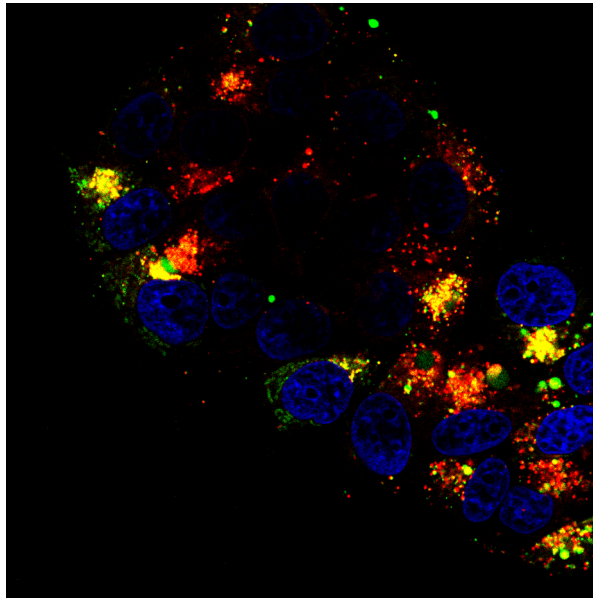


The problem

- There are too many images to analyze manually
- Automated confocal microscopy image analysis

An example

- How much zinc goes to the lysosomes?

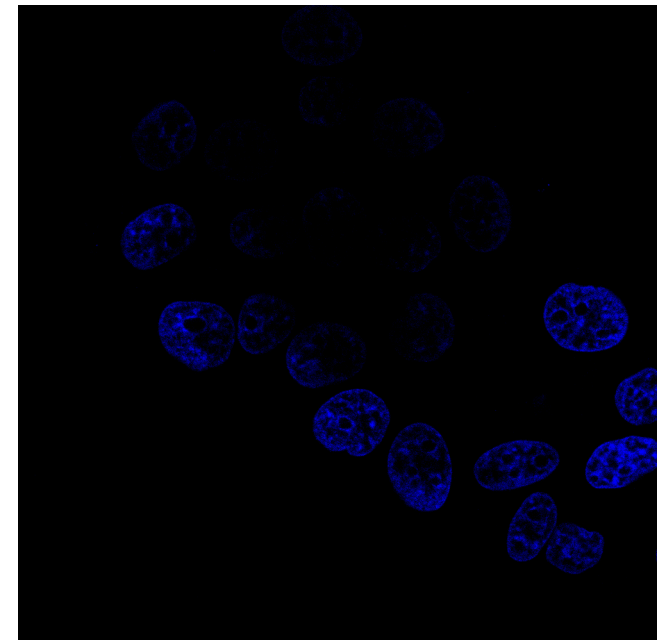
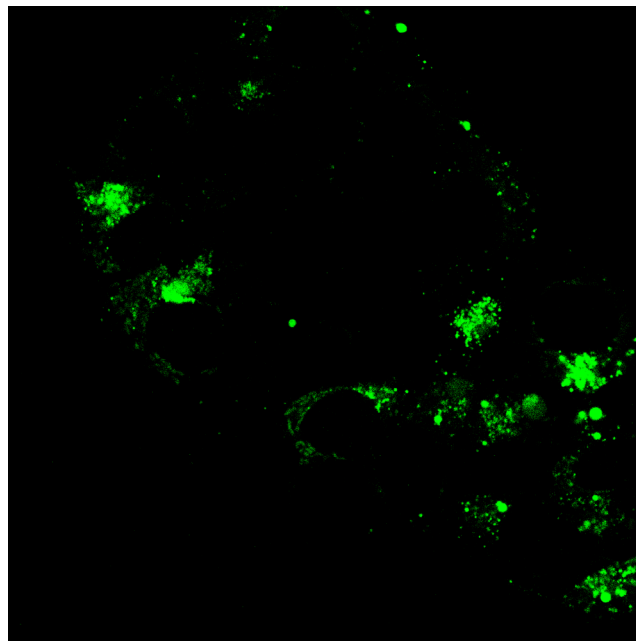
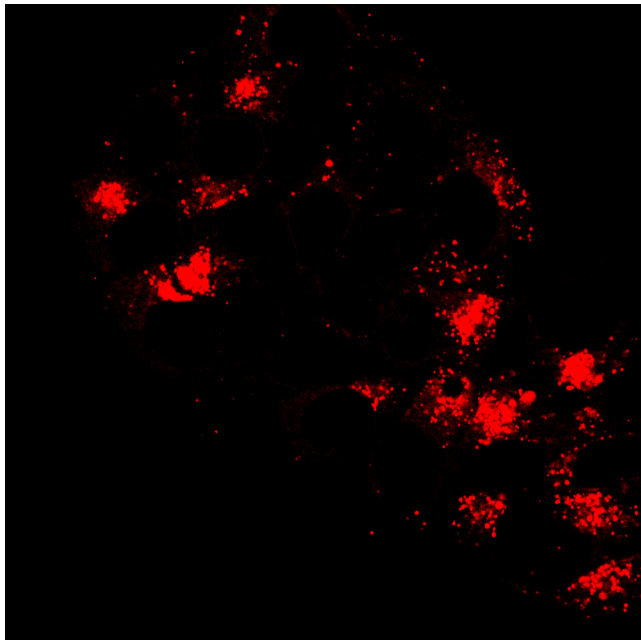


