

How-to-FlowAI

Tested using R version 3.4.1 with FlowJo v10.4. flowAI was developed by Gianni Monaco et al. at the SIgN (A*STAR), and published by Anis Larbi's group (<https://www.ncbi.nlm.nih.gov/pubmed/27153628>). A quick demo movie is available here (<https://drive.google.com/file/d/0B7qA2XRMbgZAN3d6bVpxN19NWkE/view?usp=sharing>). In order to install the R package, users will need the flowCore package (tested flowCore_1.42.2) and flowAI (tested with flowAI_1.4.4) from BioConductor. Additionally the "png" (tested with png_0.1-7) dependency from CRAN, and also the plugin jar from the FlowJo Exchange.

To instal flowCore in R copy/paste the following command:

```
source("https://bioconductor.org/biocLite.R")
biocLite("flowCore")
```

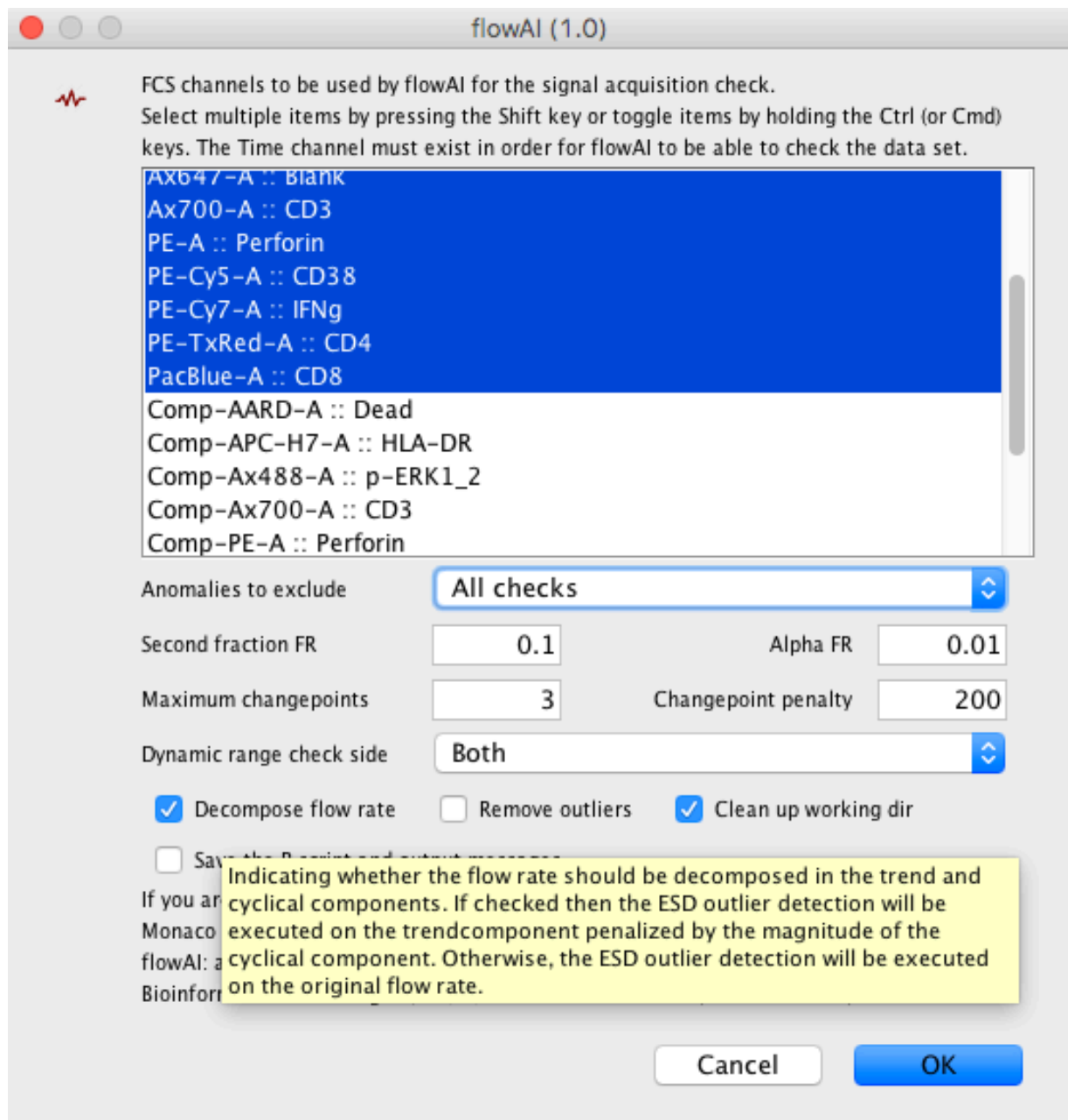
To instal the PNG package use the following command:

```
install.packages("png")
```

