



**Supplementary Fig. 5. Correlation network analysis of various performance indices.** *A*: EW<sub>SD</sub> vs. C<sub>SD</sub> (Gene part). *B*: EW<sub>SD</sub> vs. C<sub>SD</sub> (Gut bacteria part). *C*: EW<sub>SD</sub>+Leu vs. EW<sub>SD</sub>. The correlation network was analyzed by Spearman's correlation rank test ( $P < 0.05$  and  $|r| > 0.8$ ). The red and blue lines represent positive and negative correlations, respectively. Line width represents the strength of the correlation. The symbols were defined with different colors: Blue: Apparent index; Red: Serum index; Purple: Differential expression gene in the liver; Orange: Liver metabolomic analysis result; Green: Differentiated intestinal flora.