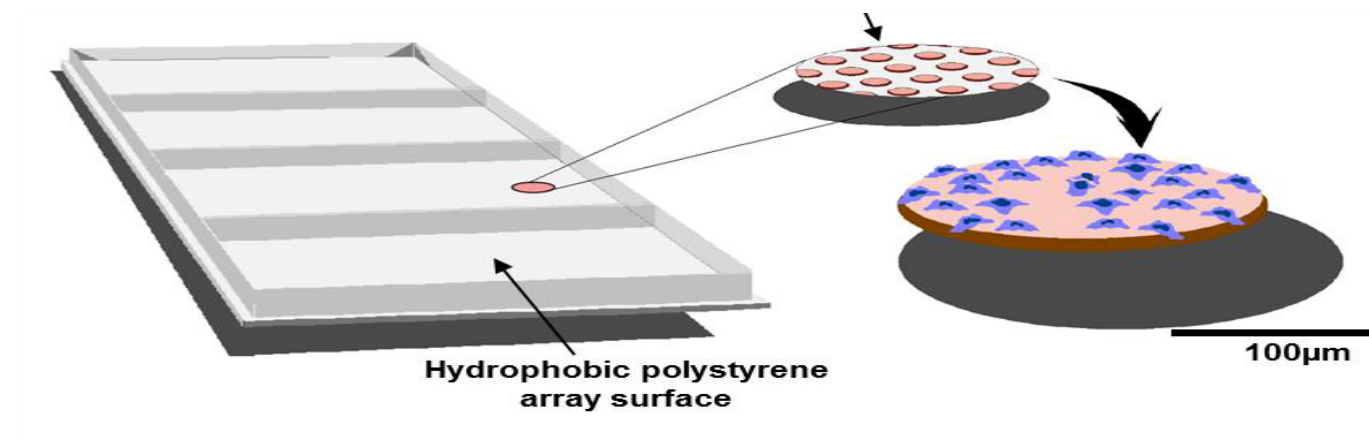


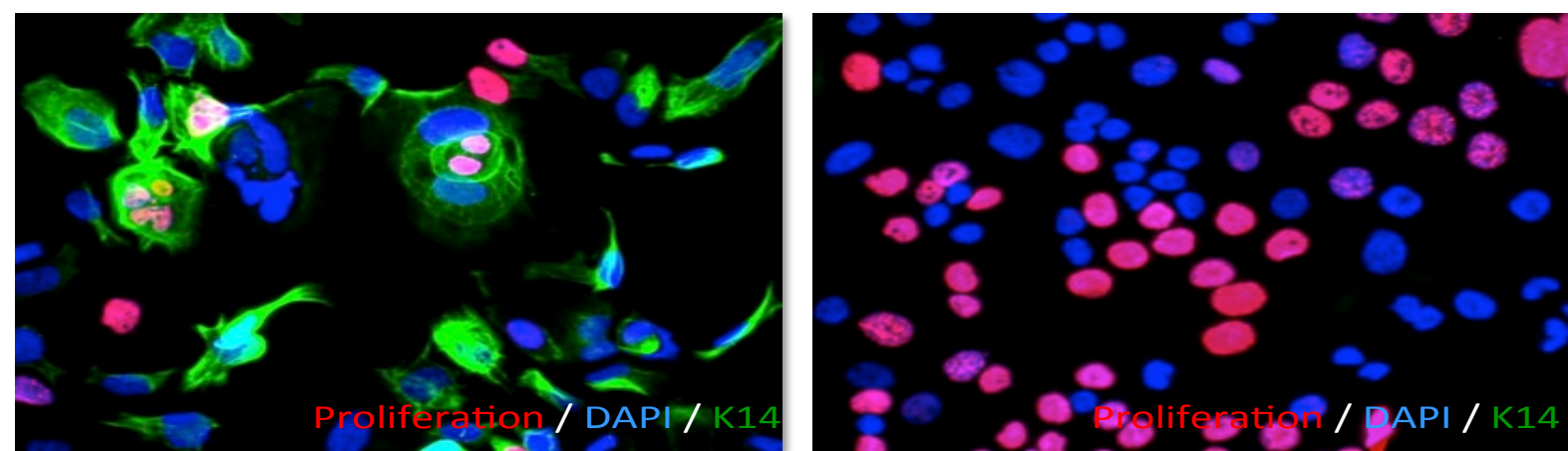
# Micro-Environment Perturbagen LINCS: studying micro-environment signals, regulatory networks, and cellular phenotypes

