

of Electron and Light Microscopy at ER-C-3

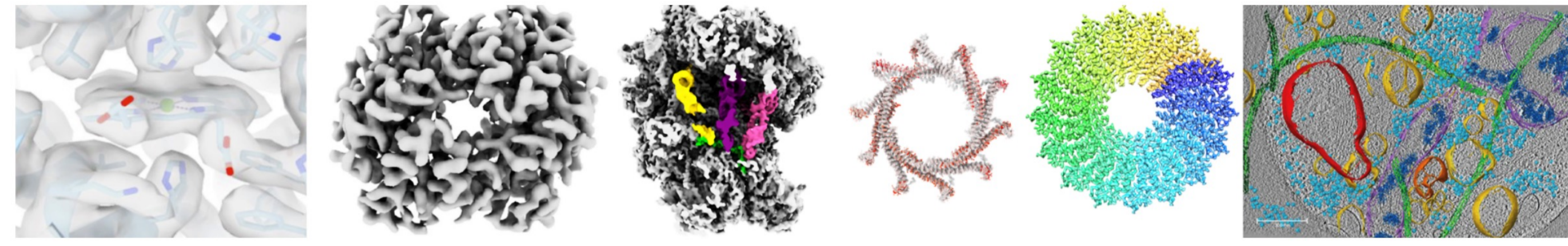
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ER-C-3 Cryo-EM Facility

