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SEMINAR

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EMDB and EMPIAR: Public archiving of cryo-EM and bioimaging data



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The Electron Microscopy Data Bank (EMDB; emdb-empiar.org) is a public repository for 3D electron microscopy reconstructions of macromolecular complexes and subcellular structures. The use of electron microscopy in structural biology has increased dramatically due to recent advances such as the introduction of the direct electron detector. The growth in EMDB has mirrored the growth in the field and the EMDB represents an important and valuable resource for the structural community for a wide range of purposes such as data-mining, comparative analysis and as references in further structural work.

The Electron Microscopy Public Image Archive (EMPIAR; empiar.org) is a public resource for raw, 2D electron microscopy images. EMPIAR is now expanding to include other imaging modalities including serial block face scanning electron microscopy (SBF-SEM), focused ion beam SEM (FIB-SEM), soft X-ray tomography (SXT). In this talk I will introduce the resources available for these archives and discuss the challenges in making big imaging data usable and useful for data integration purposes and by a wider audience.

Artwork by Ann Nee, DBS, NUS