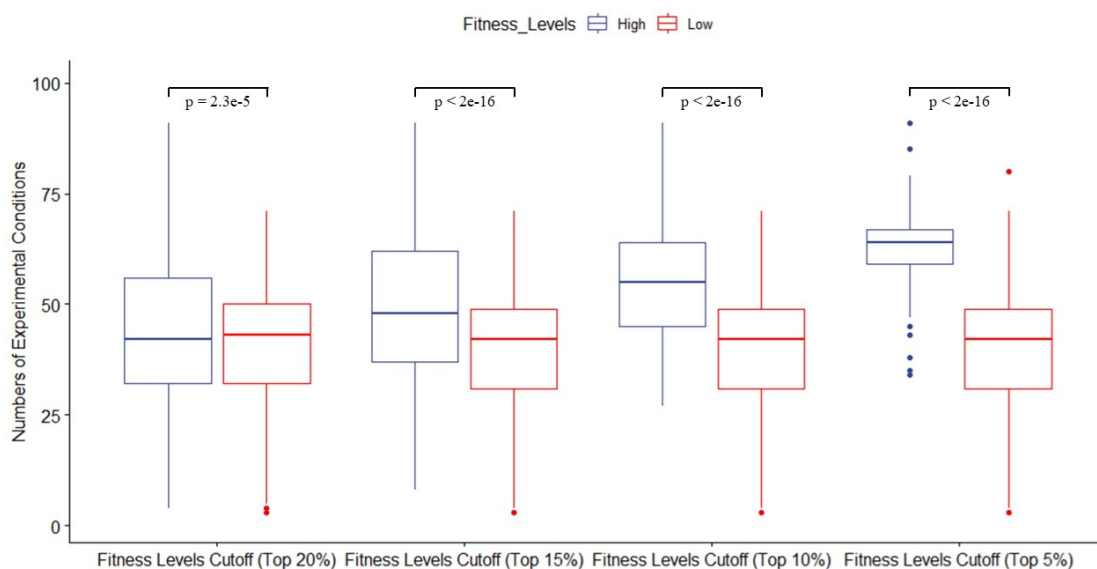# Supplementary Materials

Figure S1. The comparison of the contributions to the total fitness score from varieties of conditions. X-axis: the genes with the highest 20%, 15%, 10% and 5% total fitness values are defined as high fitness genes (high fitness level group), and the remaining genes in each case are regarded as low fitness level group genes, respectively. The values on the Y-axis indicate how many experimental conditions the gene participated in at a level above average, i.e., at least 1/176 contribution was derived from that condition. Then, we compared the "High Group" to the "Low Group" and calculated the corresponding p-values with the Wilcoxon test.
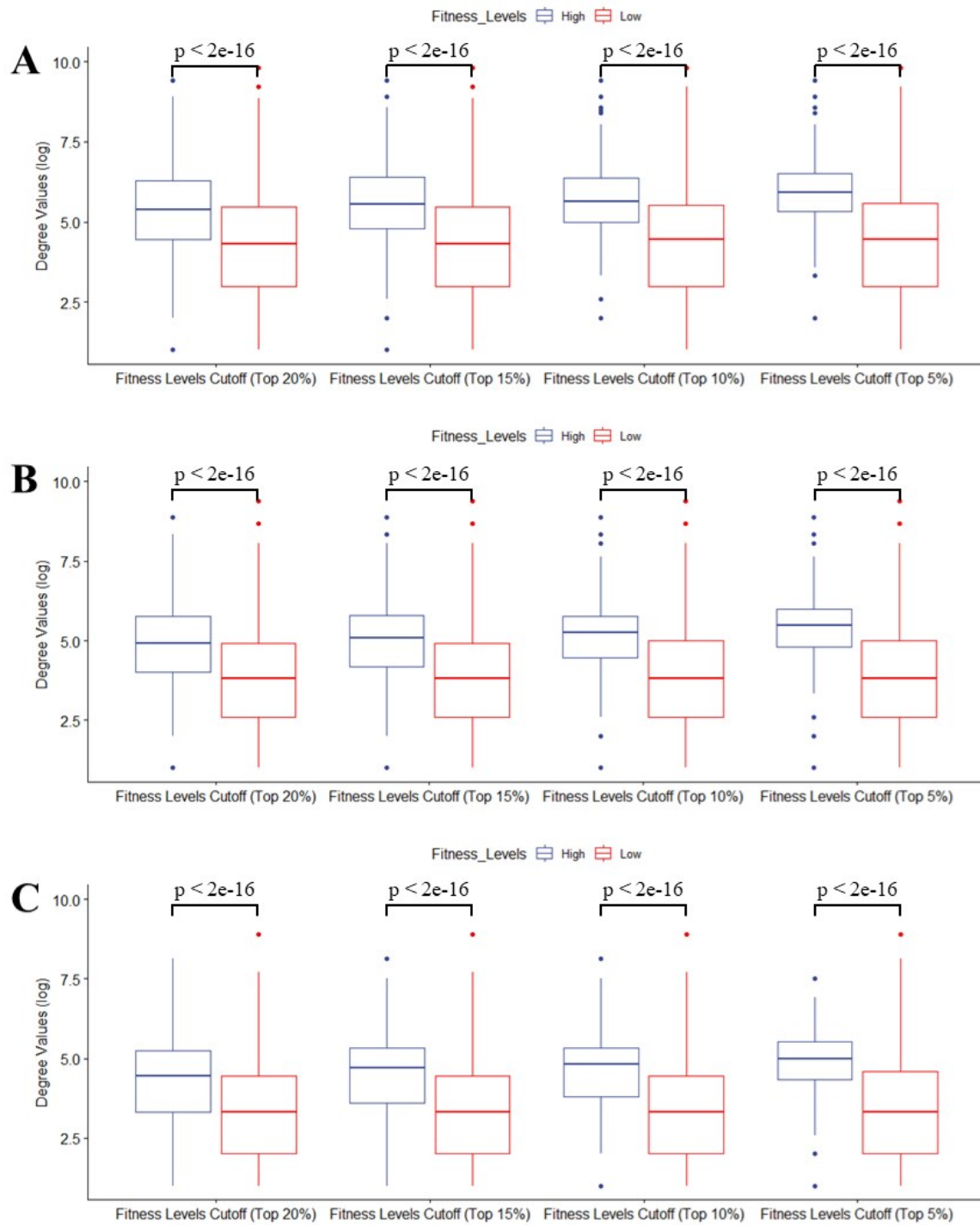
Figure S2. The relationship between degree values and total fitness levels. STRING's confidence scores: (A) 0.5, (B) 0.6 and (C) 0.7, are used as cutoffs. Note: the difference between groups is compared for each of the four conditions, and the corresponding *p*-value is calculated with the Wilcoxon test.