**Notes for analyzing 386 well images from Laura:**

* CellProfiler is pretty weak,
  + Good for organizing data
  + Maybe good for pulling in images from Omero
  + Nuclei segmentation (best settings I found)
    - Filter out objects not between 10 & 65 pixels diameter
    - Discard objects touching border
    - Threshold by Otsu method using global values
      * Otsu seeks to minimize the weighted variance in foreground vs background classes (two classes)
      * Use automatic smoothing
      * Threshold correction factor = 1
      * Bounds on threshold: [0,1]
    - Looking at the distribution of pixel intensities, it might make more sense to fit a mixture of Gaussians (MoG) after removing 0 and max pixels.
    - “Binary image” can be used to import segmentation from other source.
* Matlab
  + Reading images and running imadjust gives a good starting point
  + Denoising with median filter doesn’t seem helpful
  + Edge detection + fill
    - Only useful for nuclei
    - ‘Canny’ and ‘log’ (Laplacian of Gaussian) both get nuclei that the other misses
      * Log or ‘zero cross’ seem equivalent and get the most nuclei
      * It would probably be best to combine these two
  + Filtering nuclei
    - Size range 200 – 1000 pixels