

Supplementary Information

Title

MicroRNA pharmacogenomics based integrated model of miR-17-92 cluster in sorafenib resistant HCC cells reveals a strategy to forestall drug resistance

Authors

Faryal Mehwish Awan¹, Anam Naz¹, Ayesha Obaid¹, Aqsa Ikram¹, Amjad Ali¹, Jamil Ahmad², Abdul Khaliq Naveed³, Hussnain Ahmed Janjua*¹

Affiliations

¹Atta-ur-Rahman School of Applied Biosciences (ASAB), National University of Sciences and Technology (NUST), H-12 Islamabad, Pakistan.

²Research Center for Modeling and Simulation (RCMS), National University of Sciences and Technology (NUST), H-12 Islamabad, Pakistan.

³Islamic International Medical College (IIMC), Riphah International University, Rawalpindi, Pakistan

*Corresponding author

Hussnain Ahmed Janjua

E-mail: janjua.hussnain@gmail.com ; hussnain.janjua@asab.nust.edu.pk

Telephone number: +92 323 5680231

Author's contact information

Faryal Mehwish Awan faryal_mehwish@yahoo.com

Anam Naz anam.naz88@live.com

Ayesha Obaid aysha_obaid_nust@live.com

Aqsa Ikram aqsa_ikram@yahoo.com

Anjad Ali amjaduni@gmail.com

Jamil Ahmad dr.ahmad.jamil@gmail.com

Abdul Khaliq Naveed khaliqnaveed2001@yahoo.com

Hussnain Ahmed Janjua* janjua.hussnain@gmail.com ; hussnain.janjua@asab.nust.edu.pk

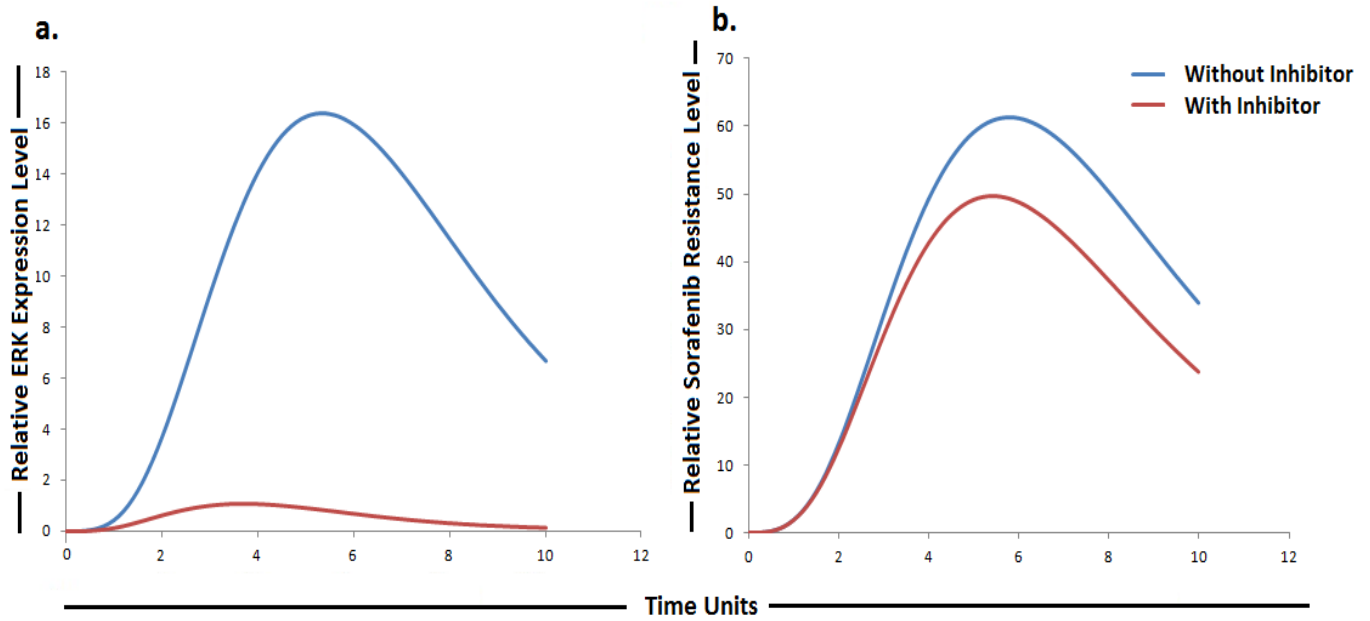


Figure S1. Simulation of relative ERK expression level (a) and relative sorafenib resistance levels (b) with and without ERK inhibitor. Time units are represented on x-axis with relative levels on y-axis

