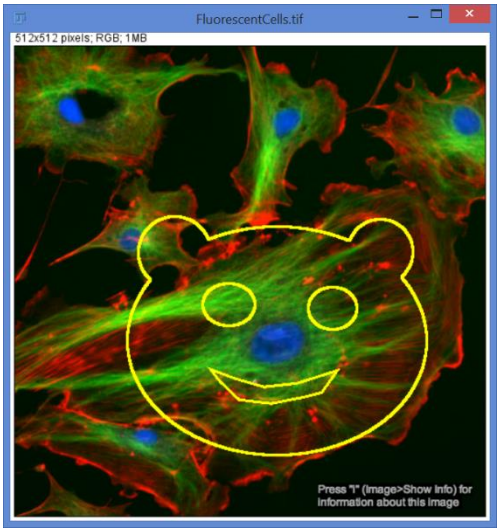
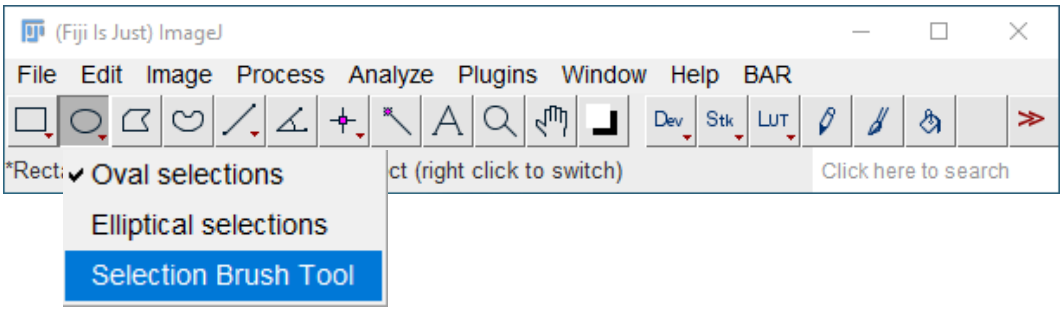
Exercises Session 3 – Simple measurements in Fiji

Exercise 6) Draw a teddy bear's face on an image. (5 mins)

- Open Samples: FluorescentCells.tif (***File / Open Samples >***)
- Use circle and polygon selection tools.
- Hold shift to add to an ROI. Hold Alt to remove from an ROI.
- This allows you to make composite ROIs.



- Try other ROI tools: the selection brush tool expands (start inside) or shrinks (start outside) the current ROI. You can also set the size of that tool



Exercise 7) Measure Nuclei size and intensity in HelaCells.tif (15 mins)

- Open the HelaCells.tif sample image (***File / Open Samples >***)
- Use magic wand to select each nucleus. (Select the wand, click on a nucleus then Double click on the Wand tool to change the tolerance)
- Use ROI manager to save each nuclei ROI (press T).
- Set measurements. ***Analyze / Set Measurements…***
- Measure the Nuclei.
  Shortcut = 'M', or use Measure in ROI manager, or More>> Multi Measure

Exercise 8) Be careful when measuring stacks as Z-projections (5 mins)

- Run this macro from the course Macros folder: StackMeasureMaxvAvevSum.ijm
- To run this macro, drag and drop on Fiji, Press 'Run' in the new text / macro window.
- Move the windows so you can see them all.

The ROI manager has 5 ROIs that were measured.

This macro opens a sample image, flattens the green channel Z-stack into a single image in 3 ways (Maximum, Average & Sum projections) and measures 5 ROIs on each image, then plots the results.

Windows are:

Original Image, the z-stack of just Ch2, and Ch2 flattened (prohjected) as Maximum, Average and Sum.

Why are the values from the MaxP, AveP and SumP different?