

## SUPPLEMENTAL FIGURE LEGEND

**Figure S1: Effect of GLP-1 on GLP-1 receptor expression, on  $[Ca^{2+}]_i$  and on Akt/ERK phosphorylation in 3T3-L1 differentiated preadipocytes.** (A) 3T3-L1 (n=6) were incubated for 24 hours in the presence or the absence of GLP-1 100nM at 37°C, mRNA levels were normalized to  $\beta$ -Actin mRNA levels. Results were obtained in triplicate and expressed as the mean  $\pm$  SE. \*P<0.05. (B) Data are the mean  $\pm$  SEM of the area under curve (AUC), time for maximal response and percentage of  $[Ca^{2+}]_i$  inhibition evoked by GLP-1 (100nM) alone or in combination with exendin (100nM) (n=3 independent experiments). \*\*\*p< 0.001 vs basal  $[Ca^{2+}]_i$  levels, and #p<0.001 vs GLP-1 100nM alone. Student's t-test. (C) 3T3-L1 (n=6) were incubated for 5 and 30min in presence or absence of GLP-1 100nM at 37°C. Proteins were extracted and loaded (30 $\mu$ g) into SDS-PAGE gels and transferred to nitrocellulose membranes using the Trans-Blot Turbo Transfer System (Bio-Rad) for Western Blot analysis. Blots are representative of five blots which showed similar results. Total Akt and total ERK proteins were used as loading control to insure that similar quantities of proteins are loaded in each line. Values for relative intensity obtained after densitometry of the bands are means  $\pm$ SE.

**Figure S2. Effect of GLP-1 receptor antagonist exendin (9-39) on GLP-1-induced changes in the expression of adipogenic, lipogenic, and lipolytic markers in human differentiated adipocytes.** In vitro differentiated adipocytes obtained from VAT and SAT samples of obese patients (n=6) were incubated in the presence of 100nM GLP-1 alone or in combination with 100nM exendin (9-39) for 12 hours at 37°C. The gene expression levels of *PPAR $\gamma$* , *FABP4*, *SERBP1*, *adiponectin*, *LPL*, *FASN*, *ACC*, *AZGP1*, *ATGL*, *VLDL-R*, *FOXO-1*, *Perilipin*, *HSL*, *GLUT4* and *Aldolase* were measured by qRT-PCR. mRNA levels of test genes were normalized to *cyclophilin* mRNA levels.

Results were obtained in triplicate for each patient and expressed as the mean  $\pm$  SE.

Bars with different letters have a significant difference ( $P < 0.05$ ).