## Automated Colorimetric Assay

## **Leaf Segmentation**

Name your single images in the following structure: Genotype@plant-no.@weeks.jpg (f.ex. Col-0@1@4.jpg)

- 1. Download WinPython **3.3.5.0** 64bit (or any Python3 version)
- 2. Save your images in Jupyter 'Notebooks' folder in 'images' subfolder
- 3. Start Jupyter
- 4. Run 1<sup>st</sup> cell to load all the packages
- 5. Run 2<sup>nd</sup> cell but adjust:
  - (a) Threshold (if necessary)
  - (b) Vertical and horizontal dilate (if necessary)
  - (c) Min\_area (if necessary)
  - (d) Name of folder where your leaves are saved (leaf\_images\_dir='./name' (probably './images')
- 3<sup>rd</sup> cell: Give the path to the original image (not the overview image) In case you get an error message, try to run the 1st cel again (but not the 2nd, then you will overwrite all your previouse results again).
  - (a) you can load single images and look up values for pixels within your image.
  - (b) you can load single images and reorder leaves (remove a leaf with right mouse, add one with left mouse)