

Topic 03 – Basic tools 2

Solution 3.1: Using macros

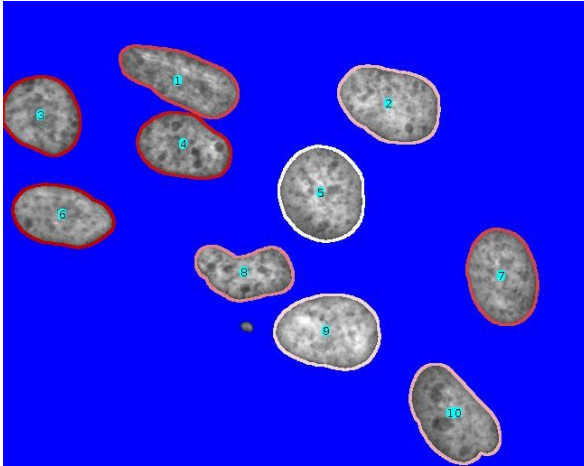


Figure 1: Area color coded.

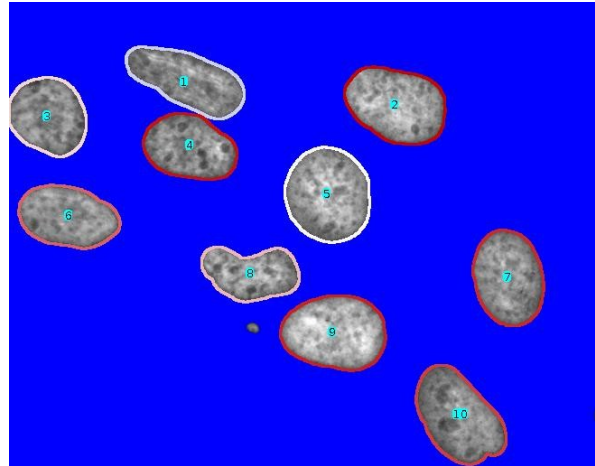


Figure 2: Roundness color coded.

Solution 3.2: Recording macros and batch processing

a)

b) The macro can look like this:

```
run("Set Measurements...", "area mean standard modal min centroid
perimeter display redirect=None decimal=3");
setAutoThreshold("Default dark");
run("Analyze Particles...", "size=400-Infinity circularity=0.00-1.00
show=Nothing display");
run("Label");
```

c) The results table will contain the measurements for all images in the input folder. Each line contains the name of the image as a label. The output folder contains the control images with the labels on the nuclei. The labels on the nuclei correspond to the line numbers in the results-table.

Solution 3.3: Using Plugins

a)

b)

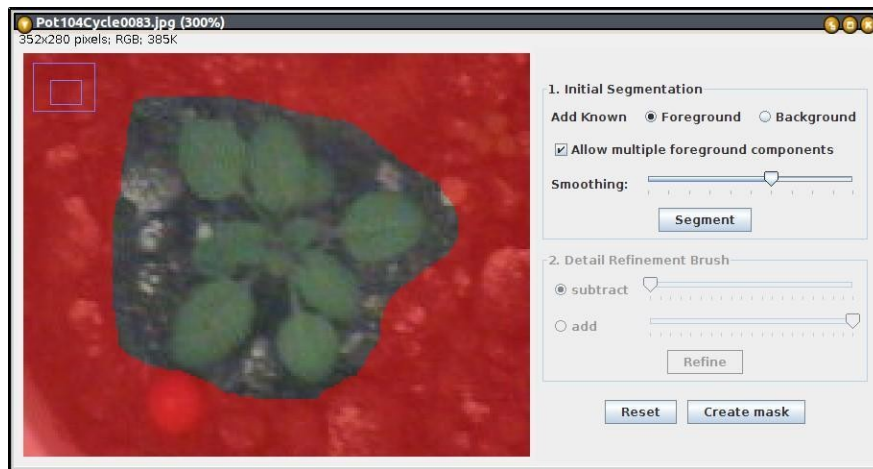


Figure 3: The siox-plugin.

c)

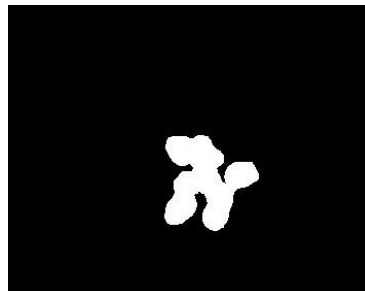


Figure 4: The mask created with the siox-plugin.



