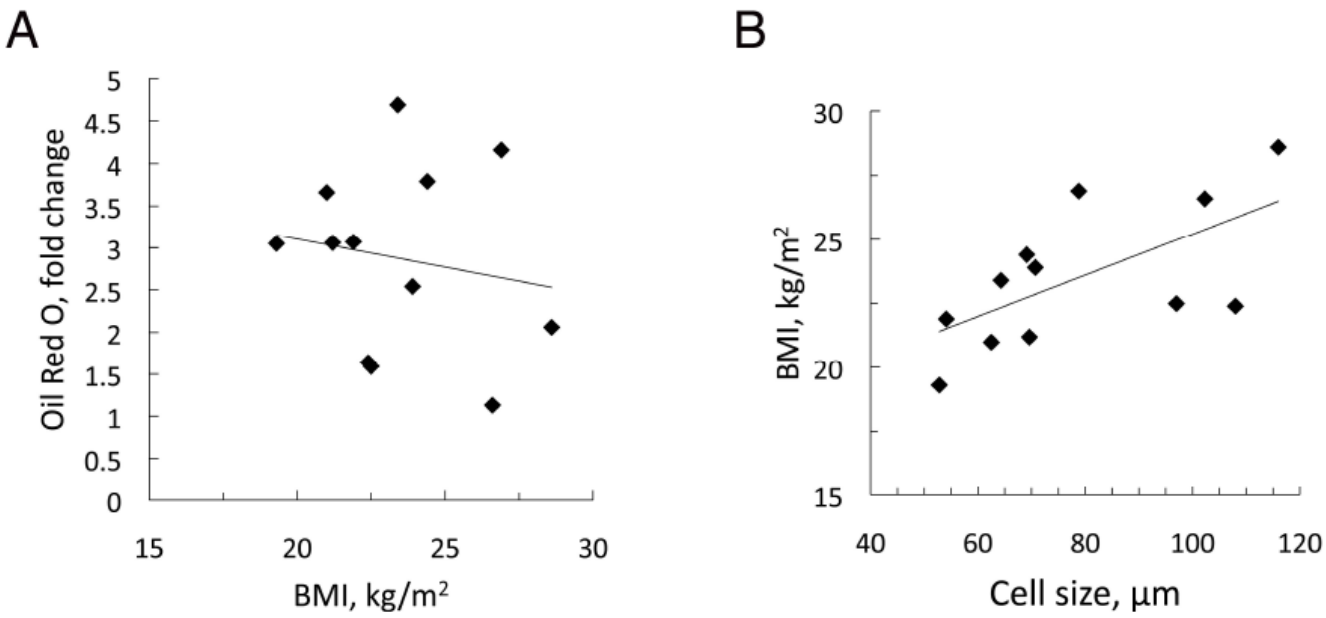
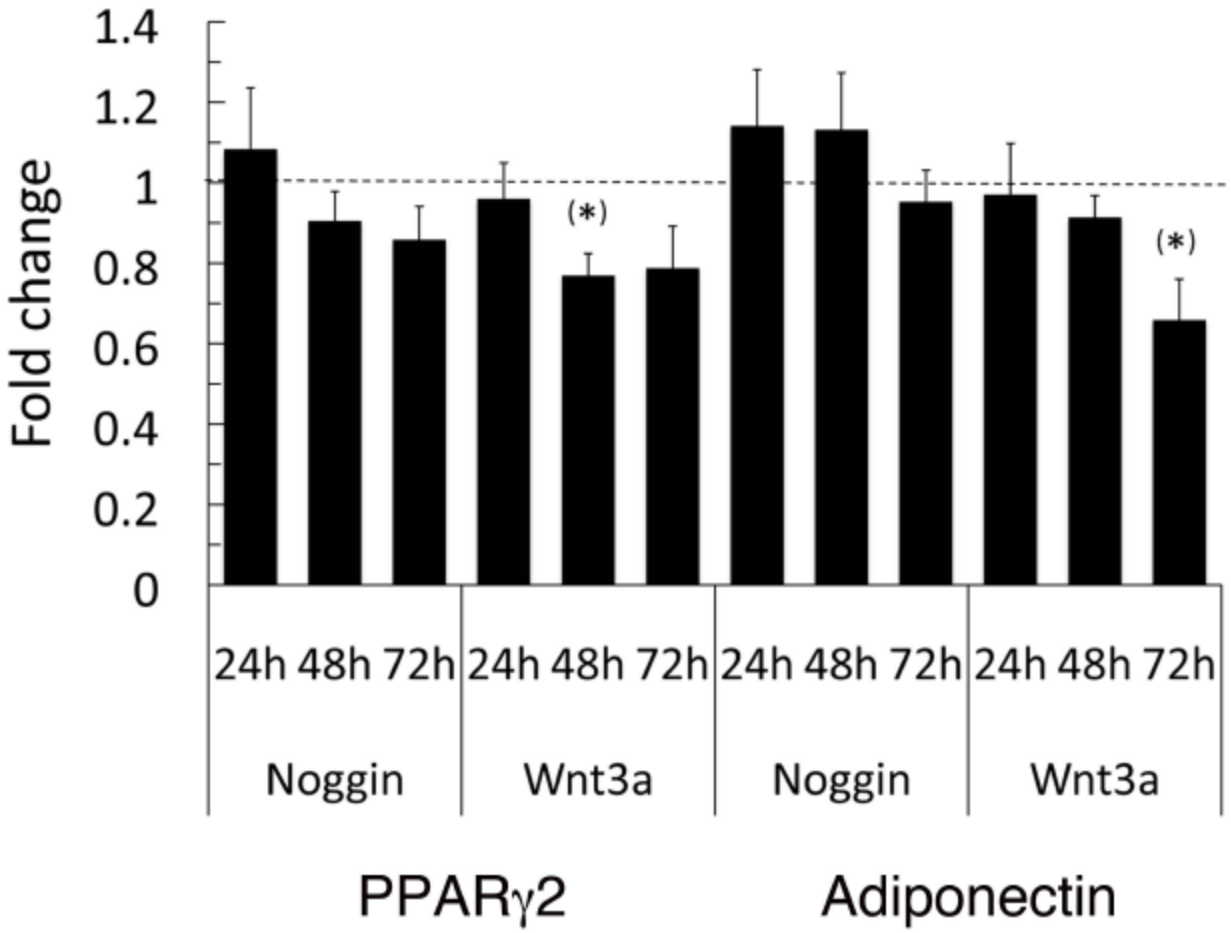
SUPPLEMENTARY DATA

