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Correlative hydrated cellular imaging using Coherent Diffraction Imaging at the Australian Synchrotron

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X-ray coherent diffractive imaging provides high resolution, high sensitivity images of intact cellular specimens without the need for sectioning, staining, or tagging. Recent advances in this field allow high resolution images to be obtained with a fraction of the dose than otherwise possible while increasing image quality. Further advances have pushed the technique into the X-ray water-window, opening up the possibility to image intact cellular specimens in their native hydrated environment.

Here we present recent results of hydrated cellular coherent diffractive imaging, showing an unprecedented level of image quality and detail. We also outline details of the sample preparation and mounting methods for correlative imaging, together with opportunities for future development.

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Summary

Primary author(s) : Dr JONES, Michael (Australian Synchrotron; ARC Centre of Excellence for Advanced Molecular Imaging)

Co-author(s) : Dr VAN RIESSEN, Grant (La Trobe University; ARC Centre of Excellence for Coherent X-ray Science); Dr ELGASS, Kirstin (Monash Institute for Medical Research, Monash Micro Imaging); Dr JUNKER, Mark (La Trobe University); Dr DE JONGE, Martin (Australian Synchrotron)

Presenter(s) : Dr JONES, Michael (Australian Synchrotron; ARC Centre of Excellence for Advanced Molecular Imaging)

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