

**Supplementary Figure S4.** a,b) Fecal conditioned media (FCM) of db/db and DIO mice significantly decreased the transepithelial electrical resistance (TEER) (a) and increased FITC-dextran (4 KDa- and 40kDa- and LPS-conjugated dextran) permeability (b,c,d) through Caco-2 cells monolayers compared to lean FCM control-treated cells. e-f) In addition, the gene expression in the intestines of obese FMT-recipients and enteroids treated with obese FCM compared to their controls. g) Densitometric analysis of quantitative expression of Zo1 protein in the intestine of lean, db/db, and DIO FMT recipient mice. The values presented are the mean (n= 5-8 mice per group) and the average of enteroids and Caco-2 culture experiments performed in triplicates and repeated 2-3 times. Error bars are the standard error of means. P values with \*\*\*<0.001 are statistically significant based on the t-test and/or ANOVA.