Figure 5: The selection created from the mask.

d) The area I measured is 4844 pixel.

Exercise 3.4: Working with stacks

a)

b)

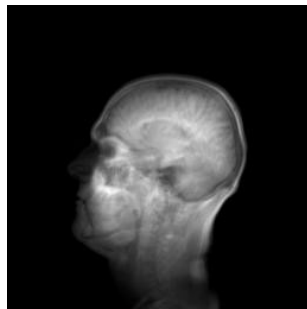


Figure 6: z-projection

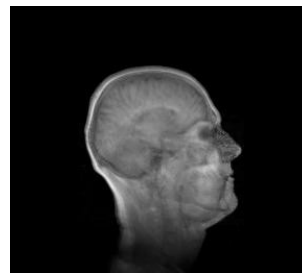


Figure 7: One slice of the 3d-projection

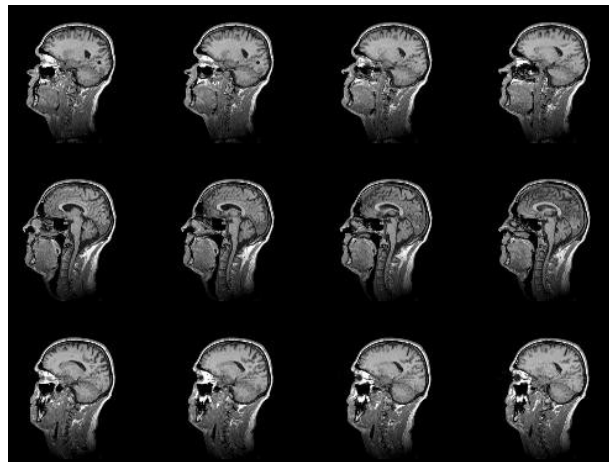


Figure 8: Detail of the montage.

- c) The combine image puts both images into the same image, one next to the other or above the other and the concatenate command concatenates the two stacks one before the other.



Figure 9: Result of the combine command.

- d)

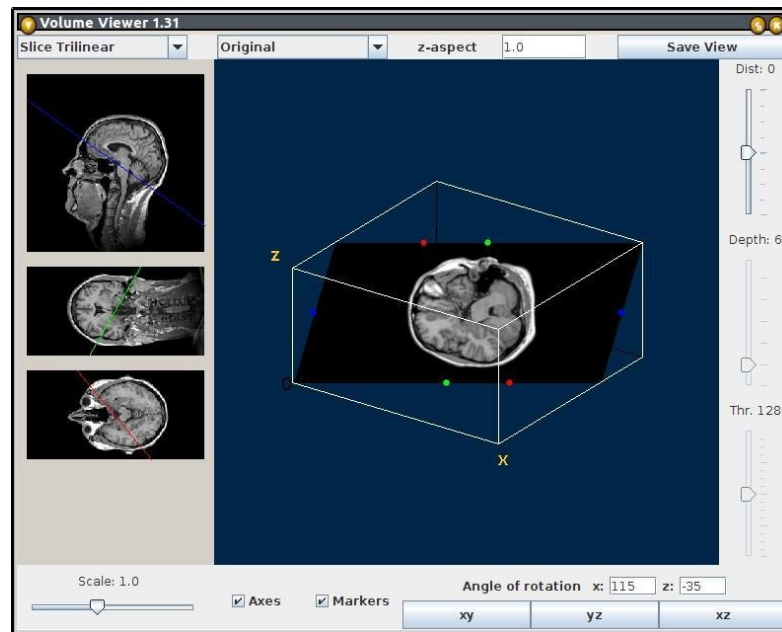


Figure 10: The volume viewer.

e)

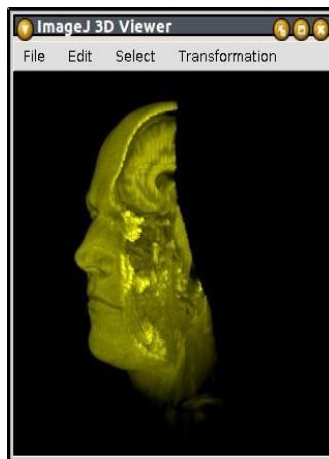


Figure 11: The 3d-viewer.