

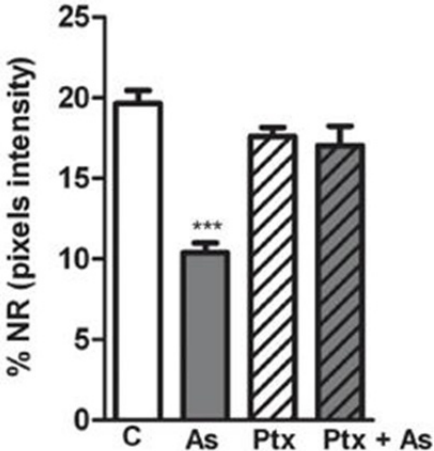
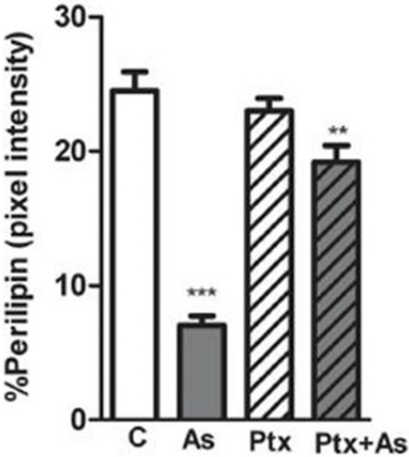
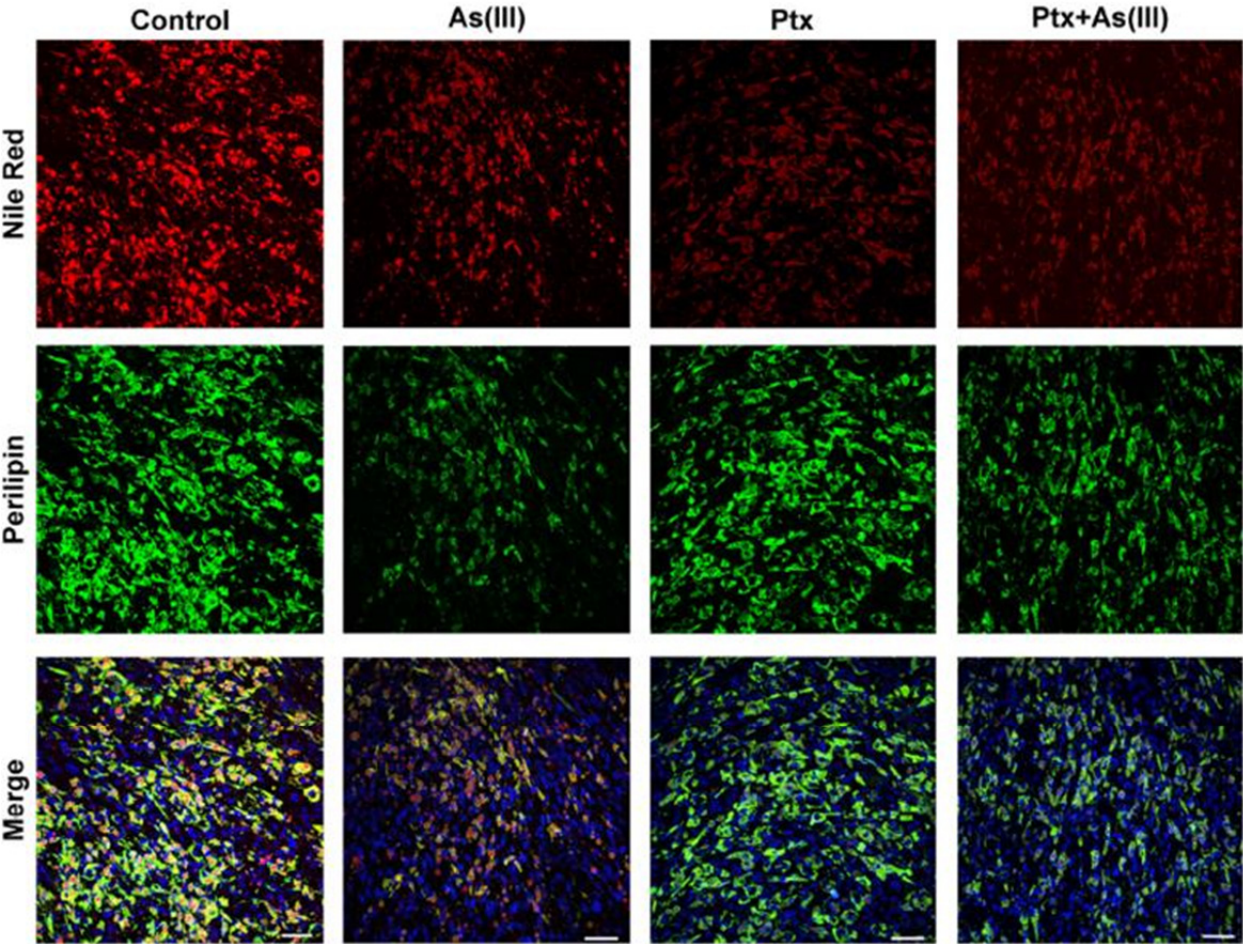
## Supplemental Figure legends