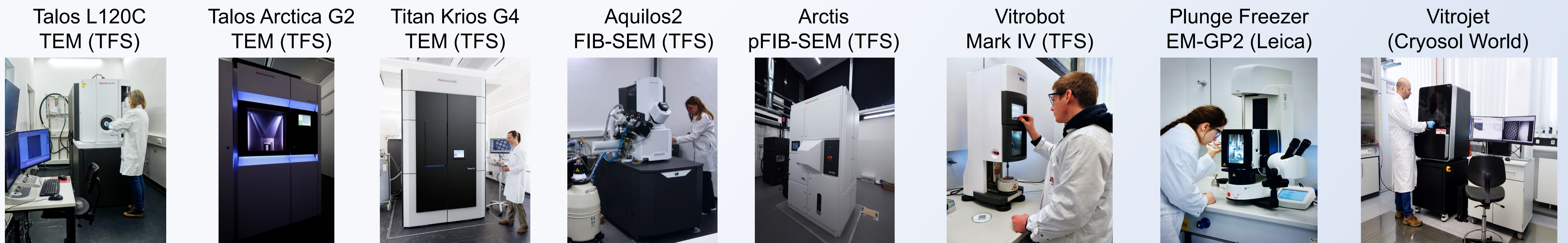
Applications

- SPA
- CET
- CLEM
- Cryo-STEM

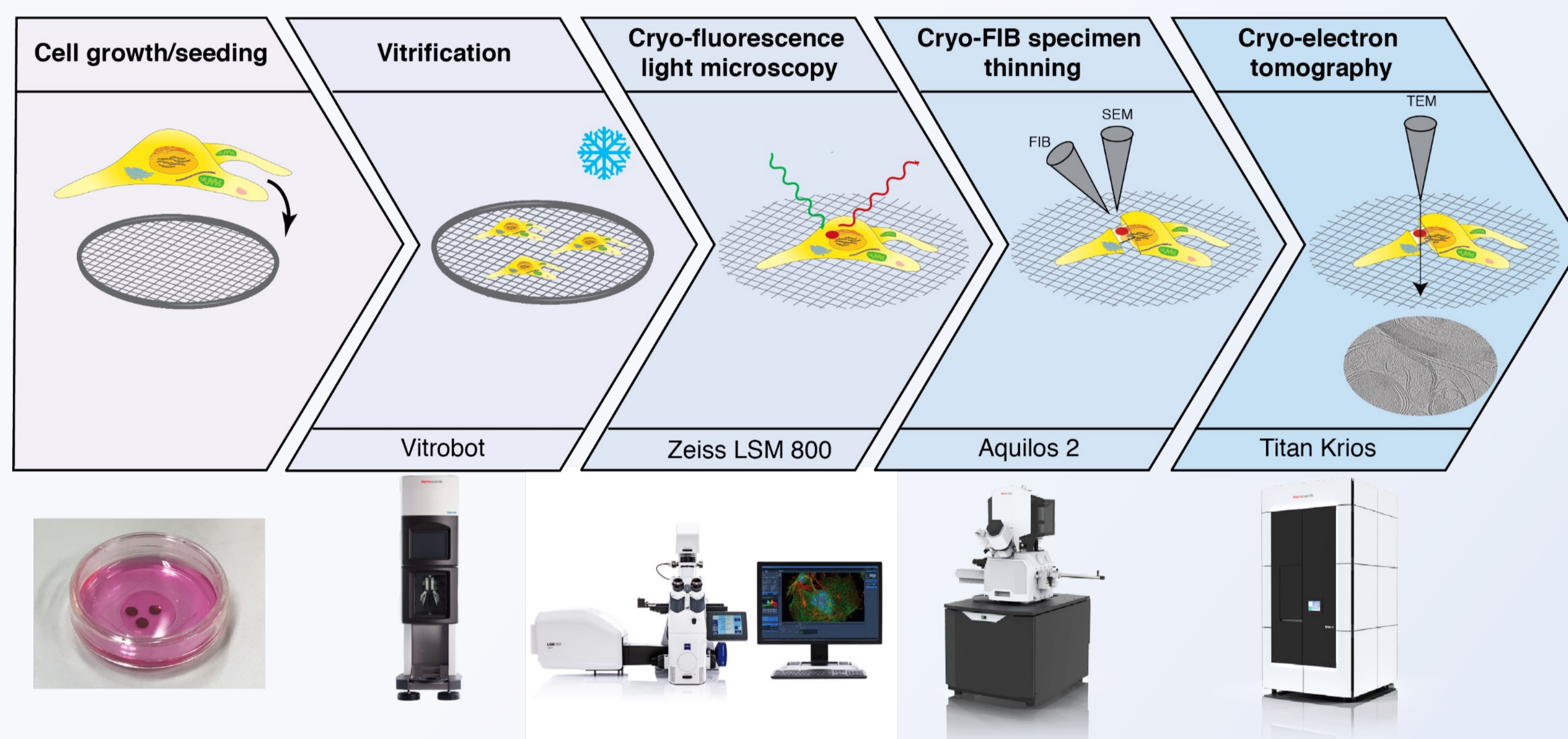


<https://er-c.org/cryoem@fz-juelich.de>

Facility Equipments

