Exercises sessions 7 & 8 – Macros

Exercise 19) Write a macro to count the nuclei in a single image in the Drosophila Cells folder

- Use the macro recorder.
- Try with find maxima or thresholding.
- Every command is recorded, so all your mistakes are included
  You will need to edit the resulting macro.
- Add results to ROI manager so you can look at them on the original image.

Exercise 20) Write a macro to count all the dapi images in Drosophila Cells folder

Goals:

- Auto count the nuclei in more than one file.
- Save the results (save the summary window at the end).
- Save an image of each counted file so you can check how accurate the counts are.

Hints:

- Add code to only open files with “Dapi.TIF” in the title. (exactly like this, not dapi.tif)
- Adapt macros from the macros folder (Start with: EmptyFolderProcessingMacro.ijm).
- See Cilia2D macro for how to save pictures as you run the macro, and how to save the summary. Do the macro first without saving any pictures, then try with saving these too.
- If using FindMaxima, you can output as Single points, then dilate the resulting image and use analyse particles to add the counts to a summary window.
- To make an output image, merge the channels of the input image and the find maxima output image. Save as a tif or Jpeg. (or both – see the differences).
- You will need to change the merge channels line from the Record macros version. It needs to have the names of the images you are working on. Use the string +Imagename+
- i.e. “c1=[“+Imagename+”.TIF Maxima]
  Square brackets [] are needed around text that may have a space in the name.
  i.e if the imagename was “001 My Cell” then you need to surround it by square brackets.
- You can also add the results of Analyze particles to the ROI manager. (Clear results, Add to manager) and save the ROI manager results, (see Cilia macro).