Each cell-spot assesses response to a specific microenvironmental perturbation

20 cell lines  
~3,000 perturbations

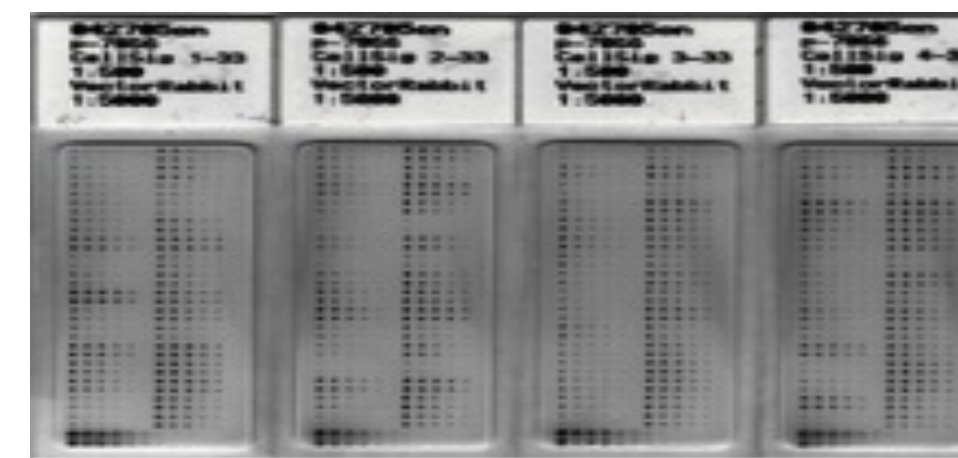


2 perturbagens per spot:  
| ECM + | GF

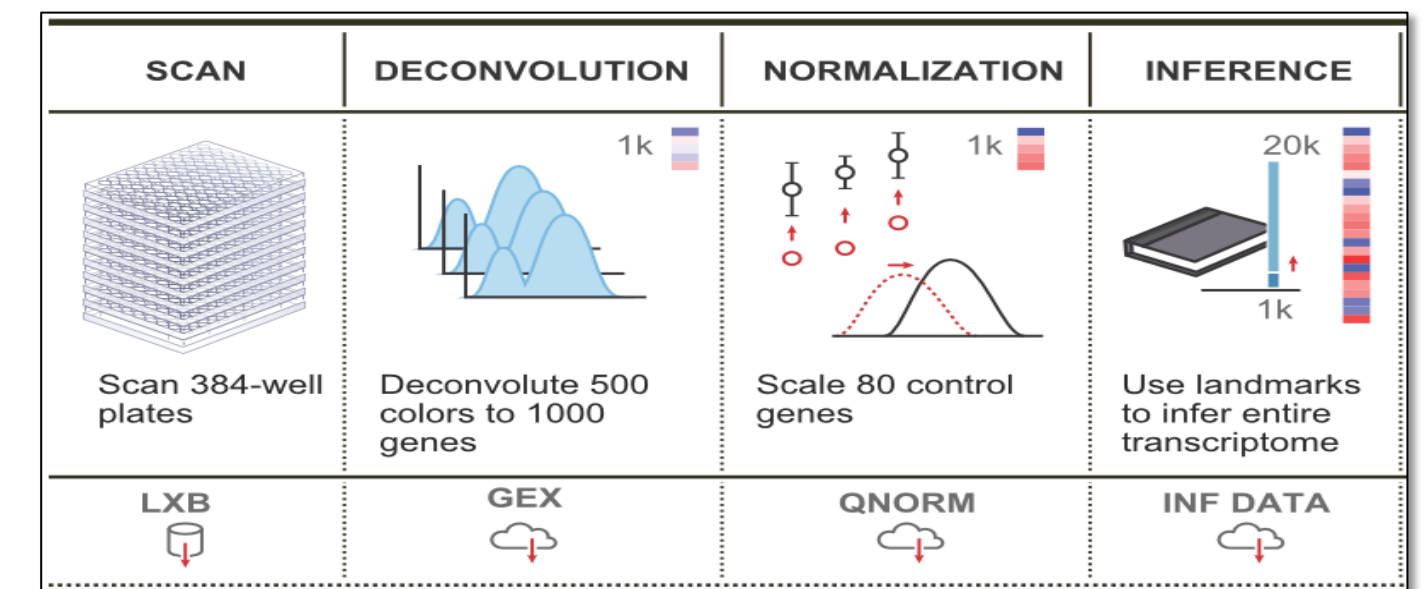


Immunofluorescent staining for **10+ biological endpoints**

Quantitative image analysis algorithms to identify morphology, cell cycle, staining intensity,...