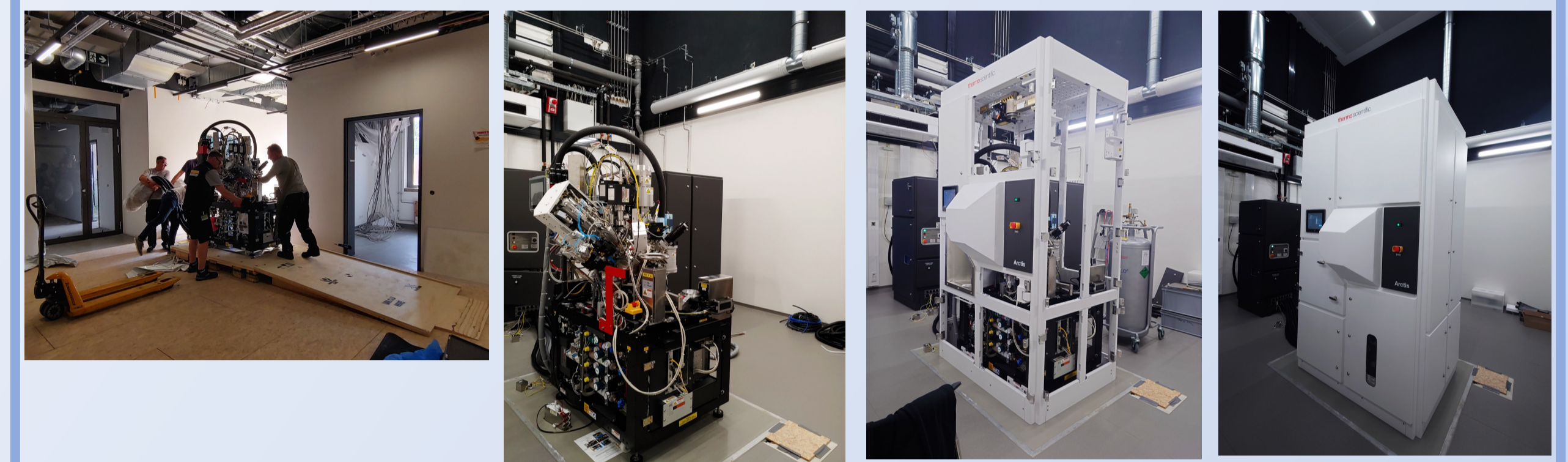


Cryo Correlative Light and Electron Microscopy Workflow



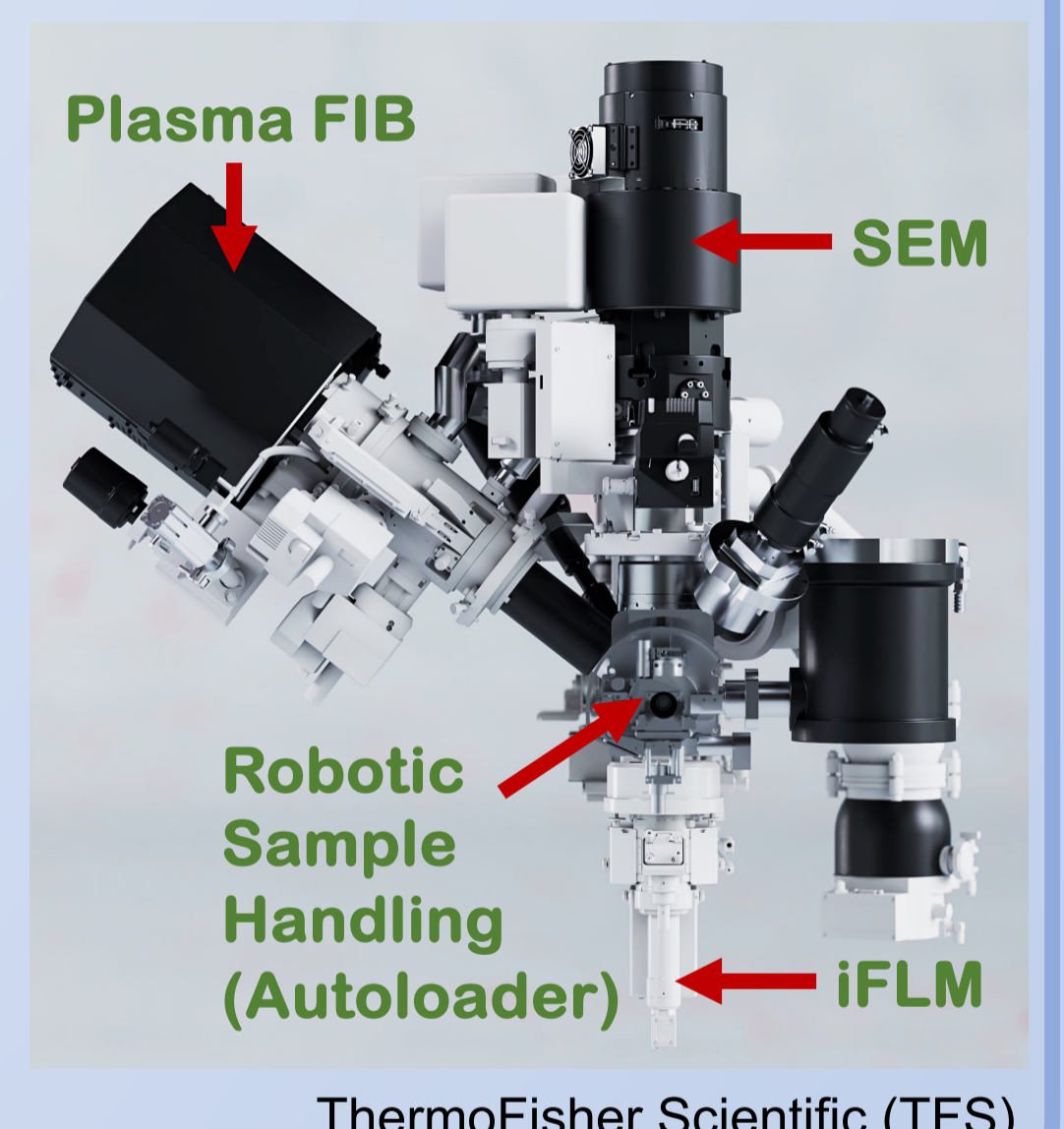
Arctis Cryo-Plasma FIB SEM (Latest Addition to ER-C-3 Facility)