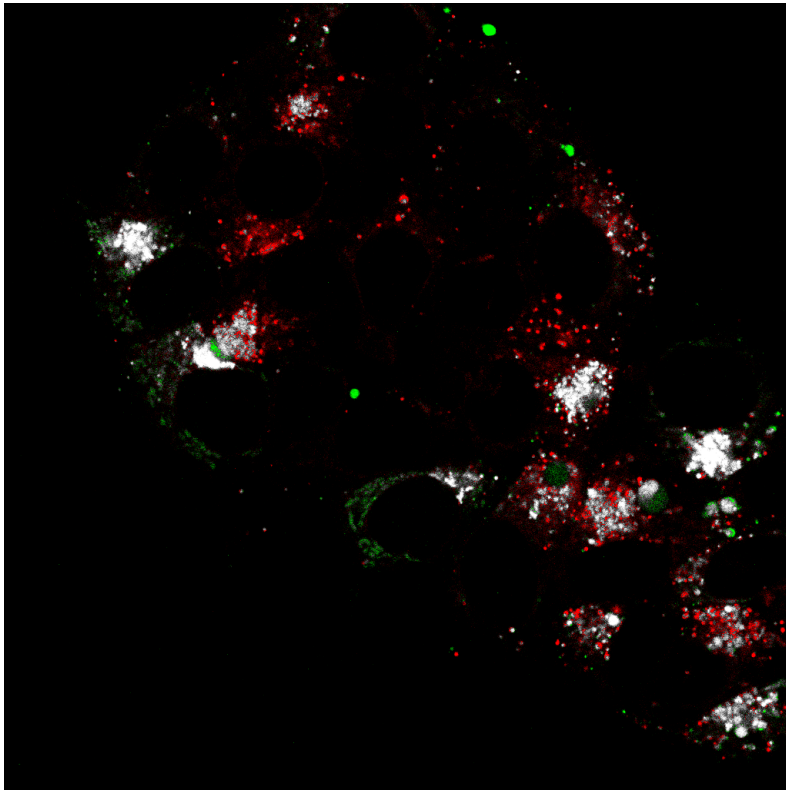
1. Split the image into three images corresponding to each channel

