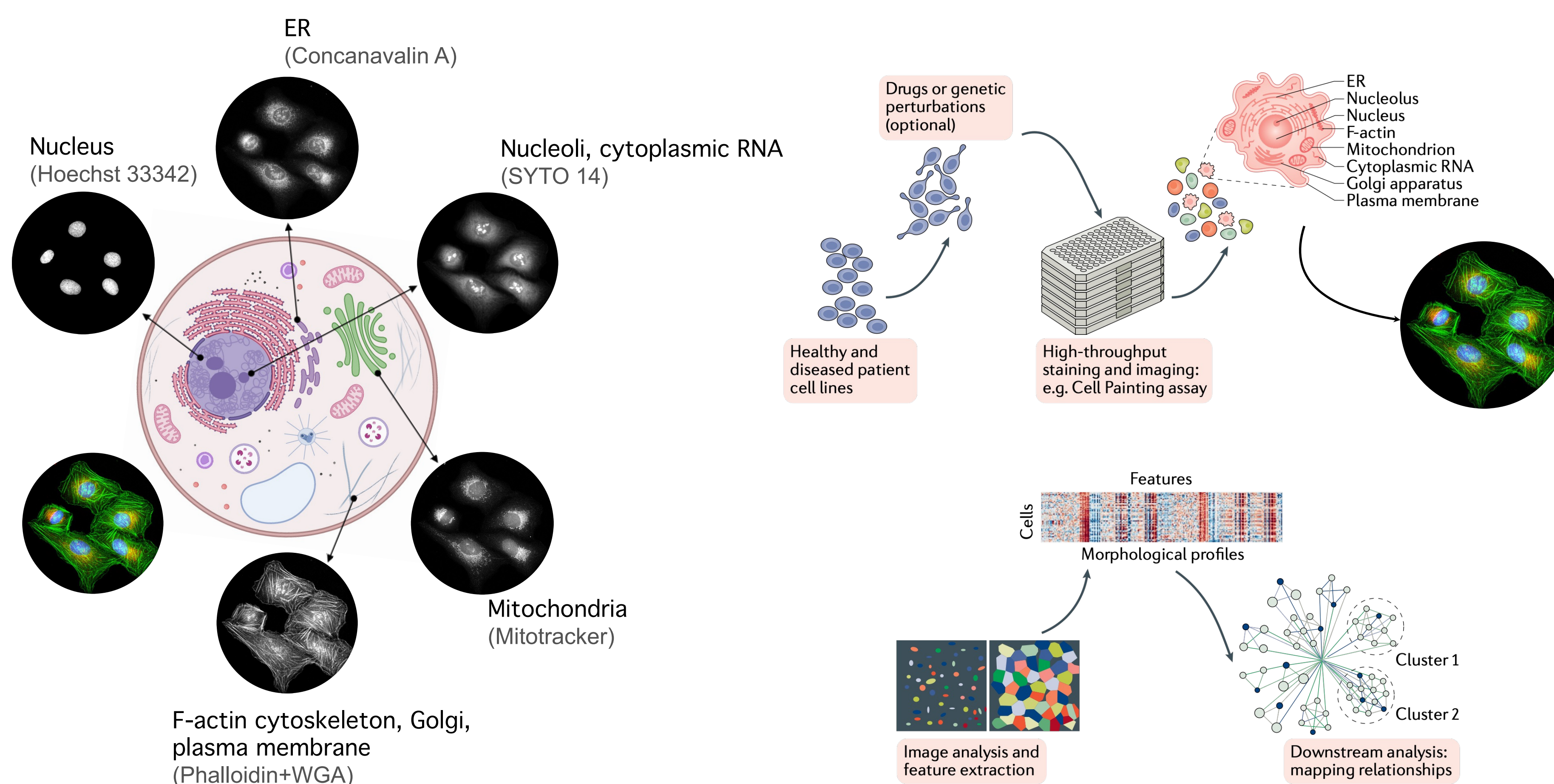


Improved understanding of drug mechanism-of-action by establishing a nation-wide service of morphological profiling