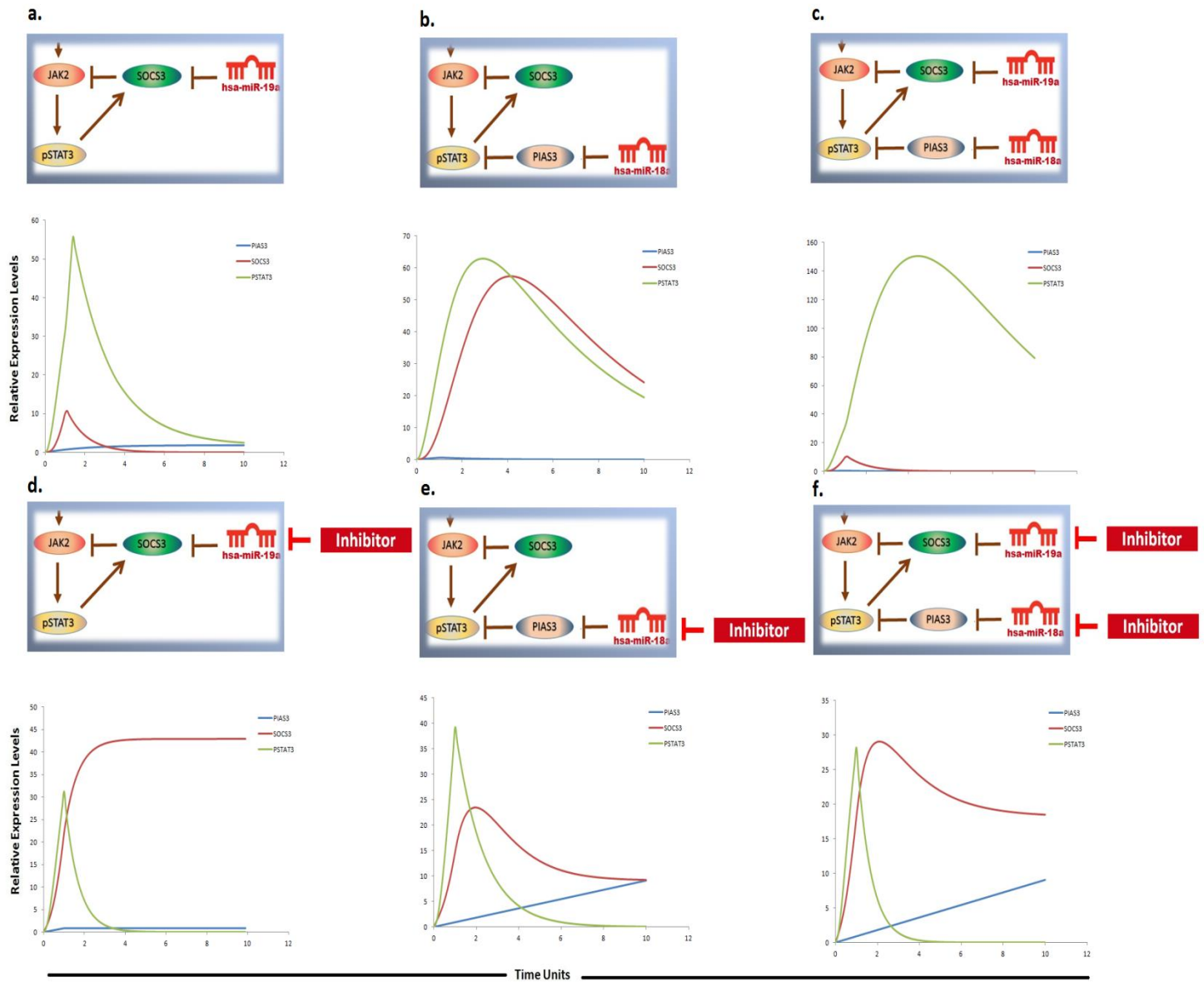


Figure S2. Simulation of SOCS3, PIAS3 and STAT3 in the presence of miR-19a only (a), in the presence of miR-18a only (b), in the presence of both miR-19a and miR18a (c), in the presence of miR-19a inhibitor only (d), in the presence of miR-18a inhibitor only (e), and in the presence of both miR-19a inhibitor and miR-18a inhibitor (f). Time units are represented on x-axis with relative expression levels of SOCS3, PIAS3 and STAT3 on y-axis. Relative levels of SOCS3, PIAS3 and STAT3 are shown in red, blue and green lines respectively.