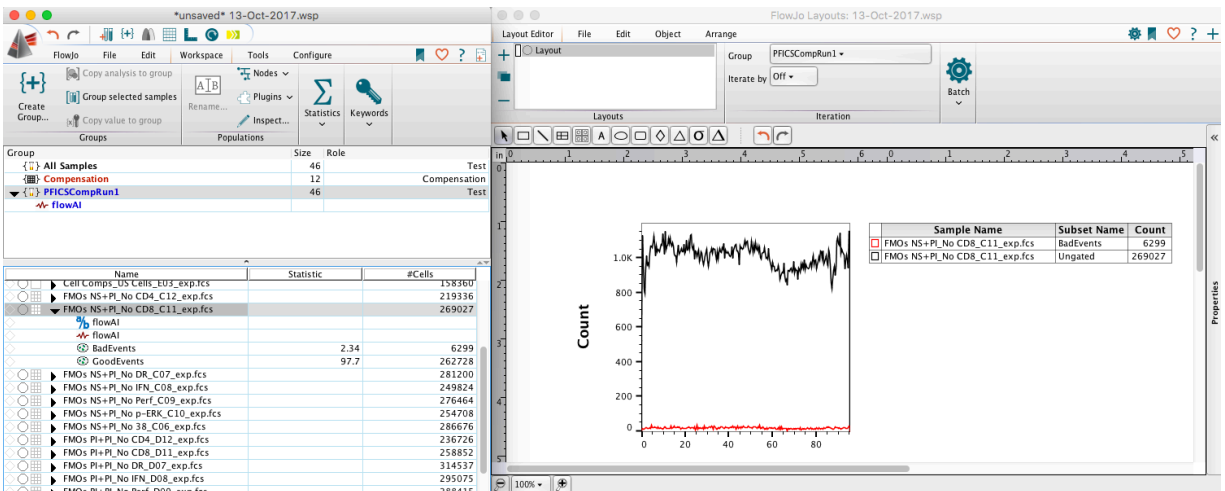
Similarly flowAI can be added to R using the following:

```
source("https://bioconductor.org/biocLite.R")
biocLite("flowAI")
```

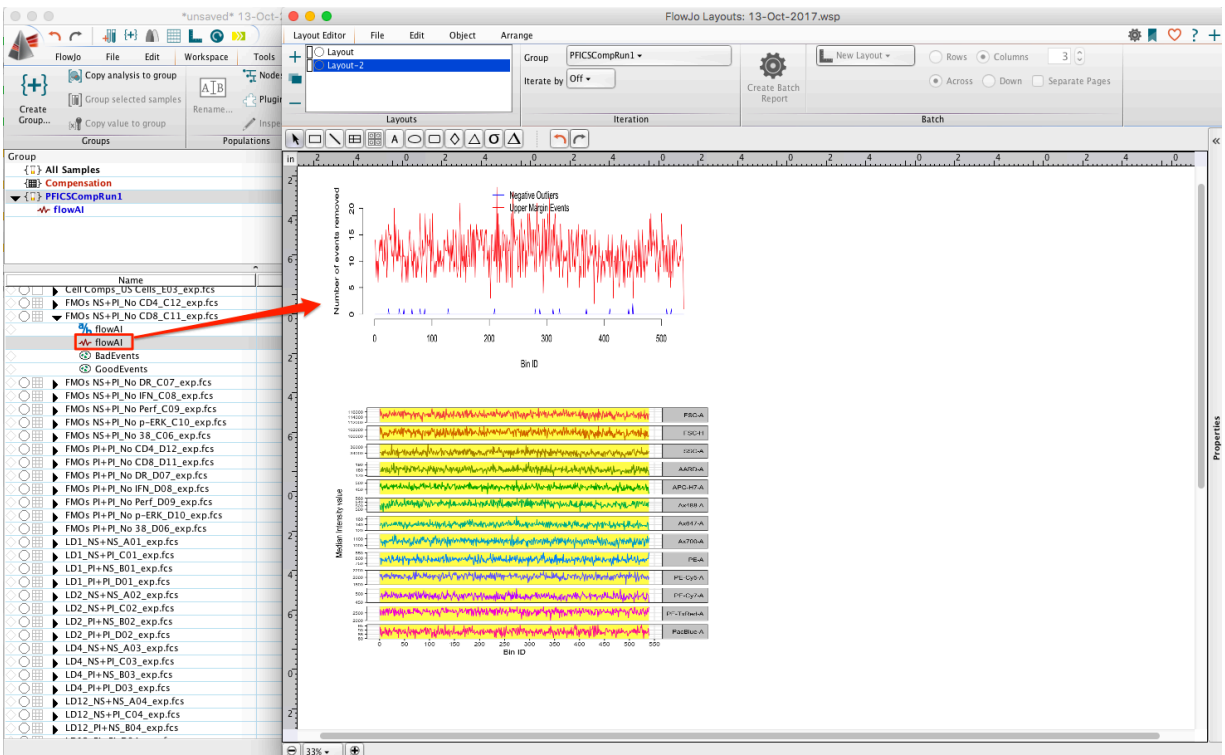
Once successfully installed place the "flowAI.jar" file into your plugins folder, and restart FlowJo. Selecting a population there, and visiting the Plugins section of the Workspace tab, you should be able to select the flowAI option. This will bring up a dialog where researchers can choose which parameters to use for signal acquisition checking accross the Time (or Event#) parameter. There are a variety of other options available to customize this checking there. Mousing over the fields will bring up a tool tip which describes the field's function:



After running the plugin on your data, a new derived parameter and (if necessary) a set of GoodEvents/BadEvents populations will be created. The flowAI population can be compared with the raw population's Time parameter in order to view the clean-up performed:



The flowAI node associated with a population can also be dragged into a layout for more feedback on the results:



If you have any issues or further questions regarding this plugin or any other features in FlowJo, we encourage you to reach out, here: techsupport@flowjo.com