Supplementary Figure 1. Differentiation of stromal cells shows negative relationship to cell size but not to BMI. Cryopreserved stromal cells from non-obese individuals were differentiated into adipocytes with the standard differentiation protocol. At day 14 the cells were stained with Oil Red O (ORO) and quantified by dissolving ORO stain in 2-propanol and measuring optical density at λ510 nm. Absorbance of the differentiated cells was compared with absorbance of undifferentiated cells. Results from the same individuals showing that there is no correlation between lipid accumulation and BMI, *A*: $r^2 = 0.003$, ns, n=12. *B*: while cell size correlated with BMI as expected, $r^2 = 0.404$, $P < 0.05$, n=12.



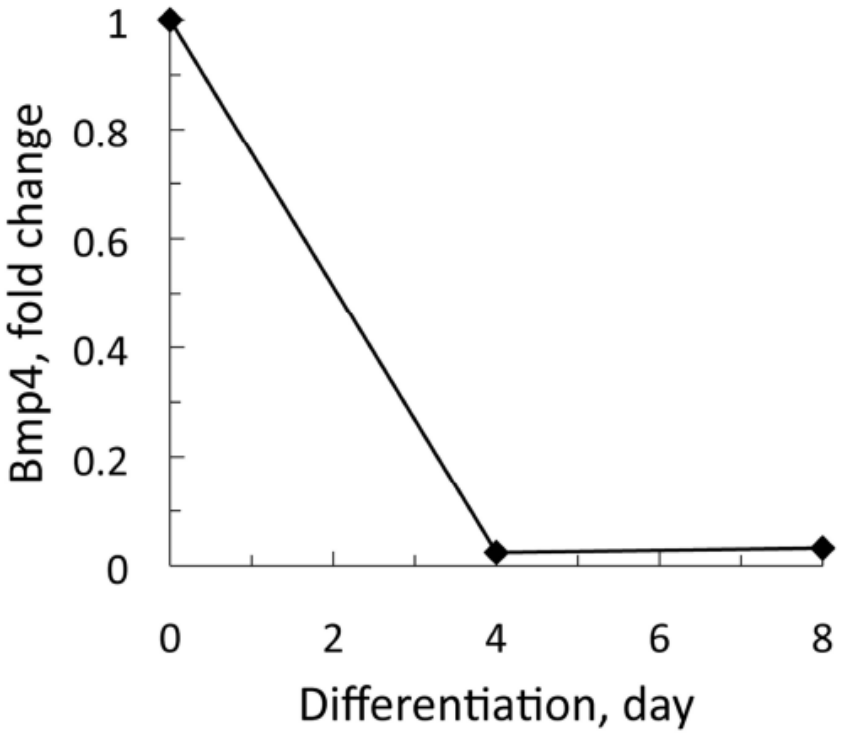
SUPPLEMENTARY DATA

Supplementary Figure 2. Differentiated adipocytes are not target cells for BMP4. Stromal cells from 3 individuals were differentiated to adipocytes. At differentiation day 12, 100 ng/ml Noggin or 25 ng/ml Wnt3a was added for up to 72h. Wnt3a was used as a positive control since it inhibits *PPARγ* expression also in fully differentiated adipocytes (1). Gene expression data of *PPARγ2* and *adiponectin* were first normalized to 18S rRNA and then normalized to expression levels in the control sample (dotted line=1). Data indicate means ±SEM, of 3 experiments. **P* < 0.05, compared with untreated.



SUPPLEMENTARY DATA

Supplementary Figure 3. Bmp4 is reduced during differentiation of murine 3T3-L1 preadipocytes. The cells were cultured in DMEM with 10% fetal bovine serum, 2 mM glutamine, and antibiotics. After 2 days of confluence, the cells were treated with 0.5 mM methylisobutylxanthine, 1 μM dexamethasone, and 865 nM insulin for 48 hours, followed by insulin alone for an additional 48h. Gene expression of Bmp4 was performed at indicated times. Expression levels of Bmp4 were first normalized to 18S rRNA and then normalized to expression levels in the control sample (=1) at day 0 (n=3). Data are presented as means ±SEM.



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