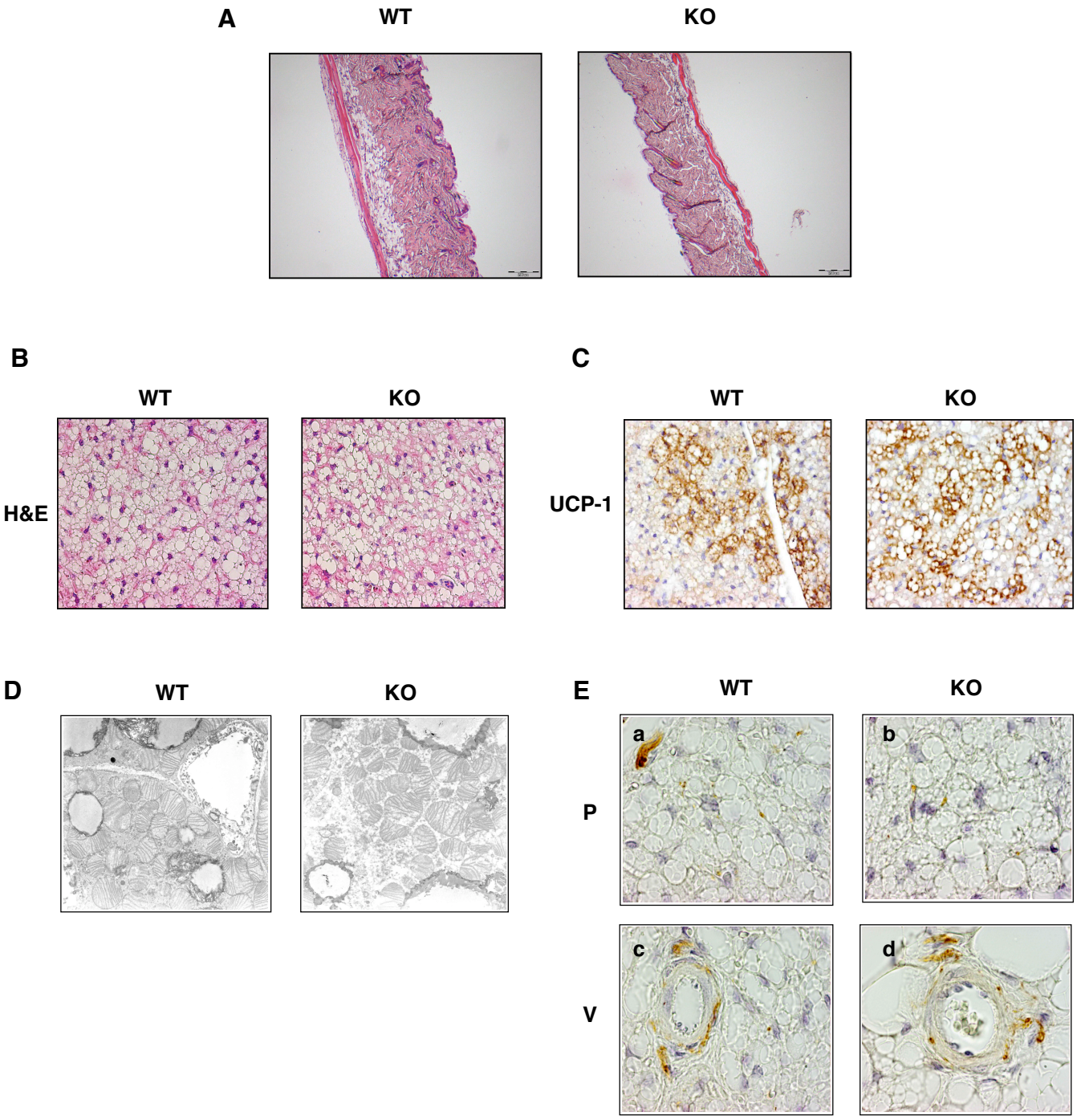
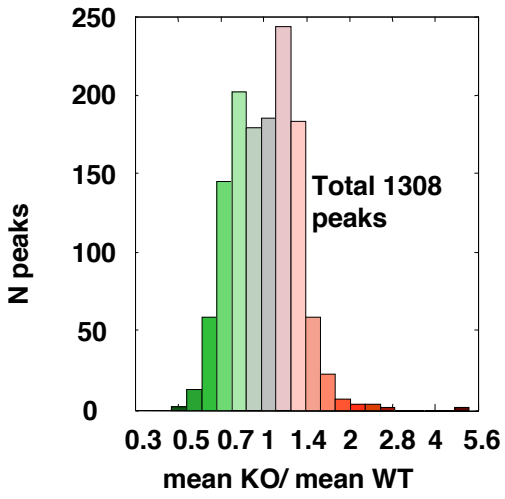
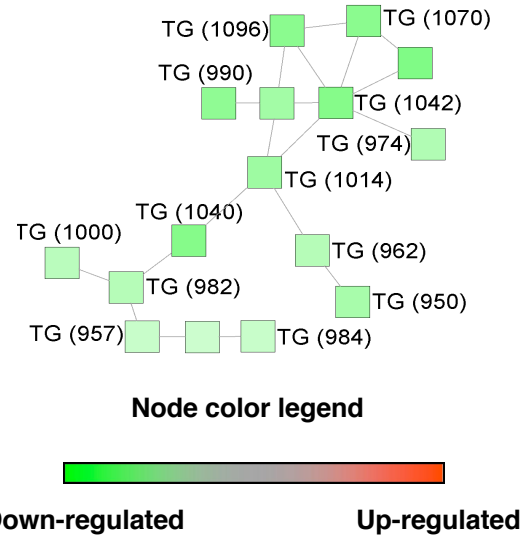


