Script Purpose: This script quantifies the neurite density in images taken of MIPs of DRGs and plots them in a boxplot with statistics

Inputs:

The inputs of the script are the LVCC images of the DRGs taken on the Thunder microscope. These images should all be in one folder which will be input into the script.

This script was designed for Epo-B experiments where an image is taken of each DRG for 4 wells, and each chip is a different condition, so there are 4 DRGs per condition. This can be adjusted.

Outputs:

The outputs of the script will be the neurite densities of each image in each condition, which can be saved as a .csv file to your computer. The script can also plot the neurite densities as boxplots and calculate any significance using an independent t-test between each condition. Plots are displayed in the notebook but can be downloaded to your computer.

How to run the script:

You can hit 'Run all' in the upper left of the screen, or you can run each cell one at a time for troubleshooting. You will have to manually save each csv file and each plot to your computer. Here is an example of the boxplot with significance lines. The outputs should look something like this.