2nd MdM Bioimage Analysis Workshop

Agenda (20-22 September, 2017)

Instructors: Chong Zhang (CZ), Peter Bankhead (PB)

(PART1) DAY 1: **Sep 20th, 2017**		
10:00-10:50	**What is in an image? What does it contain?** (e.g. open image, check intensities, tiff/bmp/png/jpg, 8bit/16bit/32bit, binary, color/LUT)	CZ
11:00-11:50	**How to inspect a region of the image and its content?** (e.g. plot histogram, plot intensity on a line, ROIs, ROI measurements)	CZ
12:00-13:00	**Is there any trick to annotate/draw better and easier on my data?** (e.g. Wand tool / Create Selection as a way to avoid manually drawing)	CZ
13:00-15:00	Lunch break	
15:00-15:50	**How much can I modify my data?** (e.g. smoothing for really noisy images (mean / median / Gaussian / etc), just so that thresholding work)	CZ
16:00-16:50	**How can I analyse different regions in one or among images?** (e.g. Analyze Particles, ROI Manager, Overlays)	CZ
17:00-18:00	**What are other operations that people use a lot?** (e.g. Watershed, Find Maxima, counting)	CZ

(PART1) DAY 2: **Sep 21st, 2017**		
10:00-11:50	**Good & bad data: Making sure your images are suitable for analysis**	PB
12:00-13:00	**Show & Tell** (If possible, you can provide 2-3 images in which you would expect to be able to measure and measure a difference. We will try to analyse one or two most common problems. First, you will explain to everybody what your data and problem is. (2 mins))	CZ, PB
13:00-15:00	Lunch break	
15:00-18:00	**Can I already measure my data?** (We will look at some of your own images together, and explore how we could use Fiji to analyse them. If possible, try to provide images in which you would expect to be able to measure a difference - as this will help us to judge whether any measurements we make are appropriate.)	CZ, PB

(PART2) DAY 3: **Sep 22nd, 2017**		
10:00-11:00	**Introduction to QuPath** What is QuPath, what was it designed for & what can it do?	PB
11:00-12:00	**Getting started** Hands-on introduction to viewing images, drawing regions, counting cells, & an explanation of the underlying concepts.	PB
13:00-15:00	Lunch break	
15:00-16:00	**Show & tell** An opportunity to present your own data, and describe that kind of analysis that you would like to perform (approx. 2-3 minutes each, depending on number of participants). We would discuss how QuPath could help, either on its own or in combination with other tools.	PB
16:00-17:00	**Writing scripts** How to use Groovy scripting with QuPath to automate analysis, perform batch processing, export results & interrogate the data in deeper ways.	PB
17:00-18:00	**Discussion & analysis** Time to revisit any of the topics from earlier in the day, and reconsider the 'Show & tell' applications with the new tools available through scripting.	PB