and "*" indicated the lumen of the vessel. Bar in A is 150 µm and representative for all images.

Supplemental Table T1: Summary of results as compared to controls. single red/green arrows indicate a qualitative reduction/increase, double arrows indicate significant change and '-' signifies no change.