Red: lysotracker

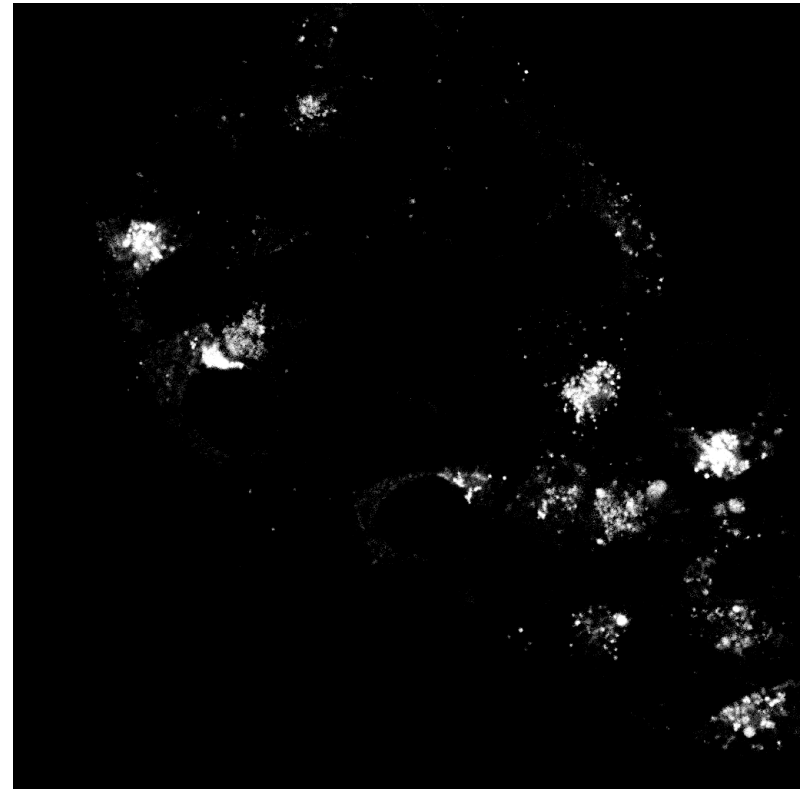
Green: free intracellular zinc

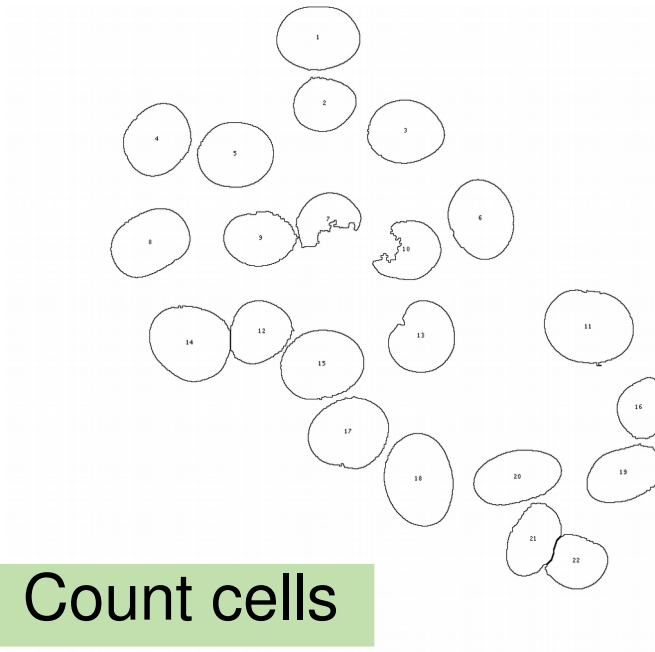
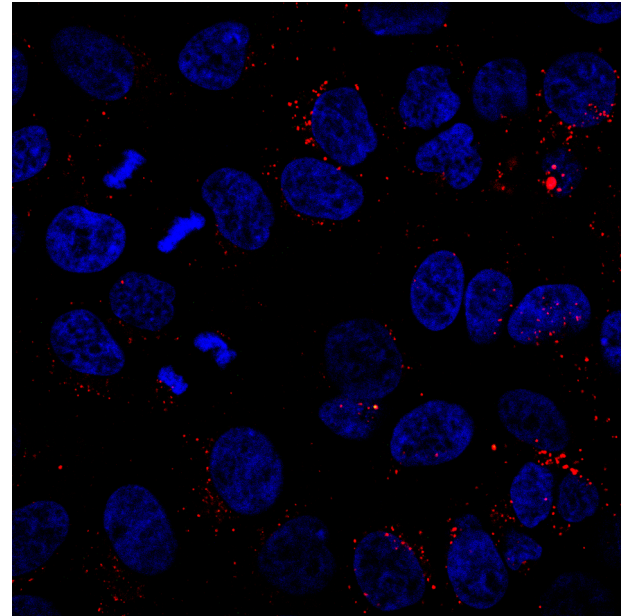
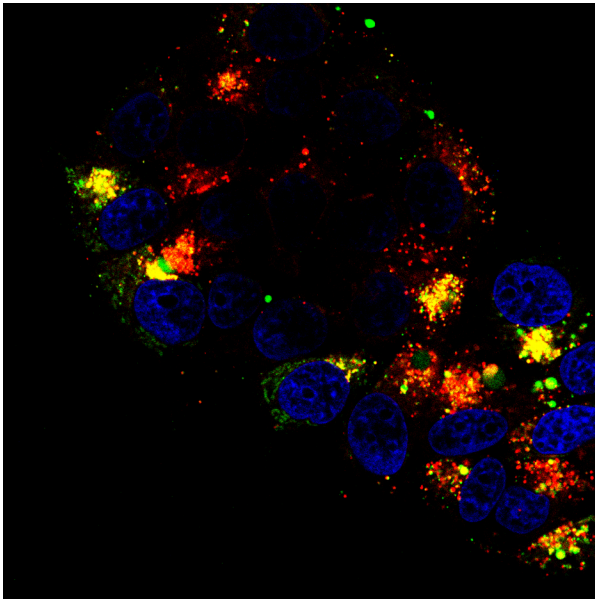
Blue: nuclei



