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University of Western Australia opens cryo-EM facility to tackle critical research

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The cryo-electron microscopy suite is the first of its kind in Western Australia



A Nobel prize-winning technique that underpins worldwide efforts to understand and treat diseases, and develop new drugs and medical therapies, forms part of a new microscopy facility launched at The University of Western Australia.

Funded by the Federal Government through the National Collaborative Research Infrastructure Strategy and the WA State Government through the Department of Jobs, Tourism, Science and Innovation, the cryo-electron microscopy suite is the first of its kind in Western Australia.

It includes three new microscopes: two JEOL F200 Transmission Electron Microscopes and a JEOL IT800 Scanning Electron Microscope, plus state-of-the-art sample preparation facilities (Leica Microsystems).

As the gold standard approach in structural biology, cryo-transmission electron microscopy (CryoTEM) allows scientists to see the intricate structures of proteins, viruses and other biomolecules at sub-nanometre resolution, providing greater understanding of the behaviours of these important biological structures and inspiring novel treatments to illness and disease.

The new cryo-scanning electron microscope (CryoSEM) enables surface imaging and element analysis of frozen samples across the physical and bio- sciences. It will support key WA research efforts in agriculture, biotechnology, and advanced materials.