Introduction

PaCeQuant is a Fiji Plug-in and it is the leading tool for pavement cell shape quantification[1](https://sciwheel.com/work/citation?ids=6083139&pre=&suf=&sa=0&dbf=0). PaCeQuant can calculate 28 shape values from each pavement cell. Normally, a few hundreds of cells are analyzed per conditions, therefore, these data sets can become difficult to manage manually. In PaCeQuant, each image generates a file results table. In this repository, we share a custom code that compiles those results tables into one data-frame suitable for building ggplot2 graphs.

Other Solutions

PaceQuant is a Fiji Plug-in. PaCeQuantAna[2](https://sciwheel.com/work/citation?ids=9792583&pre=&suf=&sa=0&dbf=0) is a very useful Rstudio-compatible R library for analysis results obtained by PaCeQuant. However, the final figures are limited in their customization and specific pairwise statistical analysis is difficult to integrate.

This Solution

In this repository, we share a custom code that compiles PaCeQuant [2](https://sciwheel.com/work/citation?ids=9792583&pre=&suf=&sa=0&dbf=0)result tables into one data-frame suitable for building ggplot2 graphs. Once the data-frame is built, the is more flexibility to build graphs suited to the user’s needs.

To use the code:

1. Arrange your data in folders named with 2 variables in your experiment

2. Name the folders using 2 variables, e.g. “time”, “position”, “genotype”, “treatment”, “concentration”,

3. Make sure the two variables are separated with an underscore “\_”.

4. By default these variables are “Genotype” and “Treatment”.

e.g: “wt\_mock”, “wt\_hormone”, “mutant1\_mock”, “mutant1\_hormone”, “mutant2\_mock”, “mutant2\_hormone”, etc

5. If variables different than Genotype and Treatment will be used, Introduce the name of the 2 variables in the code as indicated by “ ### Change accordingly”

[1.    Möller, B., Poeschl, Y., Plötner, R., and Bürstenbinder, K. (2017). PaCeQuant: A Tool for High-Throughput Quantification of Pavement Cell Shape Characteristics. Plant Physiol. *175*, 998–1017. 10.1104/pp.17.00961.](https://sciwheel.com/work/bibliography/6083139)

[2.    Poeschl, Y., Möller, B., Müller, L., and Bürstenbinder, K. (2020). User-friendly assessment of pavement cell shape features with PaCeQuant: Novel functions and tools. Methods Cell Biol. *160*, 349–363. 10.1016/bs.mcb.2020.04.010.](https://sciwheel.com/work/bibliography/9792583)