A. Morphological analysis of H&E-stained sections of skin from 16-wk-old males wild-type and PPARγ2 KO mice (n=9). **B.** Morphological analysis of H&E-stained sections of BAT from 16-wk-old wild type and PPARγ2 KO mice. **C**. Inmunohistochemical analysis of UCP-1 in BAT from 16-wk-old wild type and PPARγ2 KO mice. **D**. Electron microscopy of BAT from 16-wk-old wild-type and PPARγ2 KO mice. **E**. Immunohistochemical analysis of thyrosine hydroxilase from parenchimal (P) (a,b) and vascular (V) (c,d) noradrenergic nerve fibers in BAT from wild-type and PPARγ2 KO mice.

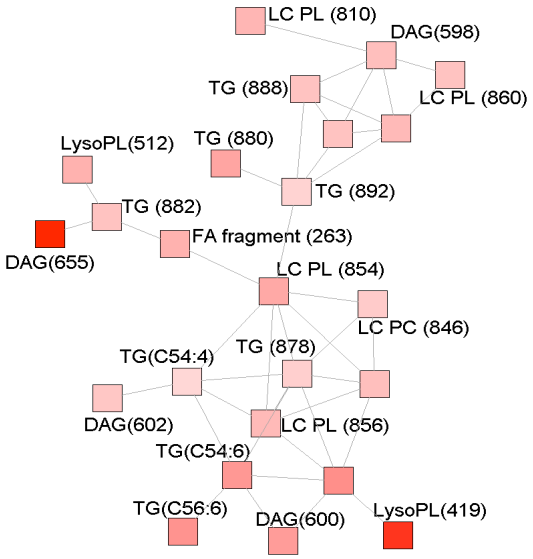
A. Histogram of the distribution of peaks (lipid compounds) according to up-/down-regulation.



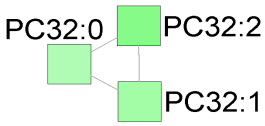
B. Down-regulated long-chain triacylglycerol cluster



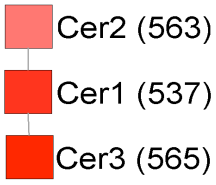
C. Up-regulated lipids (mainly long chain phospholipids, short-chain triacylglycerols, and diacylglycerols)



D. Downregulated cluster containing three C32 phsophatidylcholine lipids



E. Upregulated ceramide cluster



Selected correlation networks from lipidomic analyses in WAT. The edges represent linear correlations between compound profiles across different mouse samples that are above a threshold level (C>0.90). The node colors represent the level of up- or down-regulation of PPARγ2 KO vs. wild type mice. **A.** Histogram showing the distribution of up-/down-regulated processed peaks from LC/MS spectrometry corresponding to lipid compounds. Height of each bar corresponds to number of peaks within a particular range of ratios of means (KO vs. WT). This histogram shows an approximately similar number of peaks up-regulated (> 1) and down-regulated (< 1) indicating qualitative differences in their composition as indicated by differences in the height of specific LC/MS peaks. **B.** Cluster of long-chain triacylglycerols (TG) is decreased in adipose tissue of PPARg2 KO. Nominal m/z value is shown in parentheses. **C.** Other up-regulated lipids in adipose tissue of PPARg2 KO mouse, mainly short-chain triacylglycerols (TG), long-chain phospholipids (LC PL), lysophospholipids (LysoPL), and diacylglycerols (DAG). In parenteses are given either nominal m/z value or the fatty acid chain carbon distribution. **D.** Cluster of phosphatidylcholines (C32:n), likely containing combinations of palmitic and palmitoleic acids as fatty acid components. **E.** Cluster containing three ceramide-related compounds. For all three compounds, MS/MS analysis resulted in 264m/z peak characteristic of ceramides.