Microscope Installation



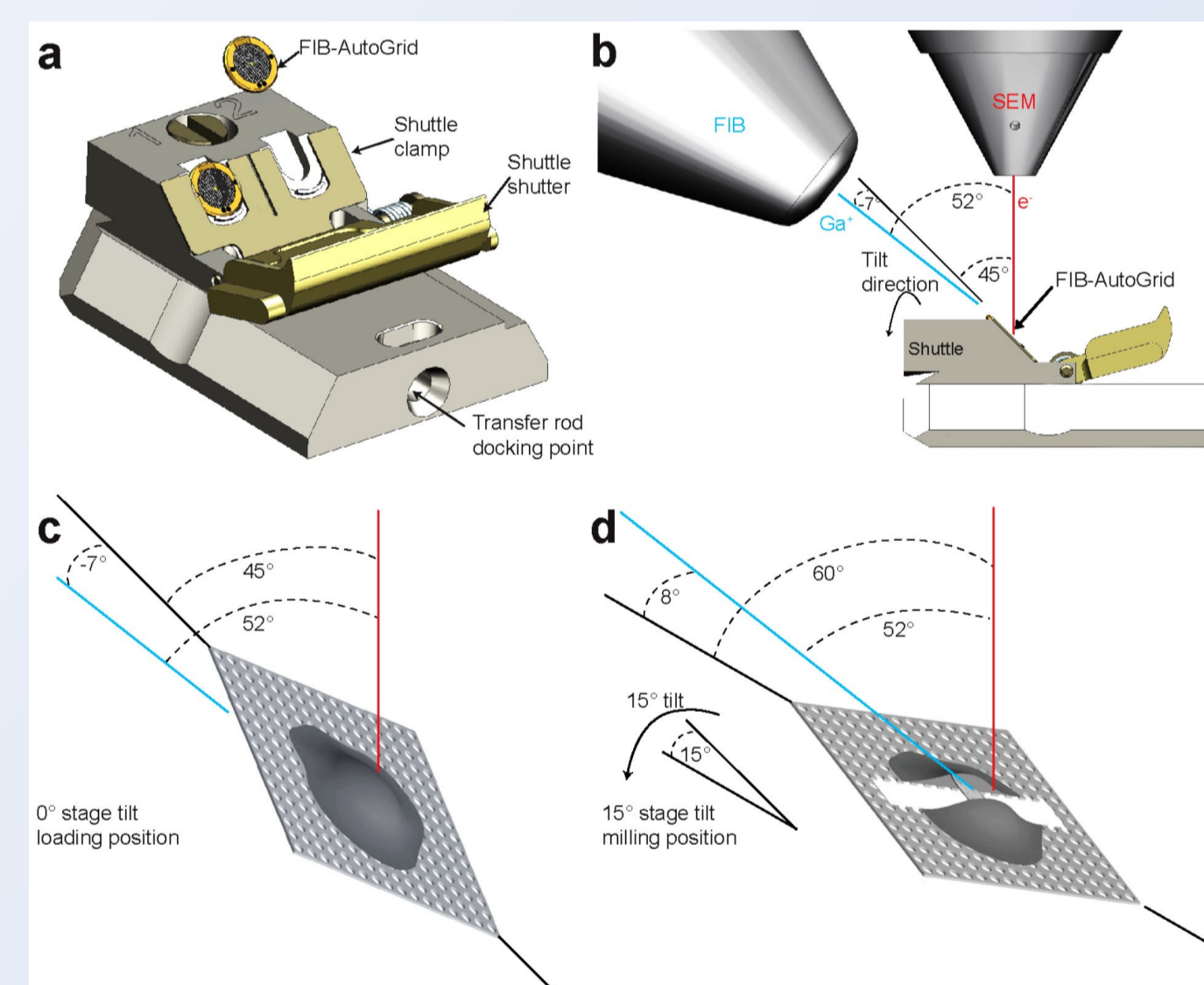
Microscope Features

- 30kV Plasma FIB SEM – thinning of cryo-fixed cells
- FEG electron & Plasma ion source (Xenon, Argon and Oxygen gases)
- Automated batch cryo-lamella milling with improved targeted workflow
- Integrated iFLM fluorescence module (iFLM); 100X objective
- Autoloader and Nanocup compatibility (High-throughput sample screening)
- Softwares: Integrated WebUI, MAPS, AutoTEM cryo
- Resolution : 7 nm (electron optics)



ThermoFisher Scientific (TFS)

