GCAT Release Notes

Version 4.5

The version 4.5 release is about fixing the variable transformation issue. Apparently, the back-transformation is not consistently applied in version 4.4 so different elements of the output end up being on different scales. The result files will include updated plots files and updated output file.

Version 5.0

New feature: default OD transformation constant was changed from *1* to *0.1*. I (Yury) believe that *0.1* is a more appropriate setting for most experiments done at GLBRC, as ODs range mostly up to 1.5. If the old behavior is desired, click log(x+δ) in the OD Transform menu and enter *1* in the box.

Also, LOESS smoothing parameter values > 1 are now allowed. Greater smoothing parameter results in a more smooth curve. However, a highly smoothed curve may not fit the data as closely as a less smooth one.

The main purpose of version 5 is bug fixes, code clean-up and refactoring to prepare GCAT for further development and potential KBase integration.

Version 6.0

Changed default options to be more appropriate for most users:

- The user is expected to enter a blank OD value by default. It remains possible to use the first reading in the well as blank. It is also possible to set blank value to 0.
- The default OD Transform is now *log(x)*. It remains possible to select *log(x+0.1)* or *log(x+δ)*, with δ specified by the user.
- The default Inoculation time point index is now *1*, e.g. it is assumed that the first OD reading in the well is post-inoculation and not that of blank media. However, GCAT generates and error if Media background is set to the *first OD reading* while Inoculation time point remains *1*, as these two choices are inconsistent with each other.

Note: when the *log(x)* transform is used for OD, all data points where $OD < OD_{blank}$ are discarded.

Enable specification of value ranges for heat maps. Setting these ranges consistently in different GCAT runs will result in heat maps with identical color scales, facilitating comparisons between experiments.

Version 6.1

Implemented Area Under the Curve (AUC) calculation.