

# BDR SEMINAR in Kobe

"CDB SEMINAR" and "QBiC SEMINAR" have been renamed "BDR SEMINAR".

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**Tuesday, October 23, 2018 16:00-17:00**

7F Seminar Room, DB Building A, Kobe

## OME's Bio-Formats, OMERO, & IDR: Open Tools for Accessing, Integrating, Mining and Publishing Image Data @ Scale

### Summary

Despite significant advances in biological imaging and analysis, major informatics challenges remain unsolved: file formats are proprietary, storage and analysis facilities are lacking, as are standards for sharing image data and results. The Open Microscopy Environment (OME) is an open-source software framework developed to address these challenges. OME releases specifications and software for managing image datasets and integrating them with other scientific data. OME's Bio-Formats is a file translator that enables scientists to open and work with imaging data in the software application of their choice. OMERO is an image database application that provides data management and sharing capabilities to imaging scientists. Bio-Formats and OMERO are used in 1000's of labs worldwide to enable discovery with imaging.

Recently, we have used Bio-Formats and OMERO to build a system for publishing imaging data associated with peer-reviewed publications. This system, the Image Data Resource (IDR) includes image data linked to independent studies from genetic, RNAi, chemical, localisation and geographic high content screens, super-resolution microscopy, and digital pathology. Datasets range from several GBs to tens of TBs. We have also built cloud-based analysis tools portals to catalyse the re-use and re-analysis of published imaging data.

This talk will review our work on these open source image data solutions and present our vision for future image data resources.



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