Untargeted morphological profiling

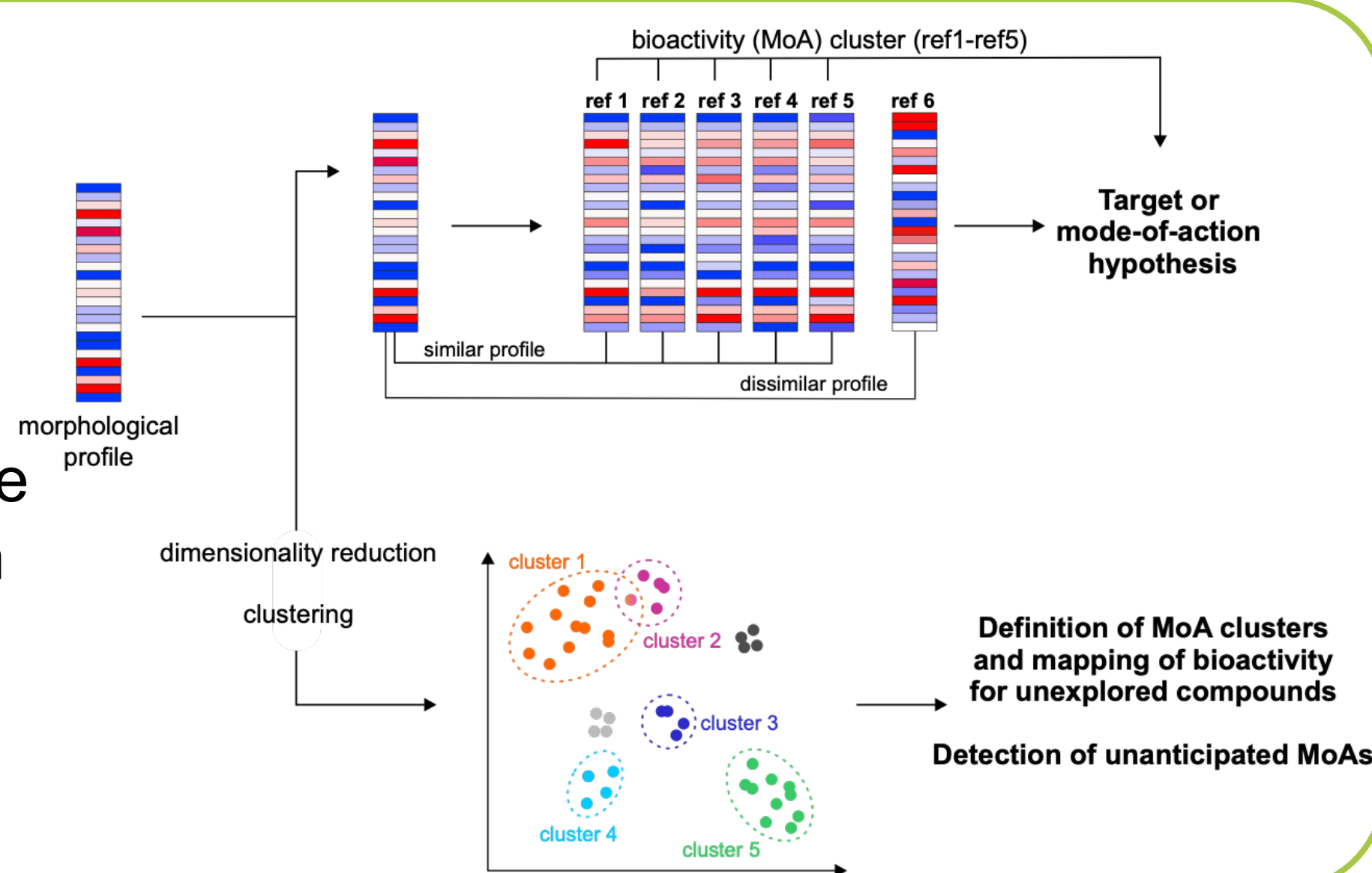


Cell Painting

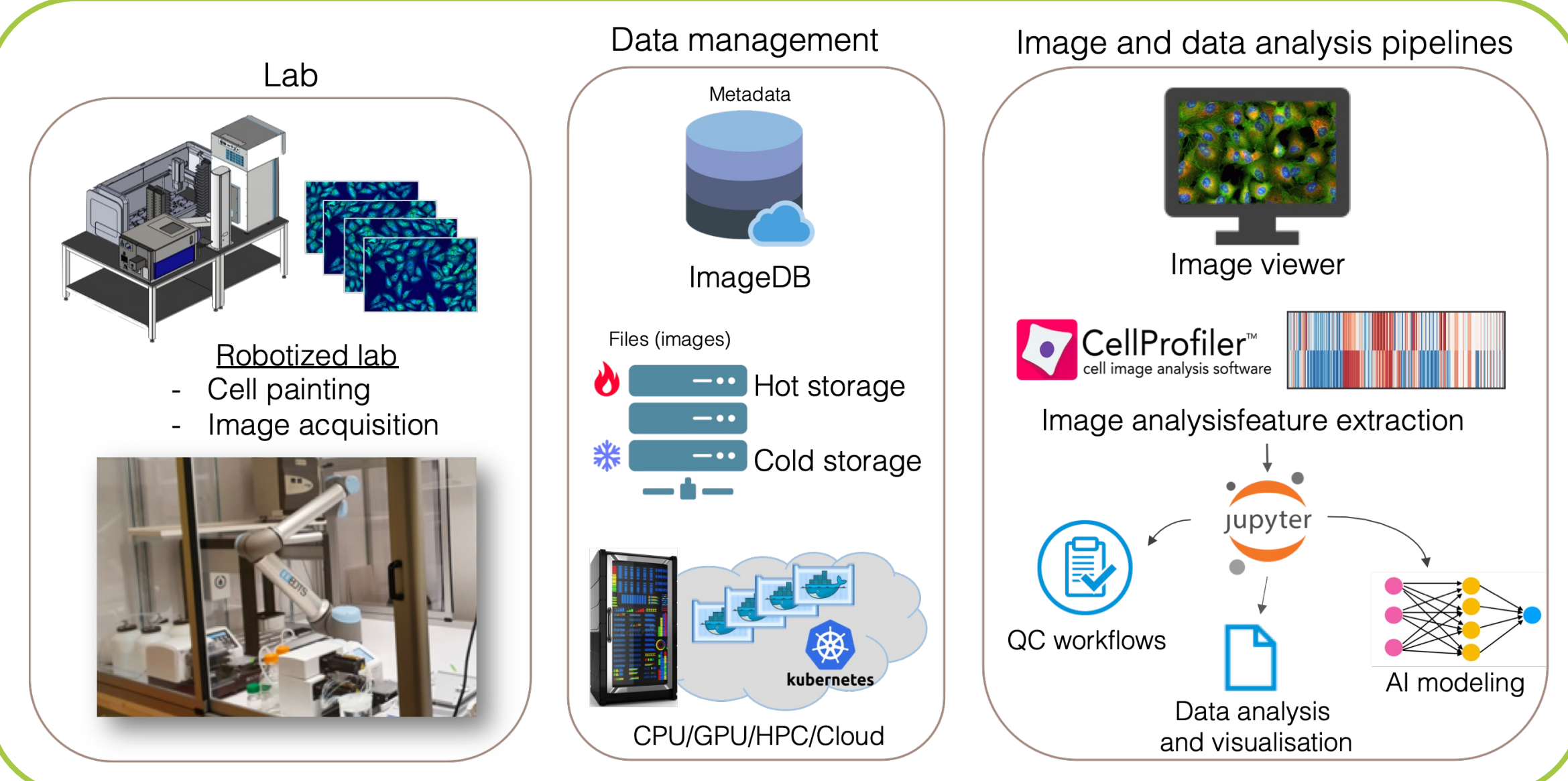
The technique includes a cocktail of fluorescent reagents to stain 8 different organelles (nucleus, nucleoli, cytoplasmic RNA, f-actin cytoskeleton, Golgi, ER, mitochondria and plasma membrane). High content imaging and image analysis are used to extract cellular features, which are then used for morphological profiling

MoA identification

By comparing morphological profiles of query compounds with those of a reference compound library, the mechanism of action (MoA) of the query compound can be estimated



