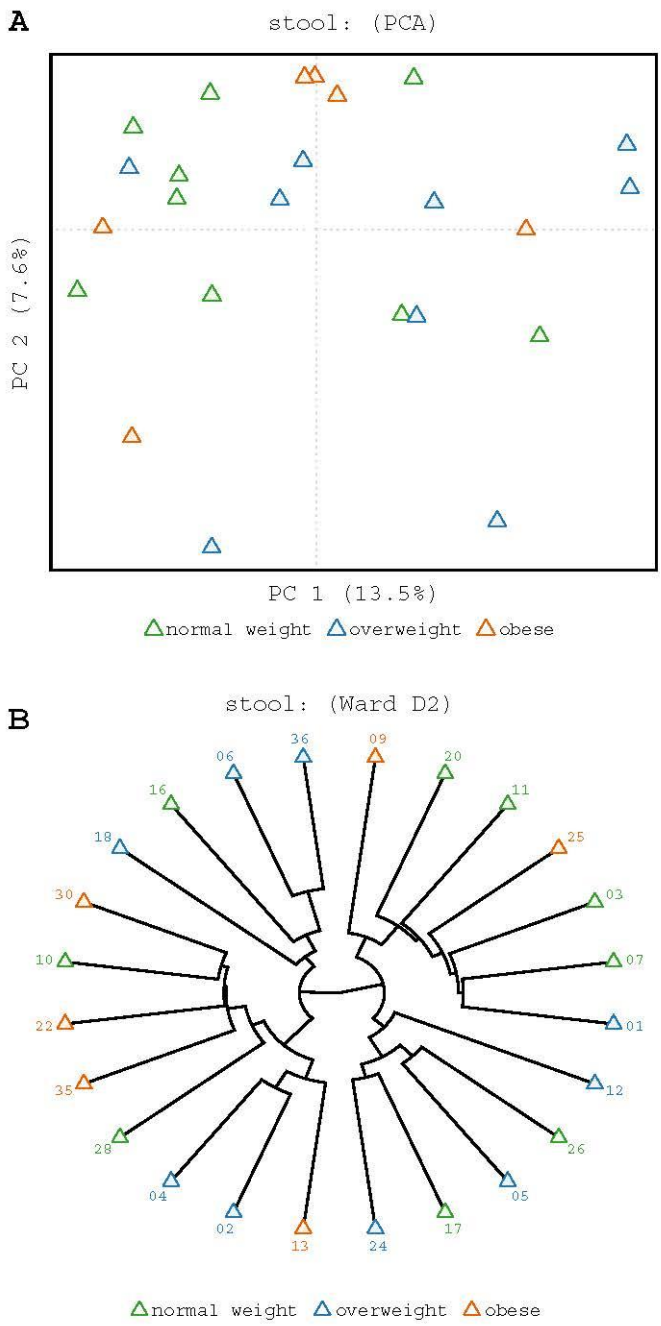
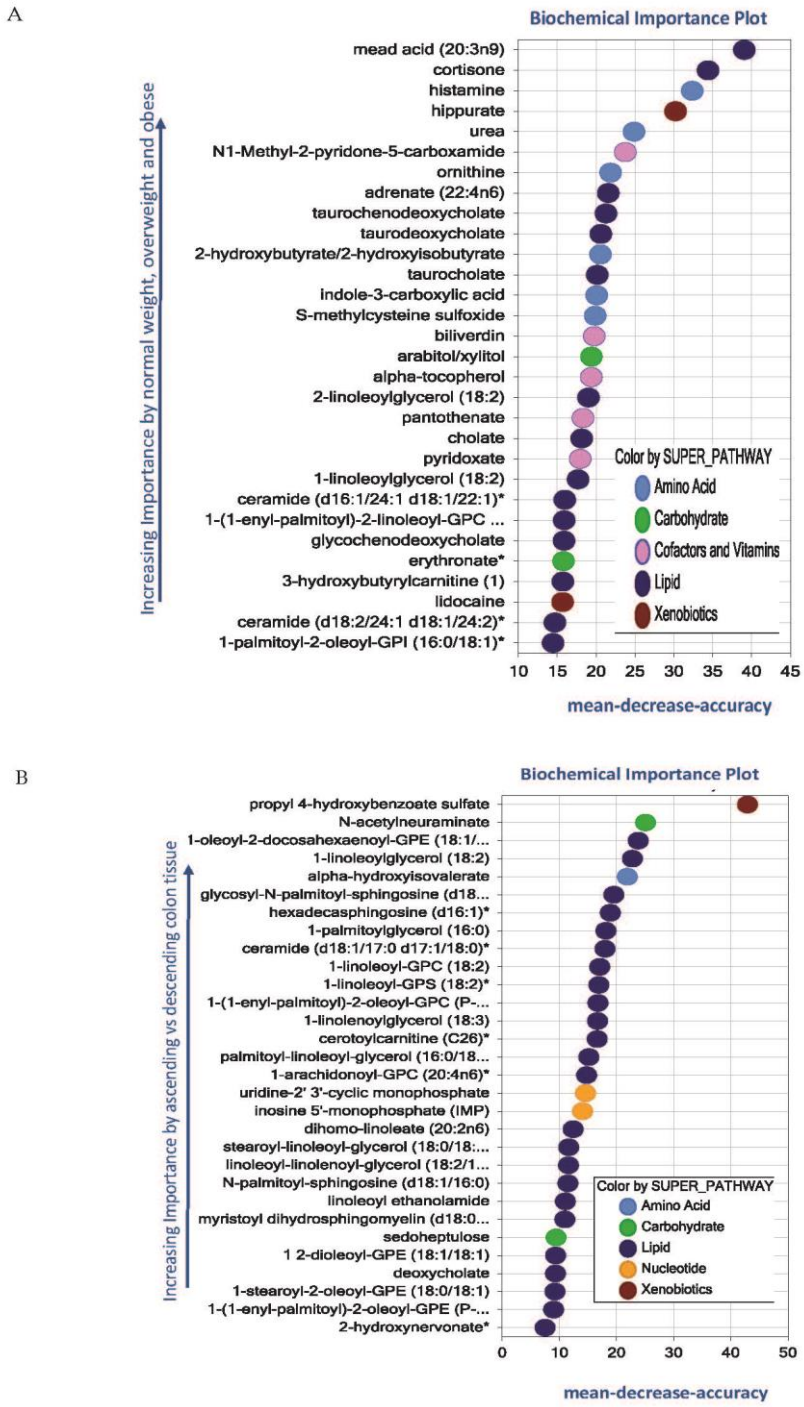


Supplemental Figure 1. Global non-targeted analysis of stool metabolite profiles according to BMI. A: Principle components analysis (PCA); B. hierarchal clustering of the stool metabolome from normal weight, overweight and obese adults (n = 24).



Supplemental Figure 2. Random Forest analysis by BMI and between colon tissue locations. A: Colon tissue metabolites from normal weight adults were distinguished from overweight and obese adults and resulted in a predictive accuracy of 53% for the top 30 metabolites. These colon metabolites across BMI groups support differences in bile acid metabolism (with taurochenodeoxycholate, taurodeoxycholate and

taurocholate) and cofactors/vitamins (with biliverdin, alpha-tocopherol and pyridoxate); B. Random forest analysis of colon tissue metabolites compared from ascending *vs* descending colon tissue (n = 24) showed a predictive accuracy of 73% with 24 of the top 30 metabolites involved in lipid metabolism.