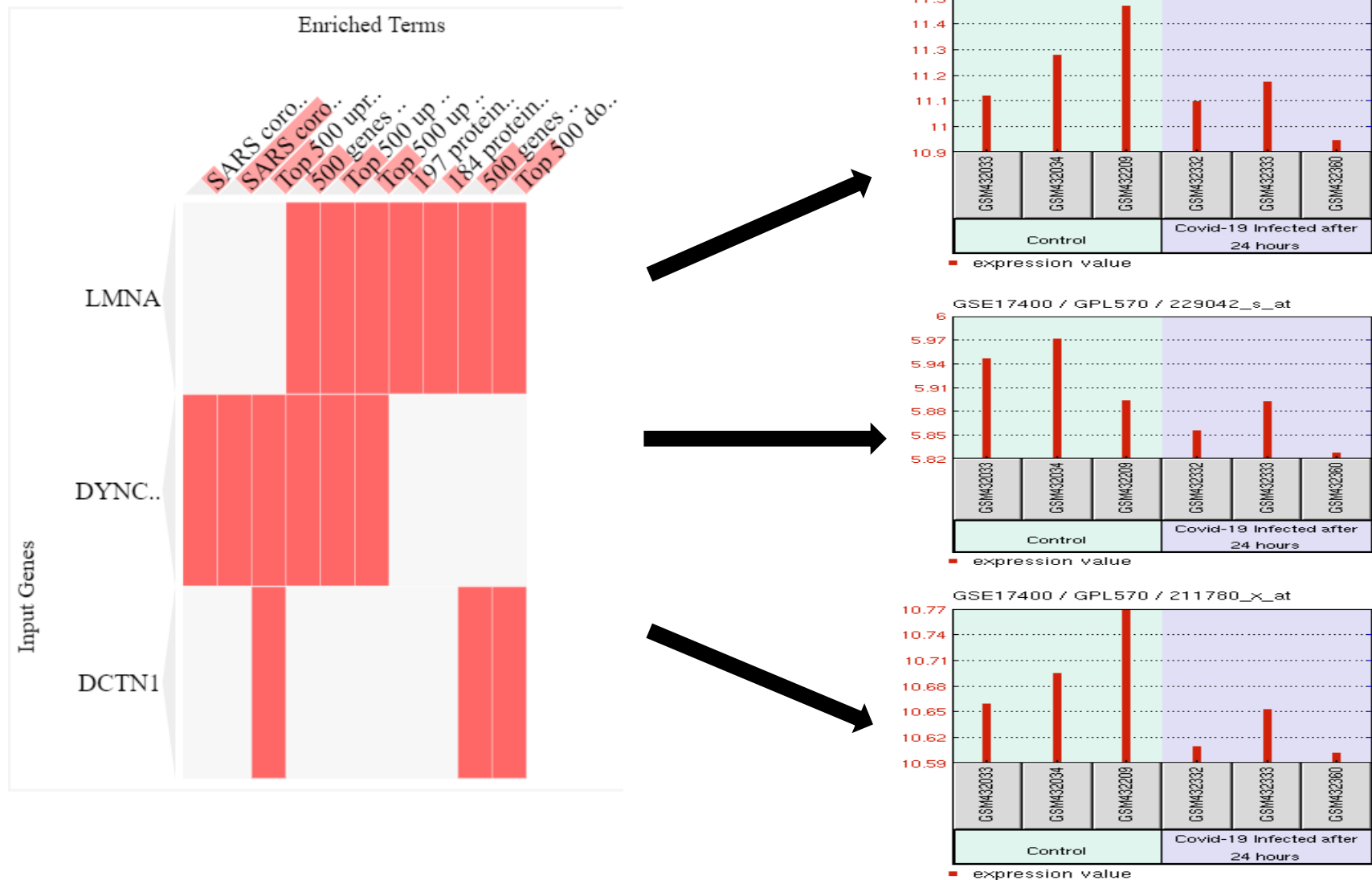
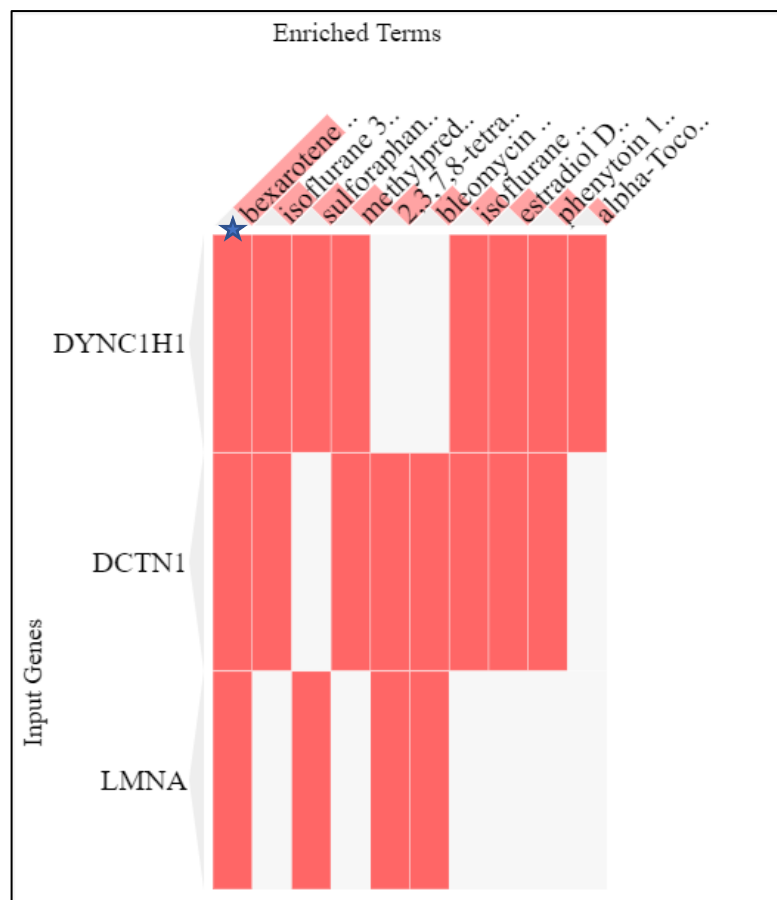
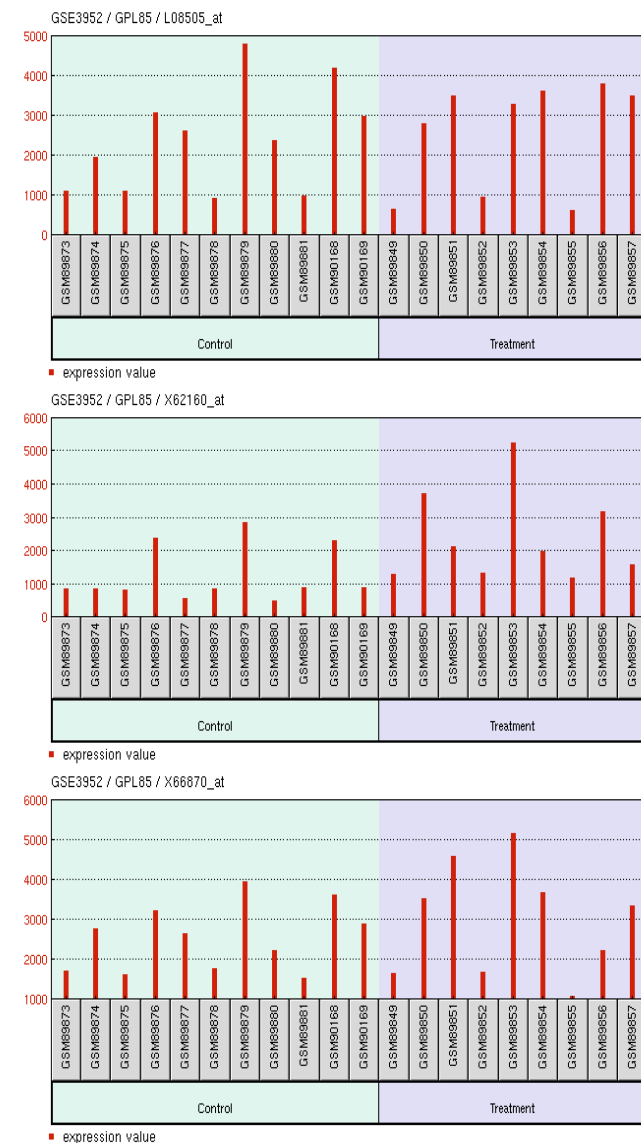


Supplementary Figure 1. SG gene-disease interaction network. (A) Interaction of SG genes and the associated lung/respiratory affecting diseases. SARS-CoV-2 target SG genes are shown in green, lung/respiratory-related affecting diseases are represented in pink. (B) Bar plot of key SG genes having maximum connections to various lung/respiratory affecting diseases in the network.



Supplementary Figure 2. Effects of SARS-CoV-2 challenges on the expression of LMNA, DYNC1H1, and DCTN1 genes. (A) GSEA of the COVID-19 related gene sets revealed mostly downregulation of the key SG genes. GEO profiles of the LMNA, DYNC1H1, and DCTN1 genes expression in human bronchial epithelial cell in COVID-19 condition after 24hr of infection (GSE17400).

(A)**(B)**

Supplementary Figure 3. (A) GSEA of the drug perturbations from GEO database records of downregulated genes identify bexarotene as potential drug candidate against SARS CoV 2 infection. (B) Bexarotene increasing the expression of LMNA, DYNC1H1, and DCTN1 genes as shown by enriched GEO records (GSE3952).