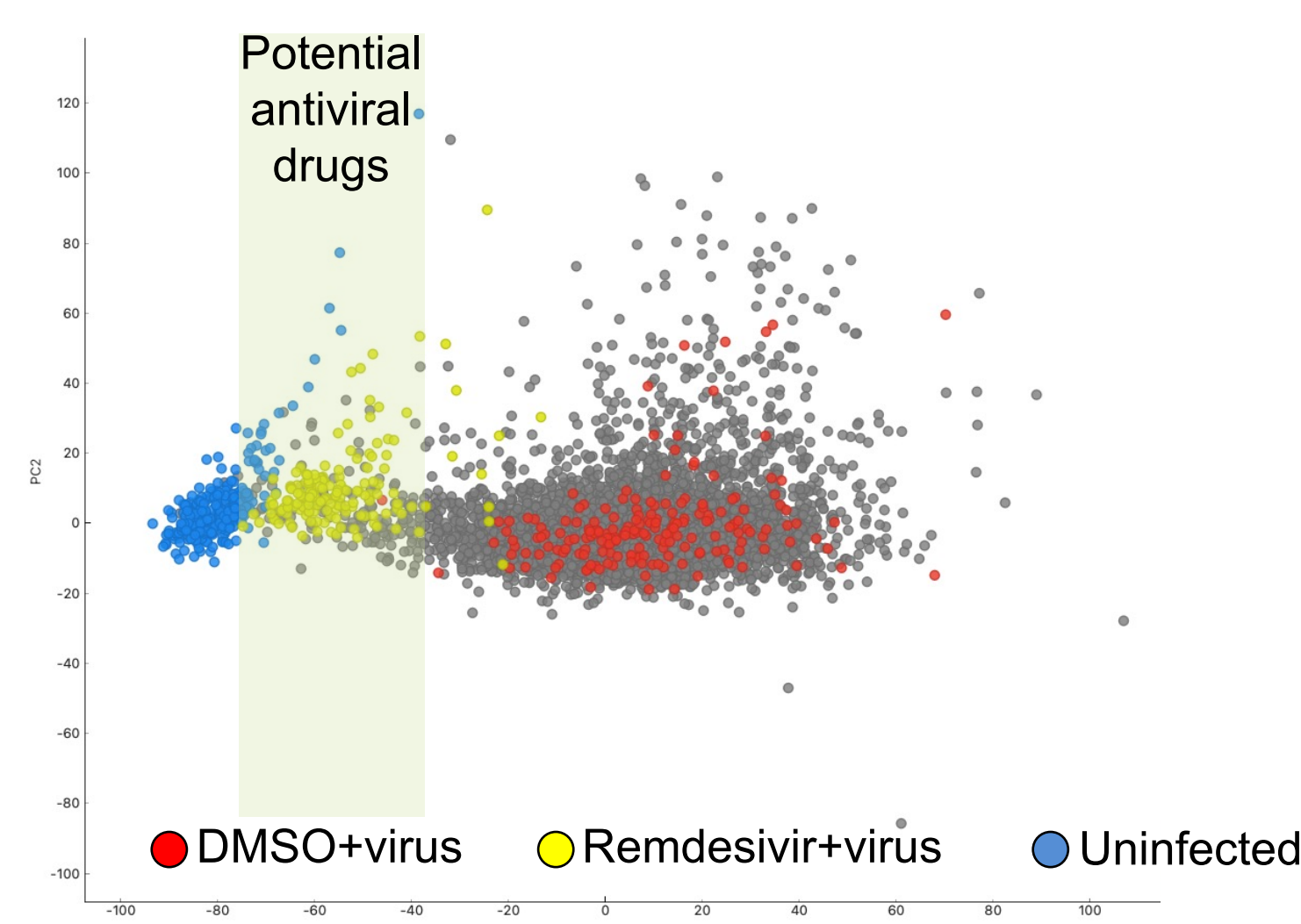
Infrastructure



Antiviral repurposing screen against SARS-CoV-2



5300 drugs
32x384 well plates
15.000 images/plate
500.000 images (4TB)
11.000.000 cells
15bn features



Future

- Cell painting on primary cell models
 - Ovarian cancer
 - Fibroblasts
- Generation of reference data sets (SPECS and JUMP)
- Develop a user-friendly web portal for data reporting

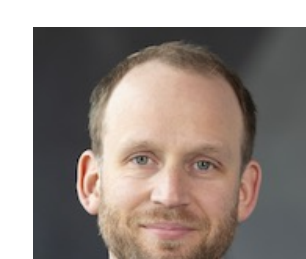
Team



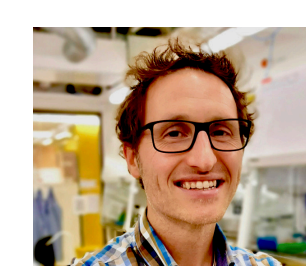
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