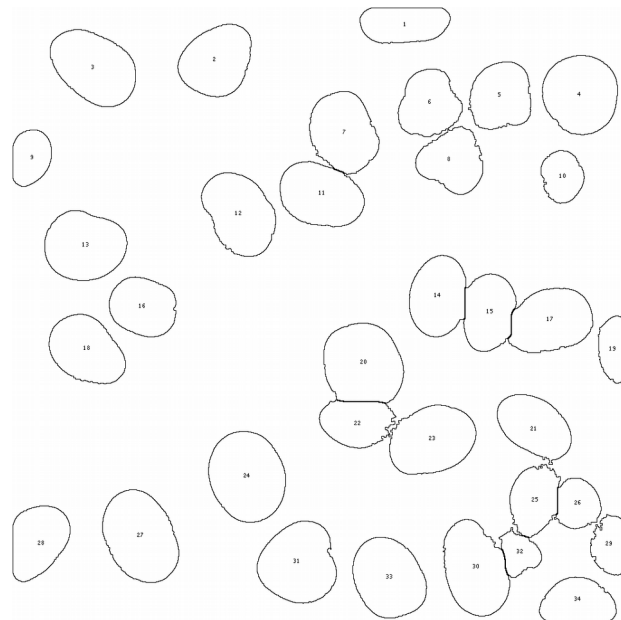


2. Measure the colocalization of labels of interest

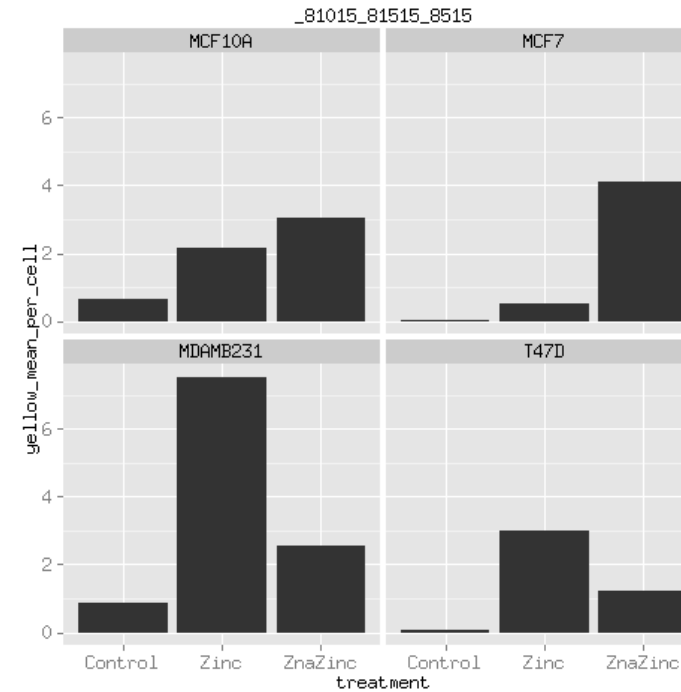
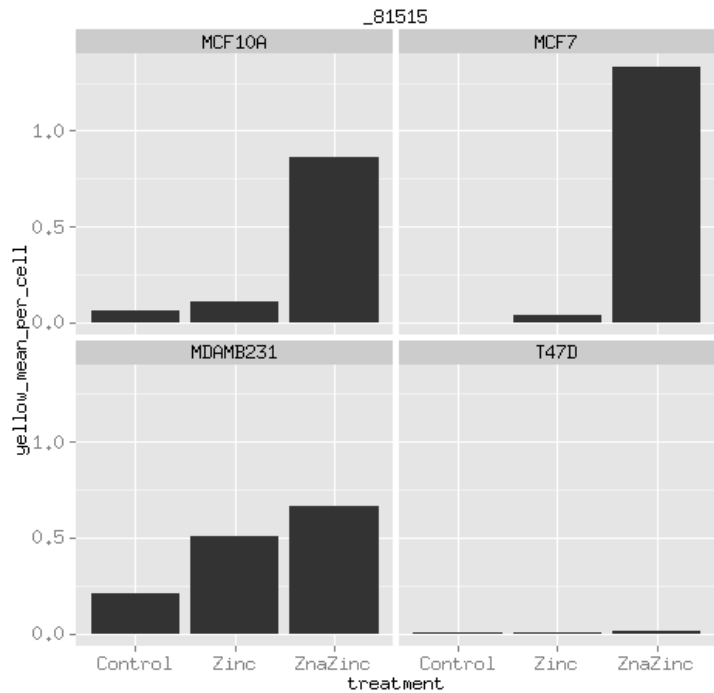