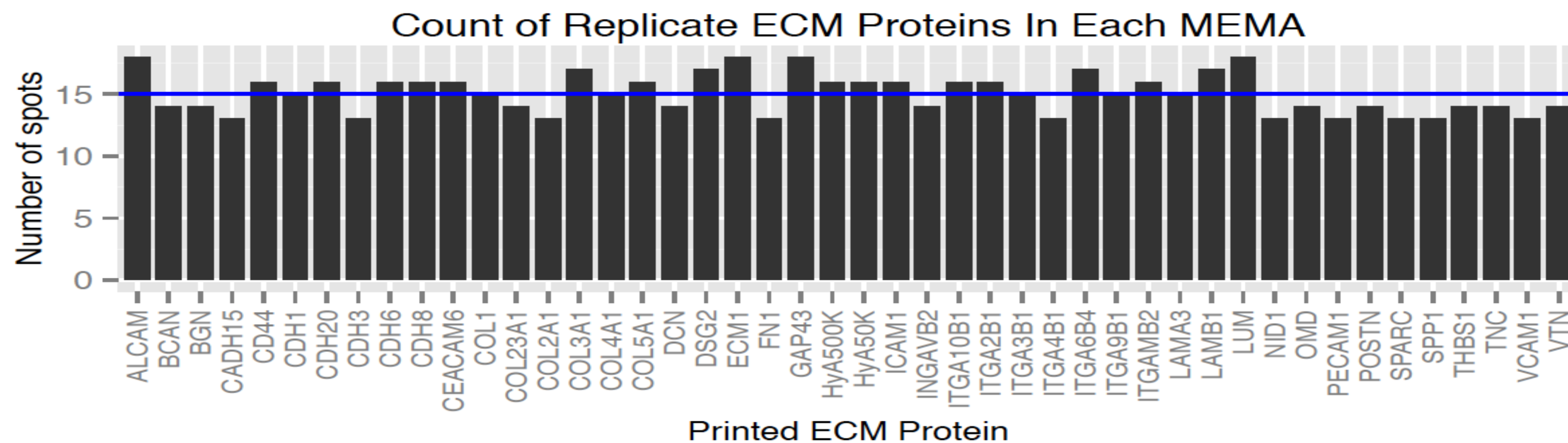
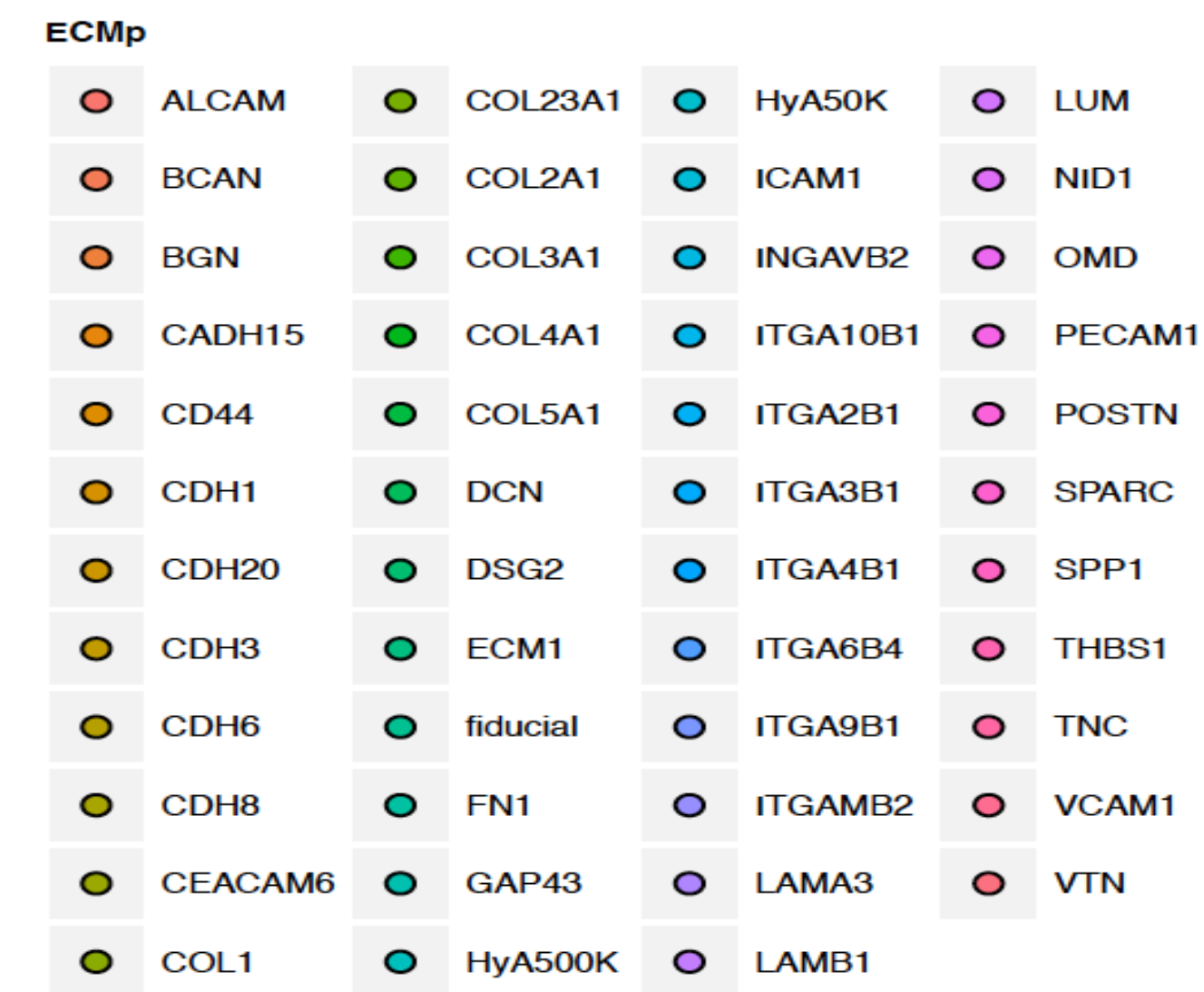
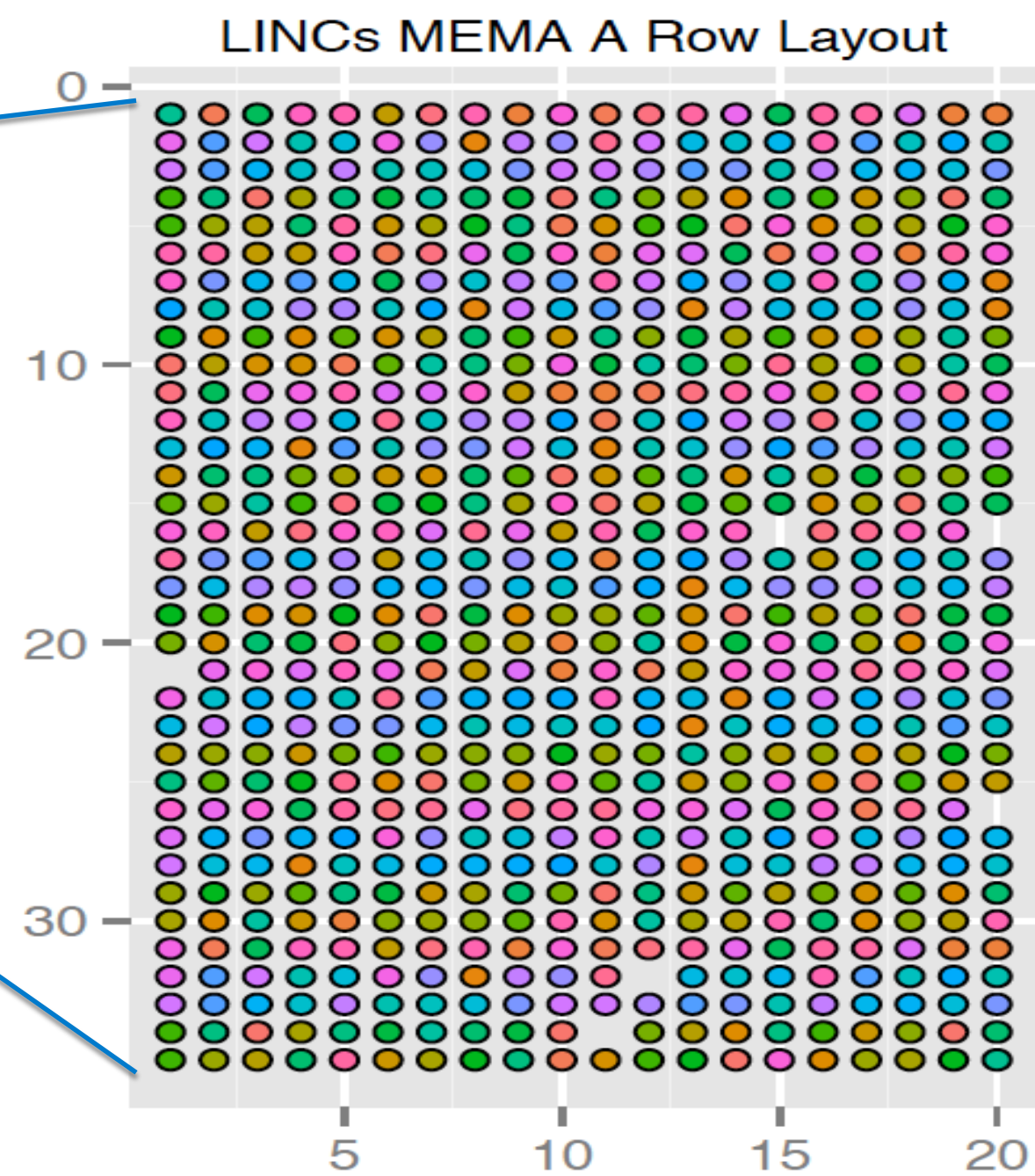
