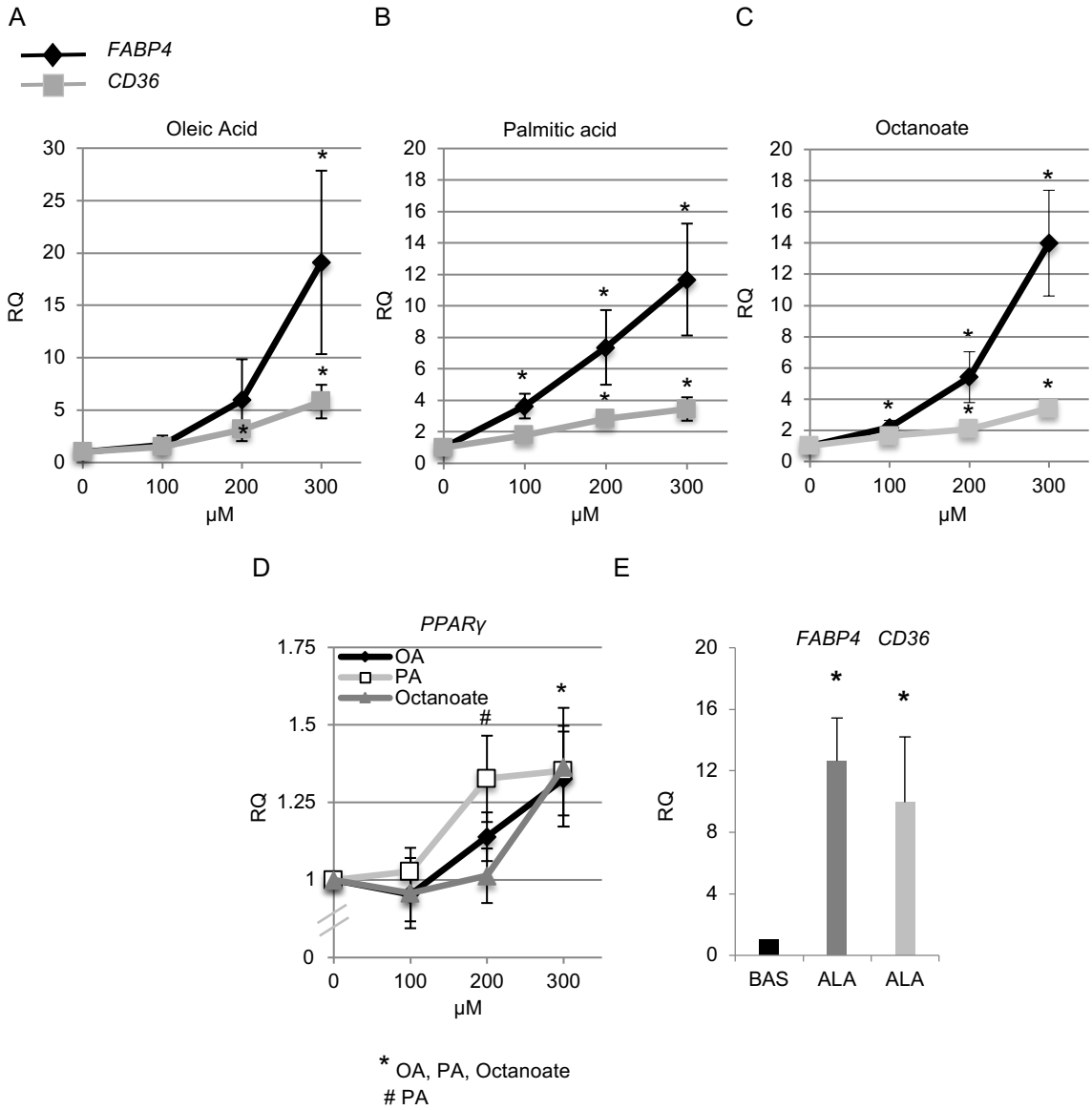
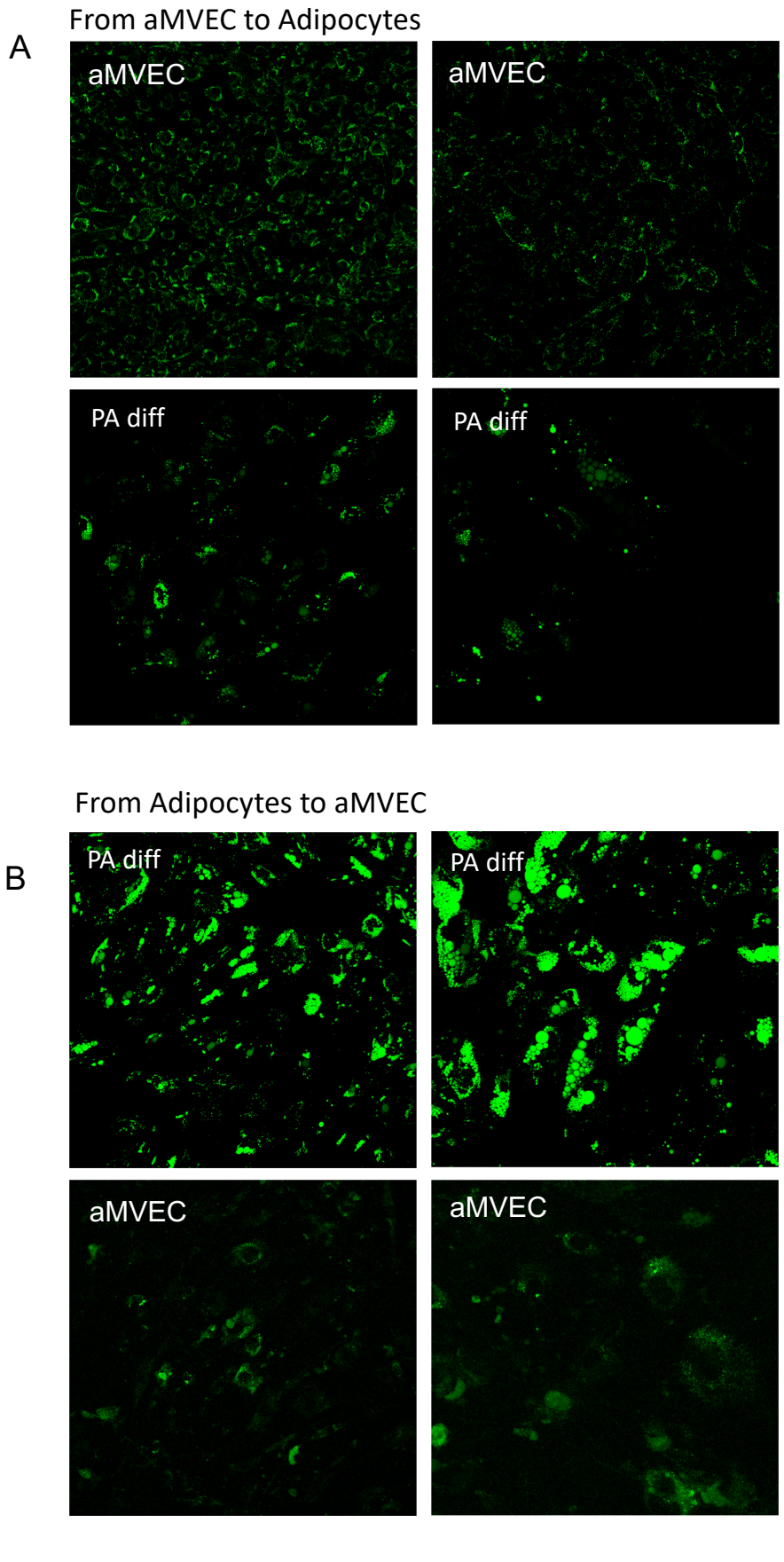
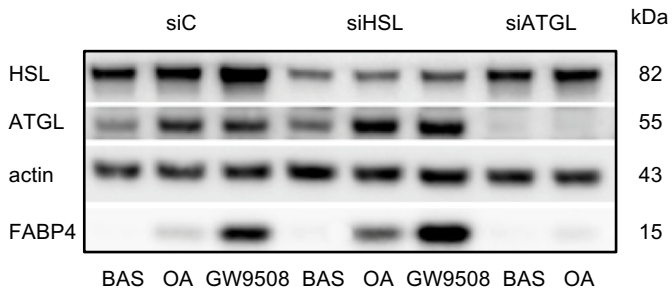


