

Deploying OMERO at Harvard Medical School

HMS Image Management Core
HMS Research IT Solutions



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Image Management Core
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2010 LINCS-OMERO

OMERO used as back-end image server for HCS data in HMS LINCS Database

Not a general purpose OMEERO server

The screenshot displays the LINCS OMEERO web interface. The main content area shows a dataset titled "Phosphorylation state and protein levels measured in BRAF(V600E/D) melanoma cell lines monitored by imaging - Dataset (ID:20219)". The interface includes a table of molecules, a viewing options panel, a fluorescence microscopy image, and a table of timepoints.

Small Molecule	Cell Line	2nd Drug	Drug Concentration	Unit
JNK-IN-8	COLO 858		0.3200	uM
JNK-IN-8	COLO 858		0.1280	uM
JNK-IN-8	COLO 858		0.0512	uM
JNK-IN-8	COLO 858		0.0205	uM
JNK-IN-8	COLO 858		0.0082	uM
JNK-IN-8	COLO 858		0.0033	uM
JNK-IN-8	COLO 858		0.0000	uM
JNK-IN-8	COLO 858		5.0000	uM
JNK-IN-8	COLO 858		2.0000	uM
JNK-IN-8	COLO 858		0.8000	uM
JNK-IN-8	COLO 858		0.3200	uM
JNK-IN-8	COLO 858		0.1280	uM
JNK-IN-8	COLO 858		0.0512	uM
JNK-IN-8	COLO 858		0.0205	uM

Protein	Measured Protein Value	Replicate	Plate Name	Plate Well
47	686.67	1	Colo858-signal1	D5
204	691.16	1	Colo858-signal1	D6
204	673.40	1	Colo858-signal1	D7
204	657.25	1	Colo858-signal1	D8
204	648.15	1	Colo858-signal1	D9
204	615.32	2	Colo858-signal1	E10
204	601.12	2	Colo858-signal1	E11
204	789.95	2	Colo858-signal1	E2
204	724.41	2	Colo858-signal1	E3
204	719.29	2	Colo858-signal1	E4
204	673.10	2	Colo858-signal1	E5
204	675.31	2	Colo858-signal1	E6
204	661.59	2	Colo858-signal1	E7
204	644.13	2	Colo858-signal1	E8

Timepoints	Protein	Intensity	Protein	Intensity	Protein	Intensity
24 hr	p27 Kip1	429.89	p-Rb(S807/S811)	170.46	p-ERK(T202/Y204)	675.31
24 hr	p27 Kip1	429.12	p-Rb(S807/S811)	167.32	p-ERK(T202/Y204)	661.59
24 hr	p27 Kip1	437.19	p-Rb(S807/S811)	168.12	p-ERK(T202/Y204)	644.13



HMS OMERO

- 2015 Application and internal funding for two year pilot; establishment of Image Management Core (IMC); Douglas Russell hired; hardware purchased and building server begins
- 2016 Beta testing of HMS OMERO begins



Current Development Projects

- OMERO.forms (Douglas Russell)
- Horizontal Scaling Phase 1, Read-Only OMERO (Glencoe)
- OMERO.cloudarchive (Douglas Russell)
- CyclF collaboration/PathViewer 2 (Zoltan Maliga, Jerry Lin, Sorger Lab/HiTS, Glencoe)



Future Goals

- Full production service owned by HMS IT by 2018
- Making OMERO default storage location at HMS microscopy cores
- Solutions for data archiving, bulk export and removal
- Sustainability