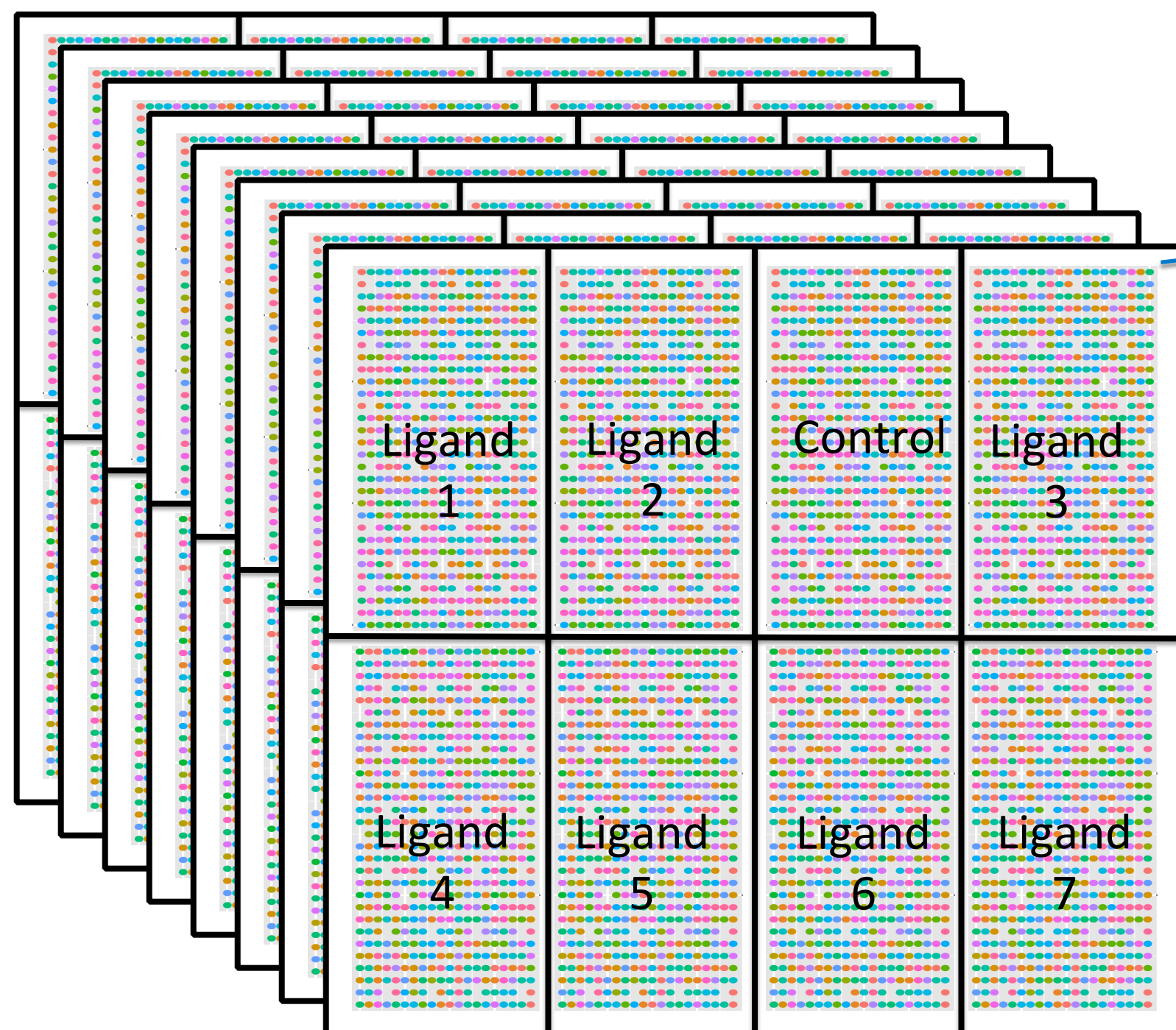
Reverse Phase Protein Lysate arrays to assess up to **500 proteins and phospho-proteins**

