USE OF COMPUTATIONAL METHODS FOR IMAGE VISUALIZATION AND ANALYSIS

KEPLER AND IMAGEJ

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Progress

- Learned how to take timelapse of treated cells using the fluorescence microscope
  - Images did not provide useful information since cells died, but were able to be exported with .lif converter
- Installed and set up Nimrod/K with Kepler Workflow System onto one of the computers at Dr. Vail's lab
  - LIFconverter
  - Updated system reqs. with: Java, Microsoft Visual Studios
  - Showed Dr. Vail and a med. student how to use Kepler with LIFConverter
- Studied Slavisa's past microscopy/Kepler slides
- Read literature on cell tracking via timelapse

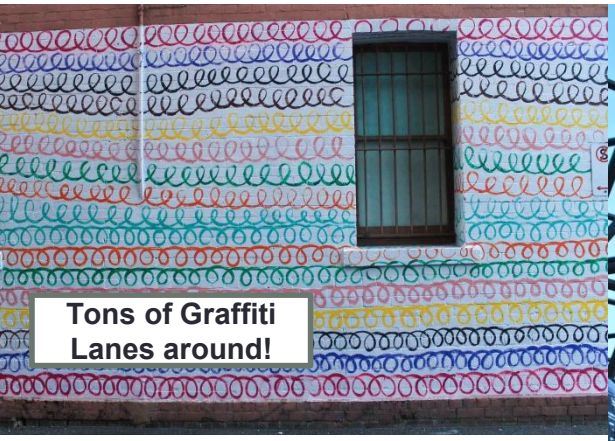
Workflow plan

1. Use LIFconverter to convert .lif to ome.tif
2. Route Kepler path to .tif images
3. Filter .tif images by (rgb) channels
   - Filter channels by timepoint
4. Merge red and green channels at same timepoint together
5. Have Kepler generate merged .tif images
6. Apply various ImageJ scripts

Tentative Plans

- Figure out why Kepler doesn't currently filter through Dr. Vail's images, but does for older versions of .lif files.
- Develop the (previously documented) workflow
- Discuss with Dr. Vail what workflows are needed
- Read through Kepler Actor References

*no pictures of penguins because no flash ☹



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