

How To Correlate

Introduction

Linear regression and Pearson correlation are fundamental statistical measures of the correlation between two populations. The Correlate plugin performs a simple linear regression and Pearson correlation calculation comparing two populations chosen from the workspace gating tree.

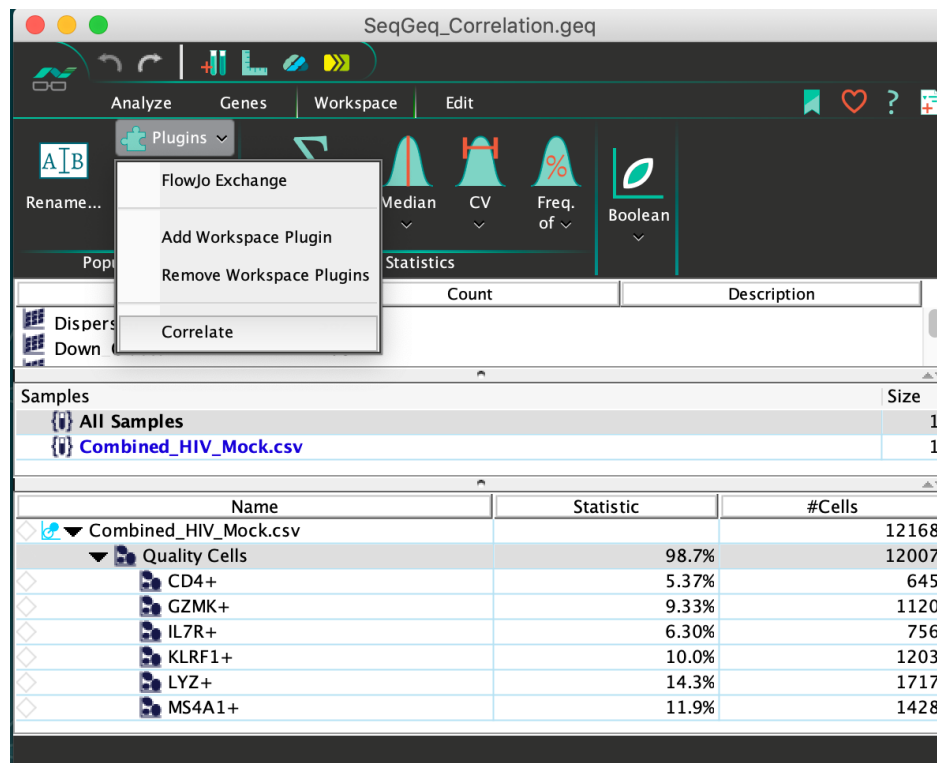
Setting up the Correlate Plugin

There are detailed instructions on how to set up plugins in our [online documentation](#).

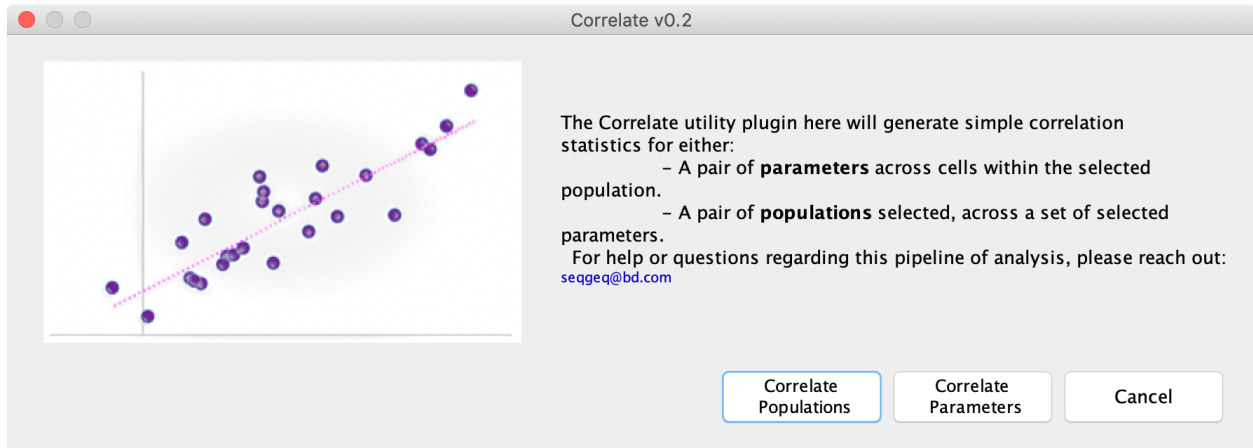
The Correlate plugin can be set up by simply placing the Correlate.jar file into the “plugins” folder on the computer.

Using the Correlate Plugin

The Correlate plugin should be used after gating populations of interest in the workspace. Select a parent population with subpopulations of interest. Go to the workspace tab, select the plugins dropdown, and choose Correlate from the dropdown.

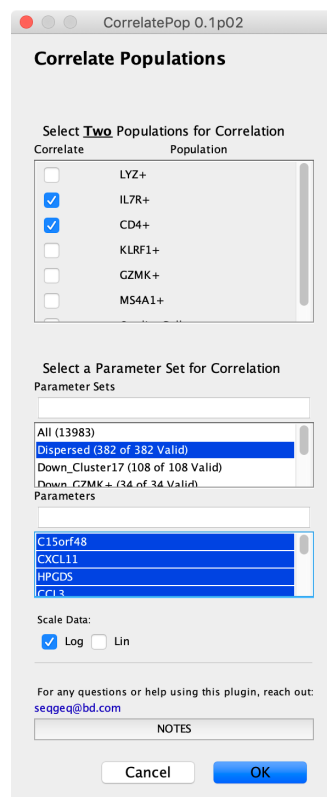


A new window will appear allowing the user to choose whether they would like to correlate populations or parameters. Choosing “Populations” then allows the user to select two populations to compare and then select a set of parameters to compare between those two populations. Choosing “Parameters” allows the user to correlate two parameters within the selected population.