Supplemental Figure 1. Fatty acid dose response curves for aMVEC. Cells were treated without (BAS) or with the indicated concentrations of (A) oleic acid (B) palmitic acid or (C) octanoate for 24 h. qRT-PCR of *CD36* and *FABP4* expressed as mRNA/18s rRNA ratio (RQ), data from at least five experiments. *P<0.05 compared to basal. (D) Effect of oleic acid (OA), palmitic acid (PA) and octanoate on *PPARγ* expression. *P<0.05 (OA, PA, Octanoate), #P<0.05 (PA) compared to BAS. Data obtained from at least four experiments. (E) aMVEC were incubated without (BAS) or with 100 μM α-Linolenic acid (ALA) for 24 h. qRT-PCR of *CD36* and *FABP4*, n=5. *P<0.05 compared to BAS. Bars represent mean ± SEM. Wilcoxon Signed-Rank Test.

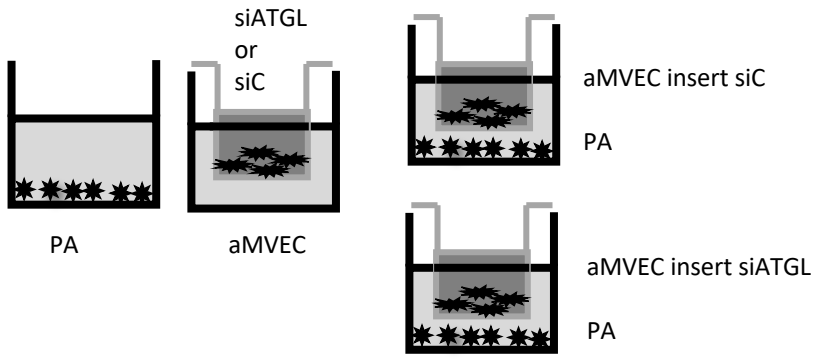


Supplemental Figure 2. Additional validation of aMVEC-adipocyte cross-talk and fatty acid uptake measured with Bodipy. Same experimental procedures as shown in Figure 3.



Supplemental Figure 3. Suppressive effect of HSL siRNA. aMVEC were transfected with siControl (siC), siHSL or siATGL. 24 h post transfection media was changed to stimulation media without (BAS), with 300 µM OA or 100 µM GW9508 and incubated for additional 24 h. Western blots were performed using antibodies specific for ATGL, FABP4, HSL and actin was used as loading control. The figure shows representative western blots of HSL, ATGL, actin and FABP4 in cells transfected with siControl (siC) (left), siHSL (centre) or with siATGL (right), n=2-3.

A



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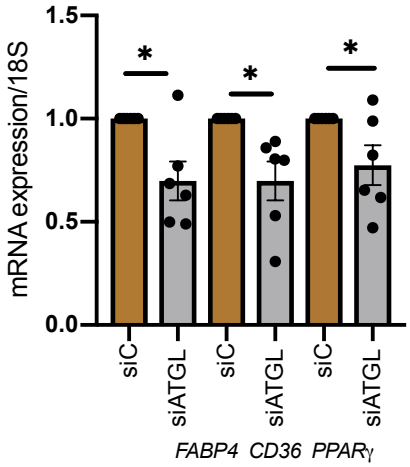

Supplemental Figure 4. aMVEC ATGL silencing influences preadipocytes (PA) gene expression. (A) Experimental design ThinCert™ co-culture. PA were independently seeded in cell culture dishes and aMVEC silenced for ATGL (siATGL) or siControl (siC) on the insert membrane. PA were co-cultured with the aMVEC insert for 48 h. (B) qRT-PCR of *FABP4, CD36* and *PPARγ in PA*, n=6.* P<0.05 compared to siC. Bars represent mean ± SEM. Wilcoxon Signed-Rank Test.

Supplemental Table 1. Primers and Probes

hATGL-FP: TCAGACGGCGAGAATGTCATTA
hATGL-RP: TGAAACCGCTGCAGACATTG
hATGL-P: CCCACTTCAACTCCAAGGACGAGCTCA
hGLUT4-FP: TCTGGCATCAATGCTGTTTTCTAT
hGLUT4-RP: ACCAACAACACCGAGACCAAG
hGLUT4-P: TGACCACACCAGCTCCTATGGTGGC
hCEBPa-FP: CCAAGAAGTCGGTGGACAAGA
hCEBPa-RP: CGCACCGCGATGTTGTT
hCEBPa-P: CGCCGCACCCGGTACTCGTT
hPPARg2-FP: TCTGCAAACATATCACAAGAAATGA
hPPARg2-RP: TCCACGGAGCTGATCCCAA
hPPARg2-P: CAGAGATGCCATTCTGGCCCACC
hFABP4-FP: GACAGGAAAGTCAAGAGCACCATA
hFABP4-RP: GACGCATTCCACCACCAGTT
hFABP4-P: CTGCACATGTACCAGGACACCCCCA