The Monash Ramaciotti Centre is a leading facility for life sciences electron microscopy. It houses Australia’s first Titan Krios microscope, currently the most advanced microscope for biological EM. The Titan is equipped with two direct electron detectors: a Falcon II and a K2 Summit with an energy filter. The facility’s expert team supports and collaborates on a large number of bio EM techniques ranging from standard SEM and TEM to immuno EM, correlative light and electron microscopy, cryo tomography and single particle analysis.
Transmission Electron Microscopes (TEM)
The facility houses three TEMs including a FEI TITAN Krios TEM, Australia’s most powerful biological TEM. The TITAN is a dedicated 300keV Cryo TEM designed for automatic data collection. It has a robotic autoloader capable of holding 12 EM grids under liquid nitrogen condition and is equipped with a Falcon II direct electron detector and from April 2016 with an energy filter with a second direct electron detector K2 summit. Software packages EPU for single particle and Tomo 4 for tomography are available for data collection. The platform also houses a Tecnai G2 Spirit also used for cryo applications and a Hitachi H-7500 used for stained samples.

Scanning Electron Microscope (SEM)
The platform houses a FEI NanoNano SEM capable of imaging life science structures in the nanometer range. The SEM runs the MAPS software for scanning large areas and to correlate images with optical microscopy. A cryo Focused Ion Beam SEM will be installed in 2016.

Sample Preparation Suite
The facility has dedicated equipment to prepare proteins, viruses, bacteria, cells, tissues and small organisms for life sciences EM. The facility houses dedicated cryo preservation and sample preparation equipment.

Mission statement: To provide expertise, training and state of the art instrumentation for life sciences electron microscopy.

Contact
Platform Head Bio EM
Dr Georg Ramm
Georg managed the establishment of the Ramaciotti Centre and is a group leader in the Department of Biochemistry. His research focuses on developing and applying advanced imaging techniques such as correlative light and electron microscopy to study cellular organelle traffic. He holds a PhD degree from Utrecht University in the Netherlands and did his honours degree at a Max Planck Research Group in Germany. Prior to being recruited to Monash University in 2009 he worked at the Garvan Institute in Sydney and the Institute of Molecular Bioscience in Brisbane.
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