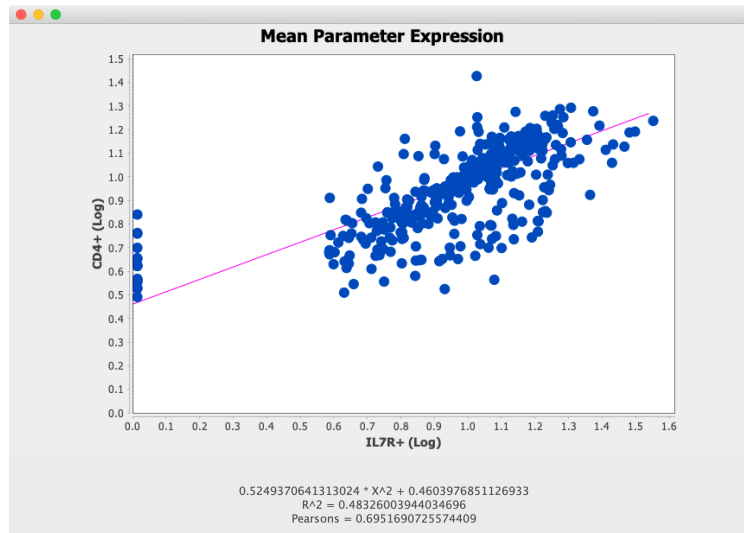


Correlating Populations

The next window will display a list of all the children population of the selected population. Select **two** of the children from this list to compare. Beneath that, there are options for choosing a parameter set and specific parameters to run regression on. The axis of the regression can either be viewed in linear or logarithmic transform.



After running the regression analysis the plugin will generate a window displaying the regression. The equation for the linear regression can be found below the plot, as well as an R^2 value and a Pearson correlation value that corresponds with the regression performed. Right click on the image of the regression plot to copy it and paste it into other software or the layout editor.



Correlating Parameters

The next window will display a list of parameters available within the sample. **Two** parameters can be selected, then a correlation will be calculated between those two parameters for the cells in the population the plugin was ran on. The axis of the regression can either be viewed in linear or logarithmic transform.

Correlate v0.2

Correlate Parameters

Select **Two** Parameters for Correlation

Parameter Sets

All (13962)
 Dispersed (302 of 302 Valid)

Parameters

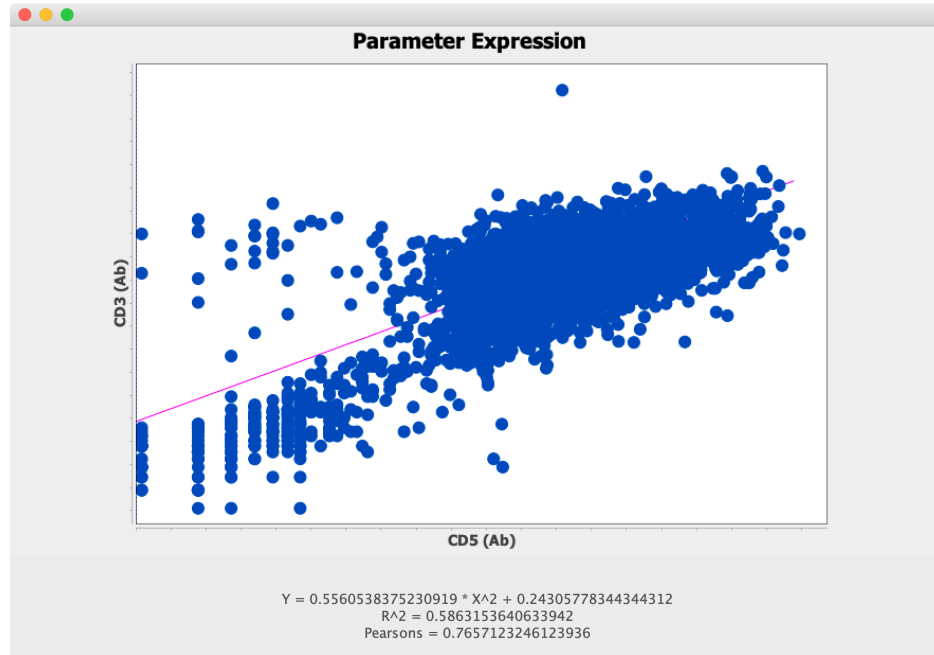
NCL
 RPL21
 RPS13
 HERPUD1
 RPS12
 UROD
 TUBB
 RPL23A
 ACTG1
 HNRNPM

For any questions or help using this plugin, reach out:
seqgeq@bd.com

NOTES

Cancel Back OK

After running the regression analysis the plugin will generate a window displaying the regression. The equation for the linear regression can be found below the plot, as well as an R^2 value and a Pearson correlation value that corresponds with the regression performed. Right click on the image of the regression plot to copy it and paste it into other software or the layout editor.



Leave us your feedback

Please write to seqgeq@bd.com or flowjo@bd.com with any questions!