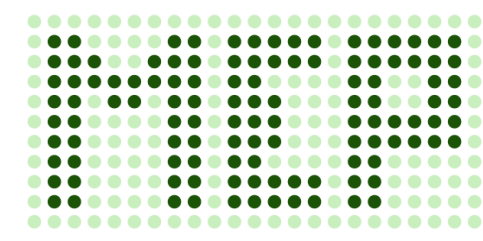


LI000 assay to assess **1000 landmark genes**

# MEMA Layout and Replicate Count

56 ligands added in solution, 46 ECMs printed  
2576 Microenvironment Perturbations (MEPS)

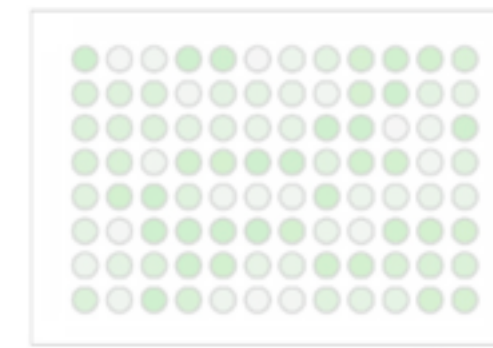
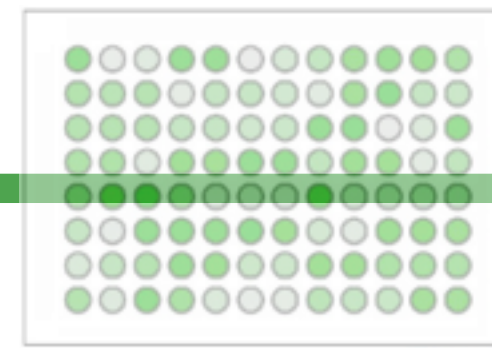
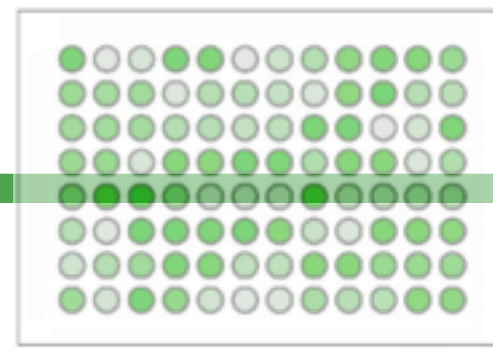
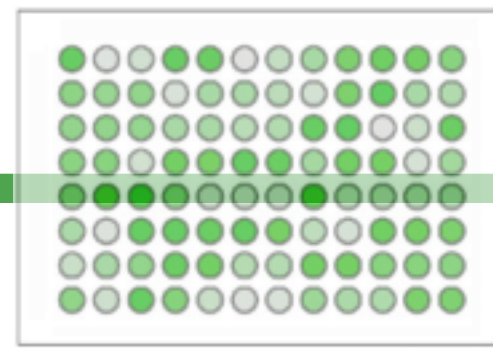
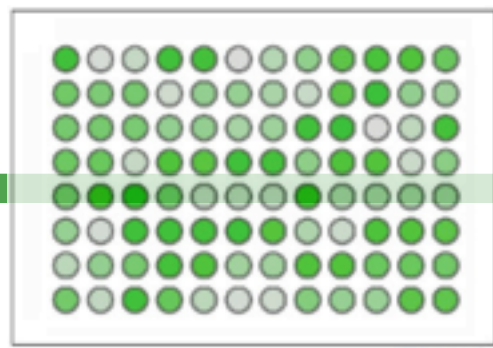
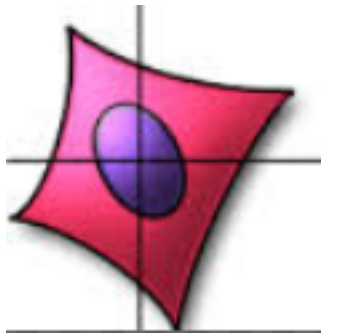
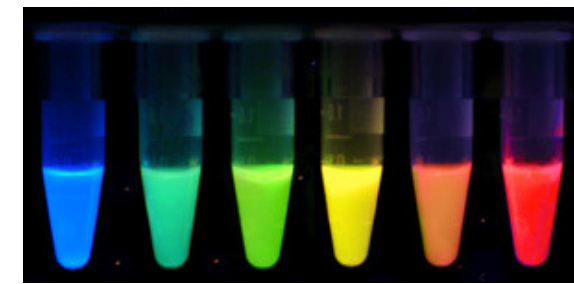
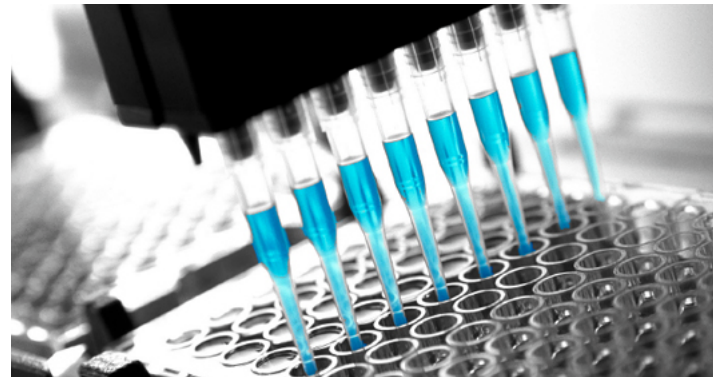
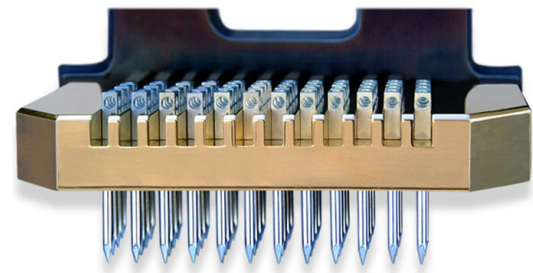




# LINCS Imaging Workflow



Lab Actions

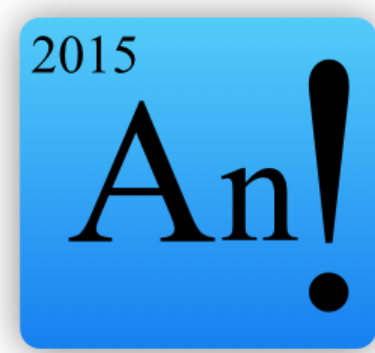


Control

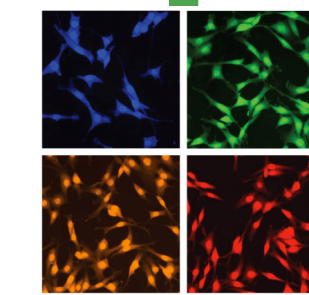


GUI & Programmatic interface layer (JSON, Python, C++, etc.)

