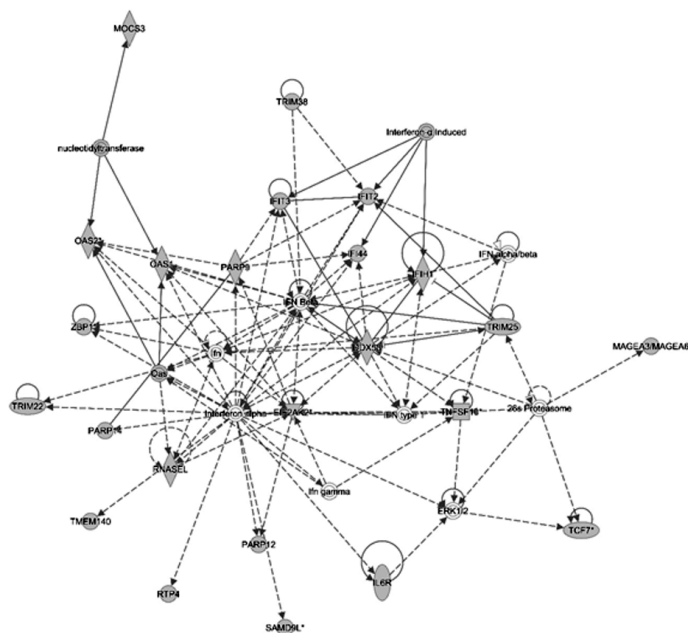
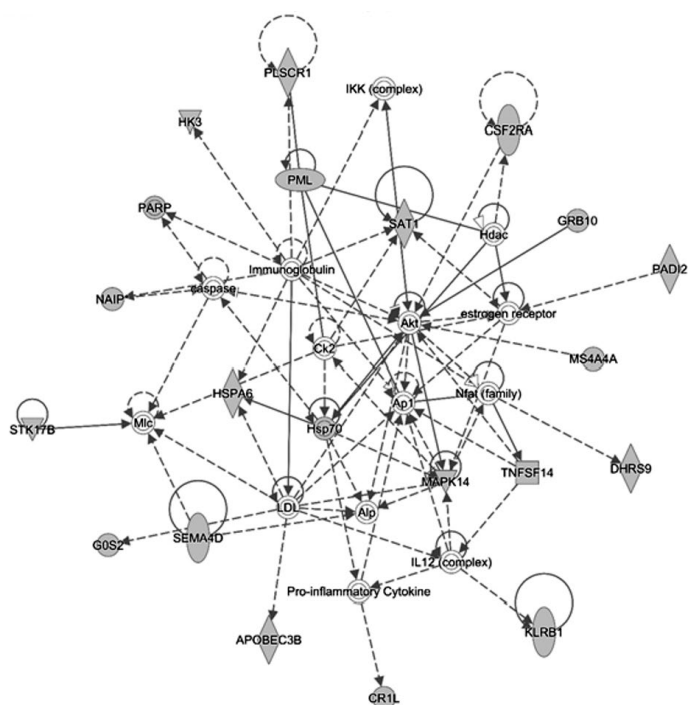


ADDITIONAL FILE 5.

Gene network analysis. Analyses were performed using Ingenuity Pathways Analysis (IPA) program.



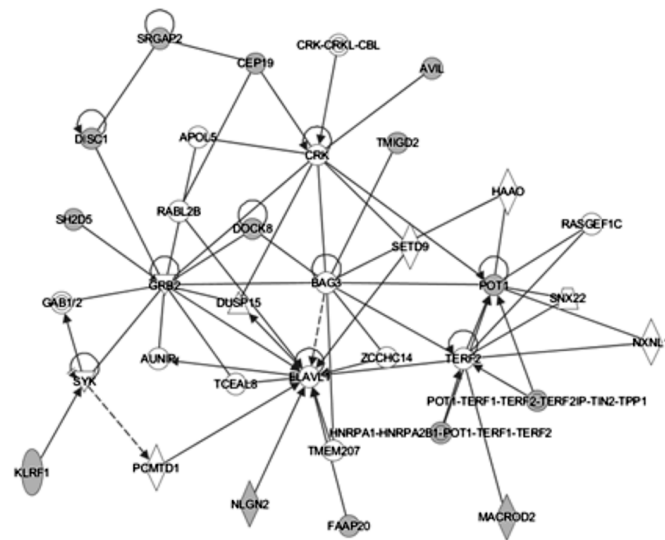
A) Antimicrobial response, inflammatory response, infectious diseases