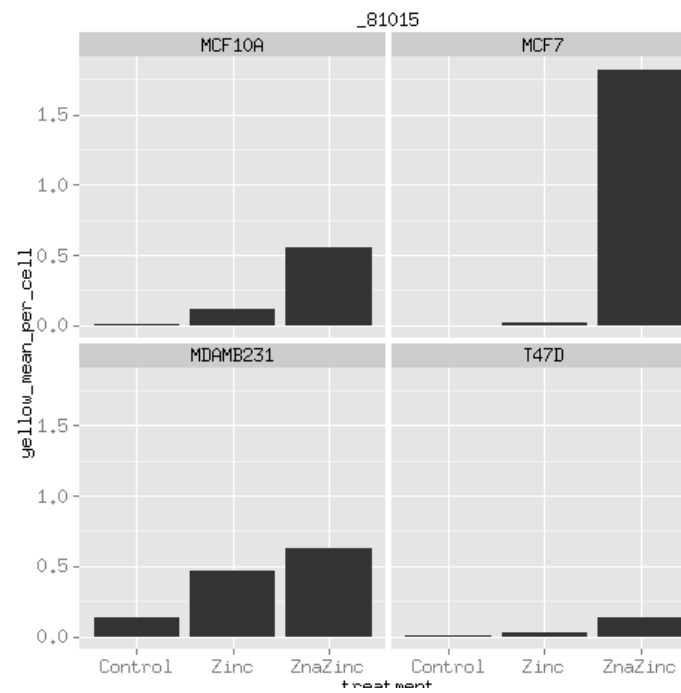
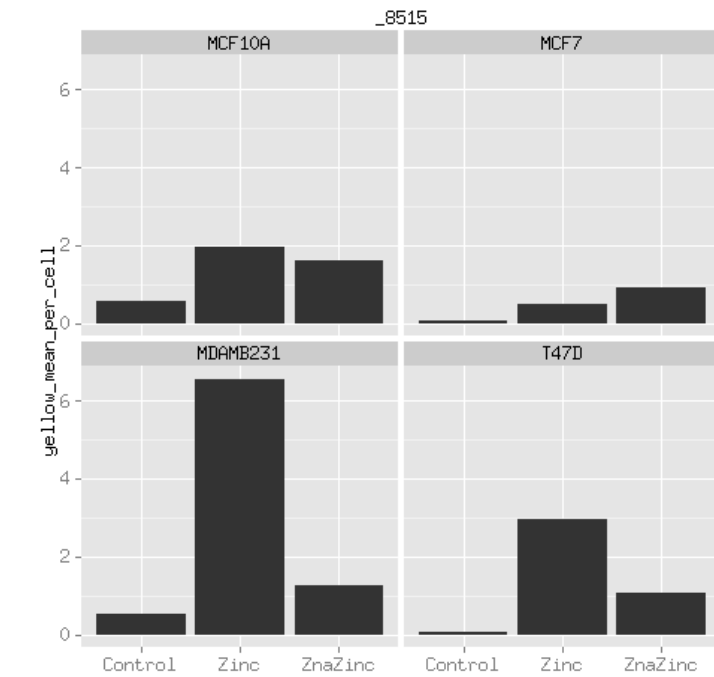




3. Count cells



4. Summarize and present results



MCF10A – normal breast cell line

MCF7, MDAMB231, T47D – cancer cell lines