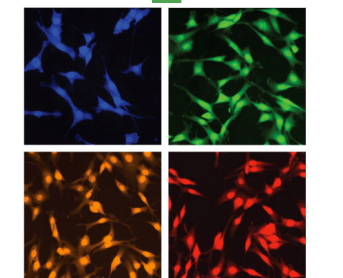
Databases



Annot: Experimental Metadata



Images



Features



Image & Features Database

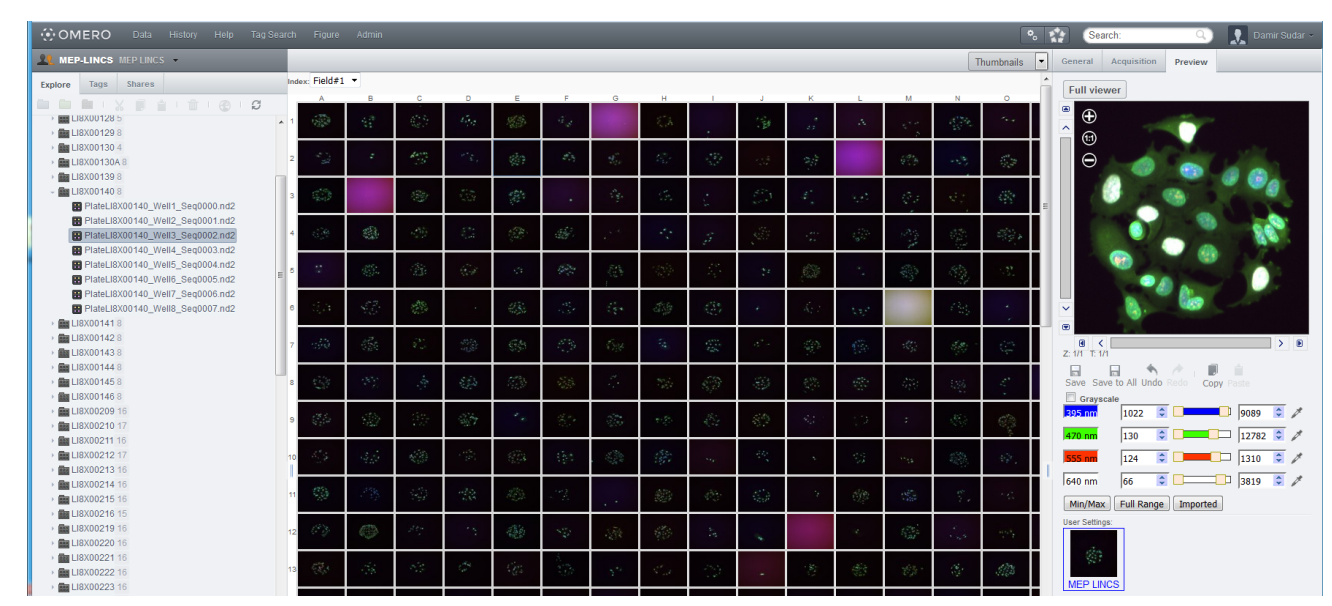
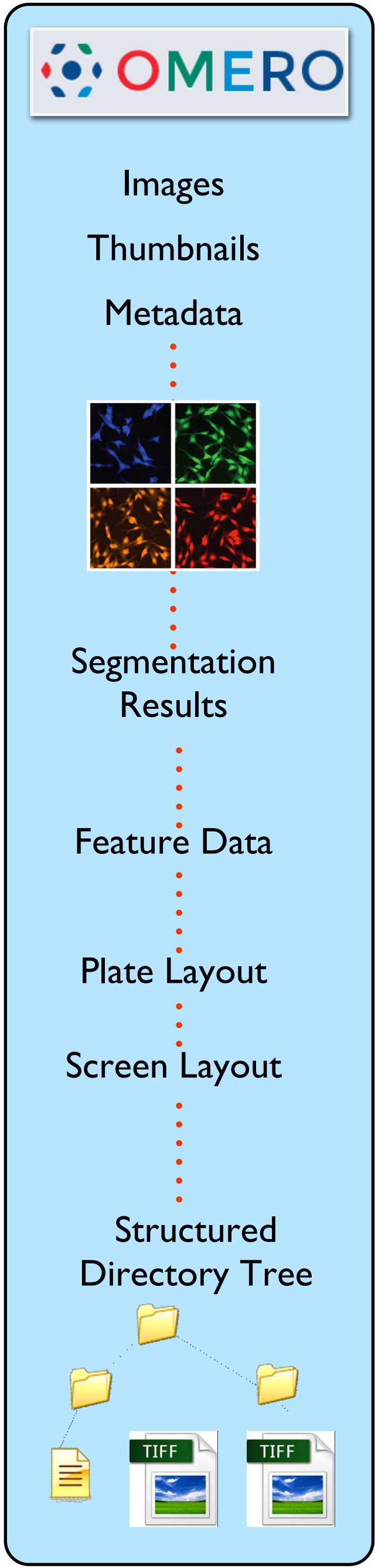
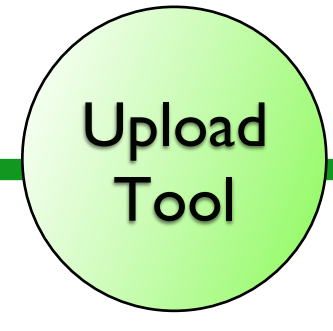
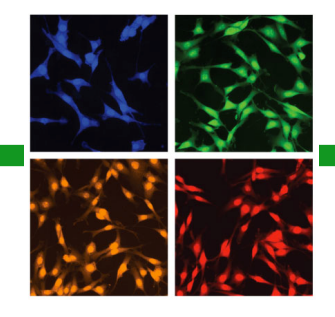
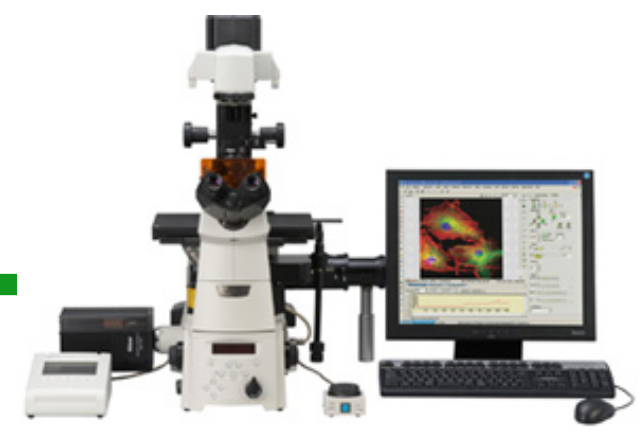
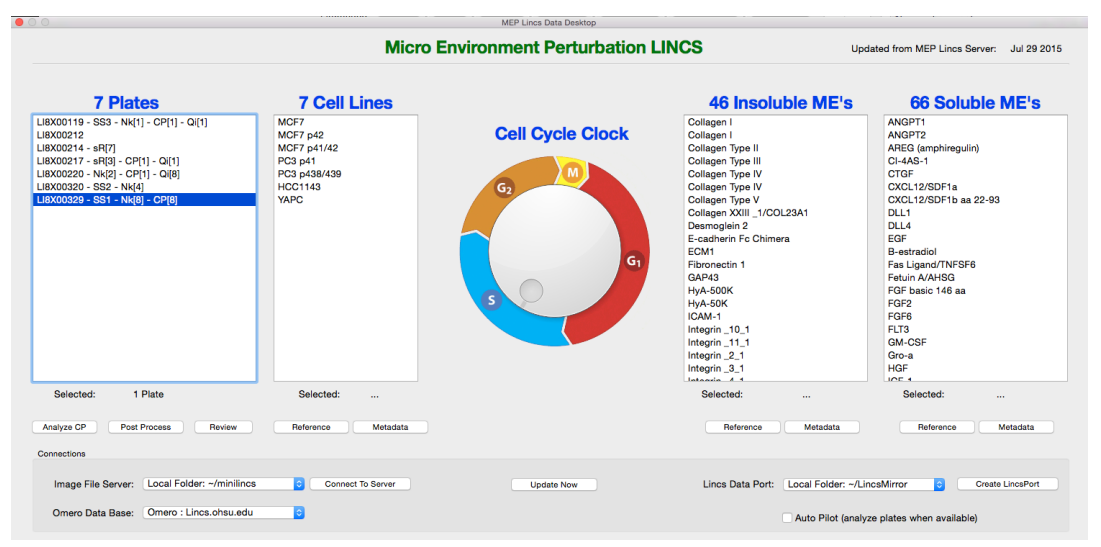