**Supplemental 1.** Ptx prevents As(III)-stimulated loss of lipid droplets and perilipin. Ptx (1  $\mu$ M) was added to the indicated groups of adipocytes grown on glass coverslips for 24 h before 1  $\mu$ M As(III) was added. After 72 h, the cells were fixed and stained for triglyceride content (Nile Red), perilipin (green), or nuclei (blue). Images of four fields per cover slip were captured at 40x (scale bars = 50  $\mu$ m) and the thresholded fluorescence quantified and averaged. The data in the graphs present mean  $\pm$  SEM percentage of positive pixels normalized to DAPI staining in four separate cultures representative of two separate experiments. Data were analyzed by ANOVA and Newman-Keuls post-test for differences between groups (\*\*  $p < 0.01$  and \*\*\*  $p < 0.001$  relative to control).

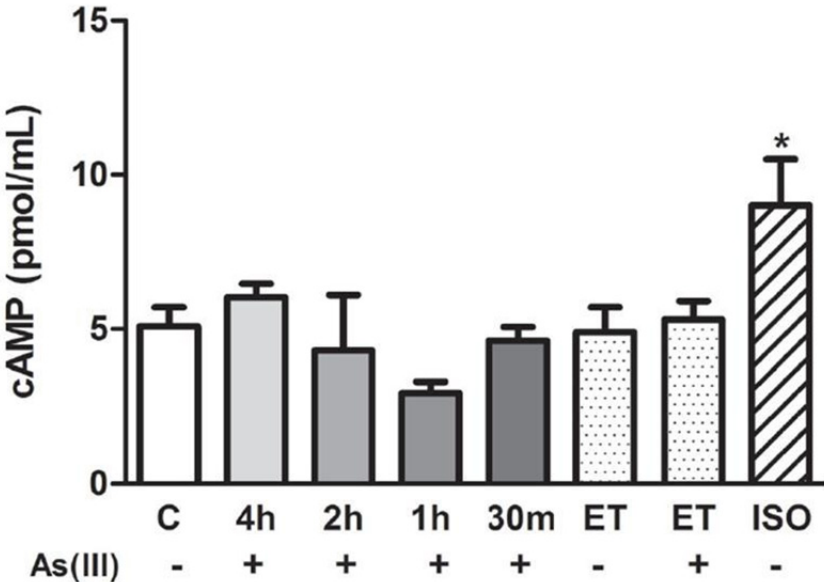
**Supplemental Fig 2** As(III) does not increase intracellular cAMP levels. Adipocytes were incubated with 1  $\mu$ M As(III) for the time indicated, 100 nM endothelin-1 for 4 h, or 10 nM isoproterenol (positive control) for 1.5 h. At the end of exposure, cells were harvested, lysed, and cAMP levels were quantified using a colorimetric enzyme immunoassay, according to manufacturer's instructions (Cyclic AMP EIA Kit (Cayman Chemical Co)). Data are presented as mean  $\pm$  SEM cAMP of three separate cultures (each sample assayed in duplicate) from two independent experiments. Data were analyzed by ANOVA and Newman-Keuls post-test for differences between groups.

**Supplemental Fig. 3** As(III) does not suppress perilipin by stimulating the S1PR1 or AGTR1. Adipocytes were incubated with 1  $\mu$ M of either the S1PR1/3 inhibitor VPC23019 or the AGTR1 inhibitory L 158,809 for 30 min before adding 1  $\mu$ M As(III). The cells were then incubated for 72 h before isolating total proteins. Western analysis with antibodies specific for perilipin or  $\beta$ -actin was used to measure protein abundance. Each lane contains protein from a separate cell culture.

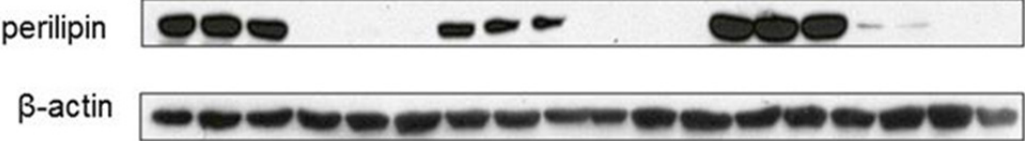
Supplemental Fig 1



Supplemental Figure 2



Supplemental Fig. 3



L-158,809	-	-	-	-	-	-	+	+	+	+	+	+	-	-	-	-	-
VPC 23019	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+
As(III)	-	-	-	+	+	+	-	-	-	+	+	+	-	-	-	+	+