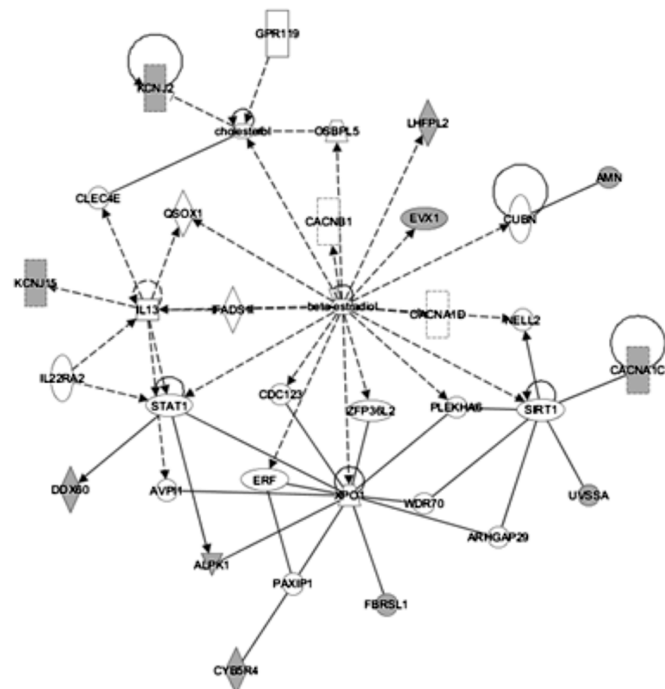
B) Dermatological diseases and conditions, organismal injury and abnormalities, cellular movement

The diagram illustrates a complex gene regulatory network. Nodes are represented by various shapes: circles, diamonds, and squares. Interactions are shown by solid and dashed lines with arrows indicating direction. Key nodes include ESR1, KHDRBS1, MOV70, and EGR1. The diagram illustrates a dense web of regulatory relationships, with some nodes having self-loops.

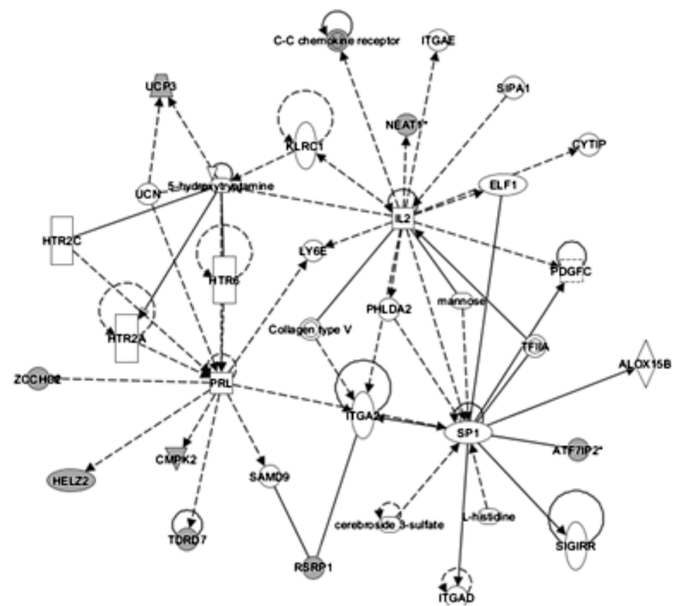
D) Carbohydrate metabolism, cell morphology, cellular function and maintenance



E) Cell-to-cell signaling and interaction, hematological system development and function, inflammatory response



F) Developmental disorder, hereditary disorder, metabolic disease



G) Connective tissue development and function, skeletal and muscular system development and function, tissue development