Image Browsers



MEP-LINCS Dashboard

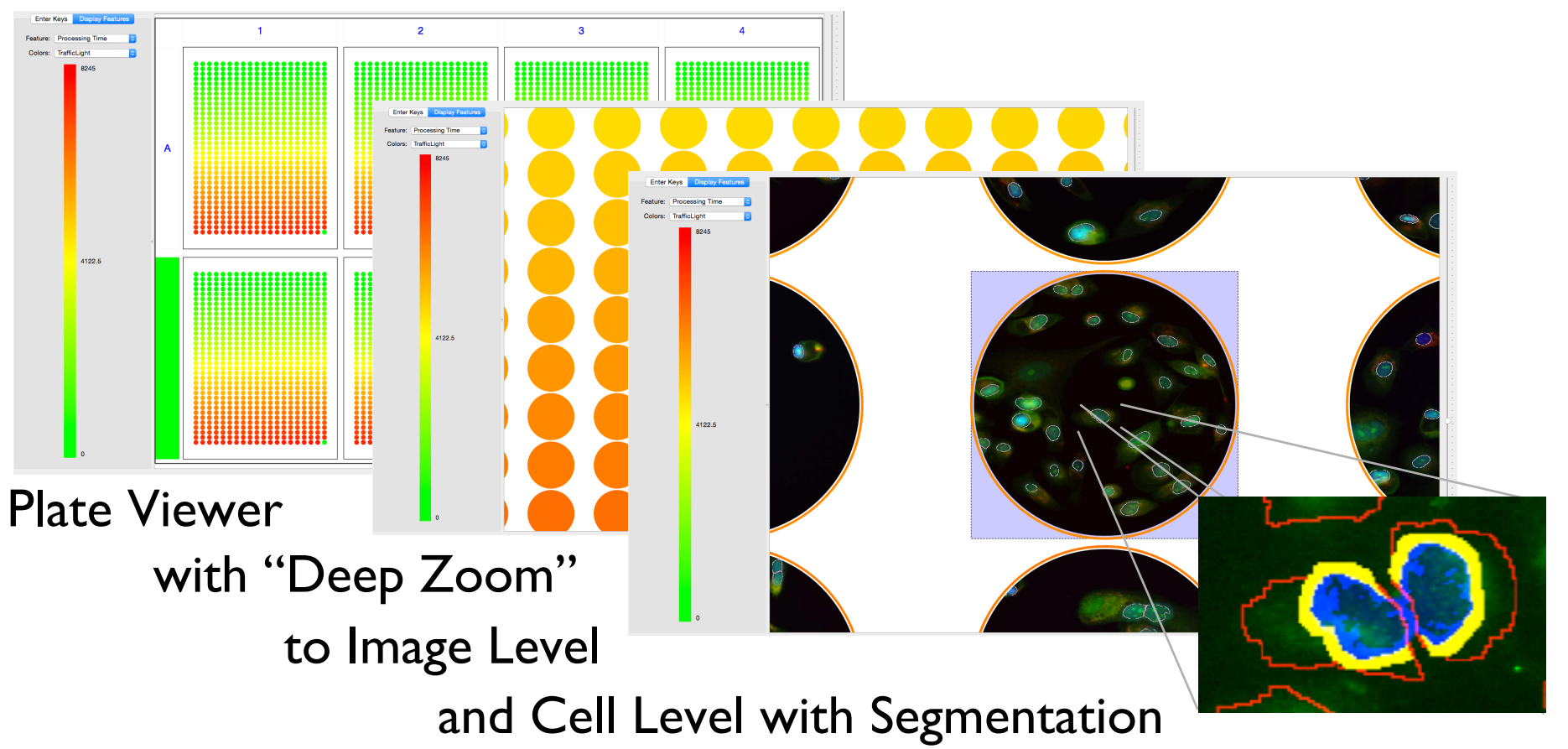
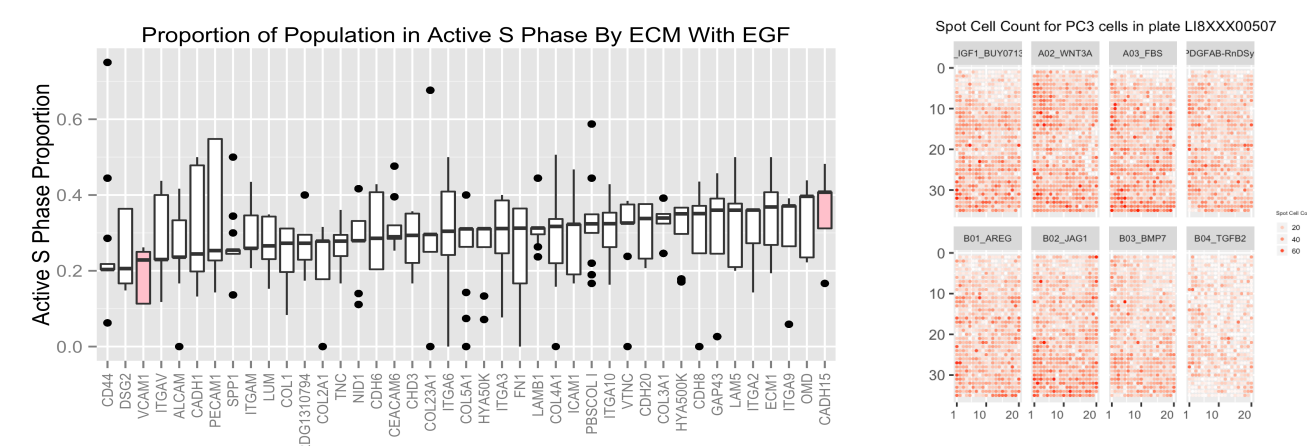
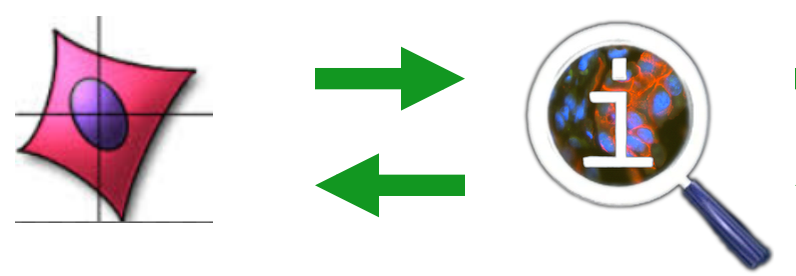
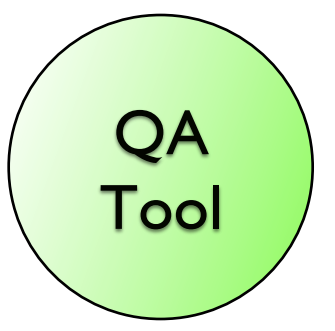


Plate Viewer with "Deep Zoom" to Image Level and Cell Level with Segmentation



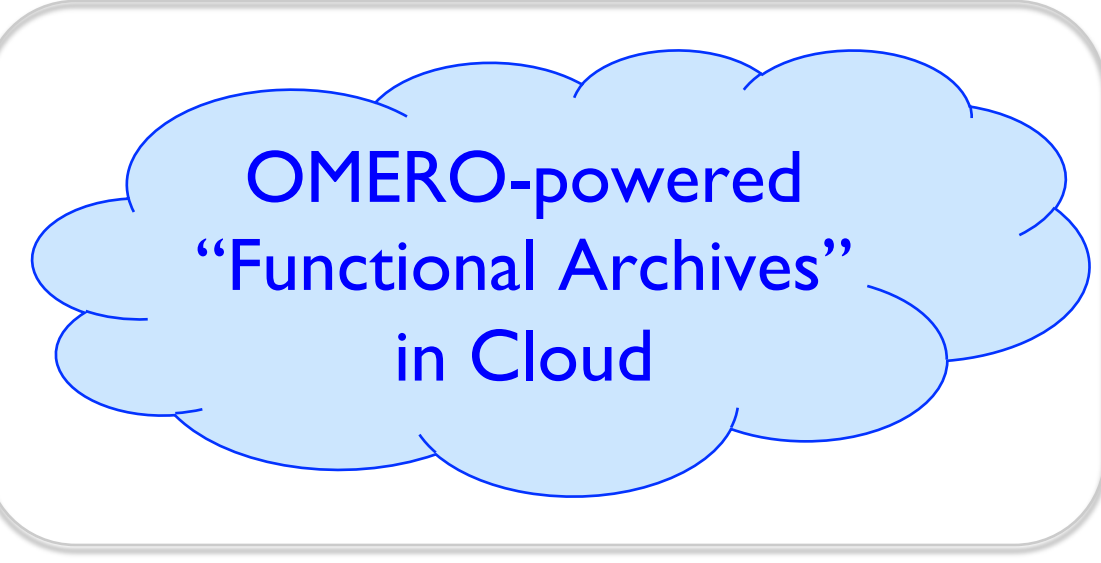
R/Shiny Analysis Tools



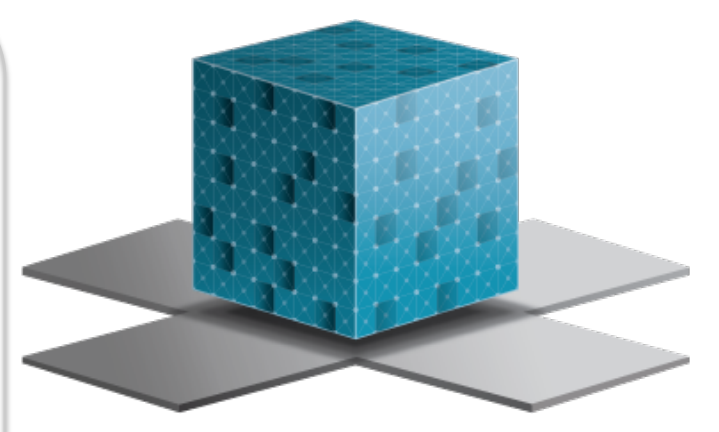
CellProfiler Manager



Cluster processing



OMERO-powered "Functional Archives" in Cloud



BD2K-LINCS DCIC



CONTRIBUTE to the CURE