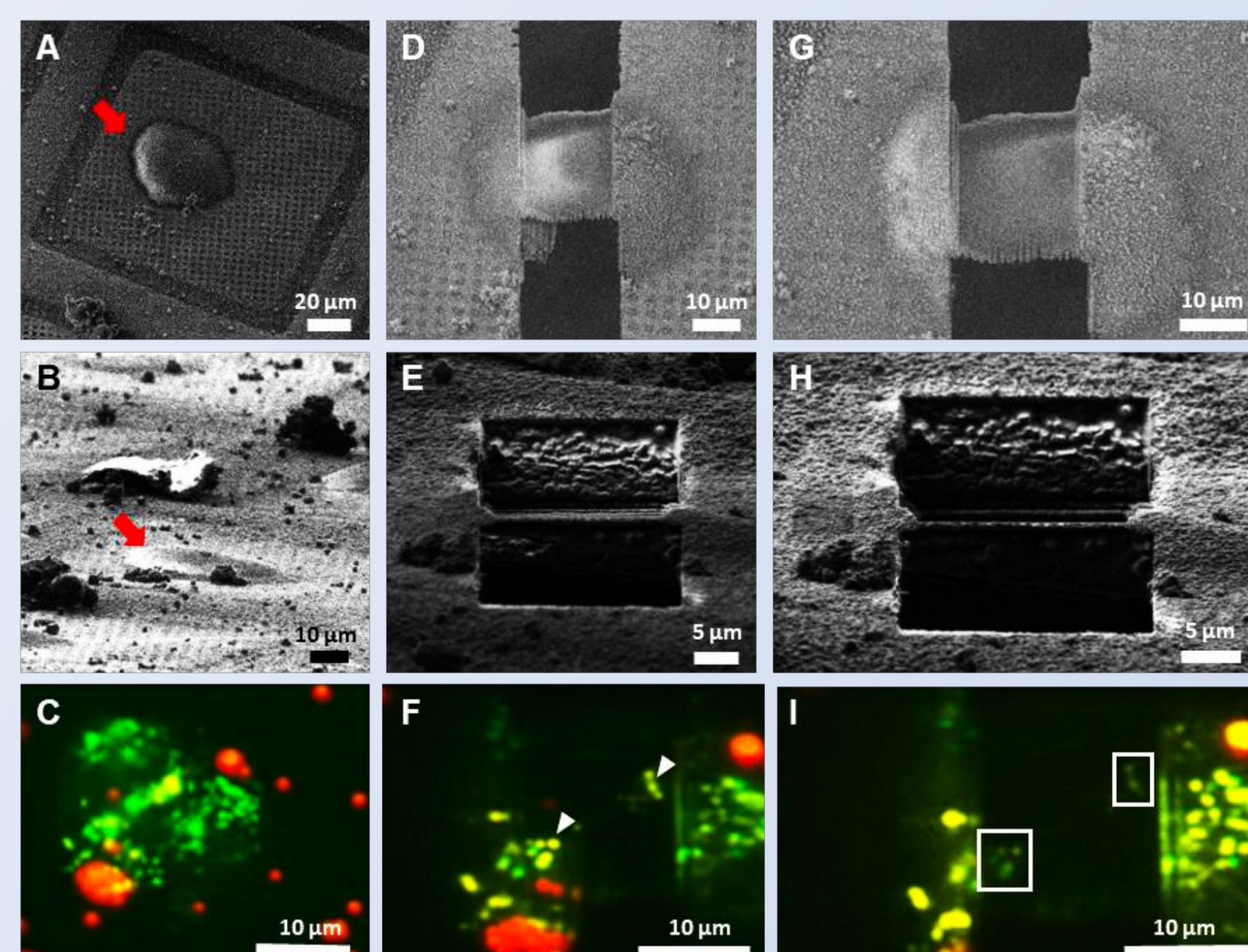
Aquilos2 Cryo-FIB SEM (TFS)



Wagner, F. R., *et al.* (2020). Nat Protoc 15(6): 2041–2070. DOI:10.1038/s41596-020-0320-x.

Microscope Features

- 30kV FIB SEM – thinning of cryo-fixed cells
- FEG electron & Gallium ion source
- Automated batch cryo-lamella milling (AutoTEM, TFS)
- Integrated METEOR fluorescence module (Delmic); 50X objective
- Ceres ice shield (Delmic)
- EasyLift™ Cryo
- Slice and view
- Softwares: AutoSlice & View, MAPS, AutoTEM cryo, Odemis
- Resolution : 7 nm (electron optics)

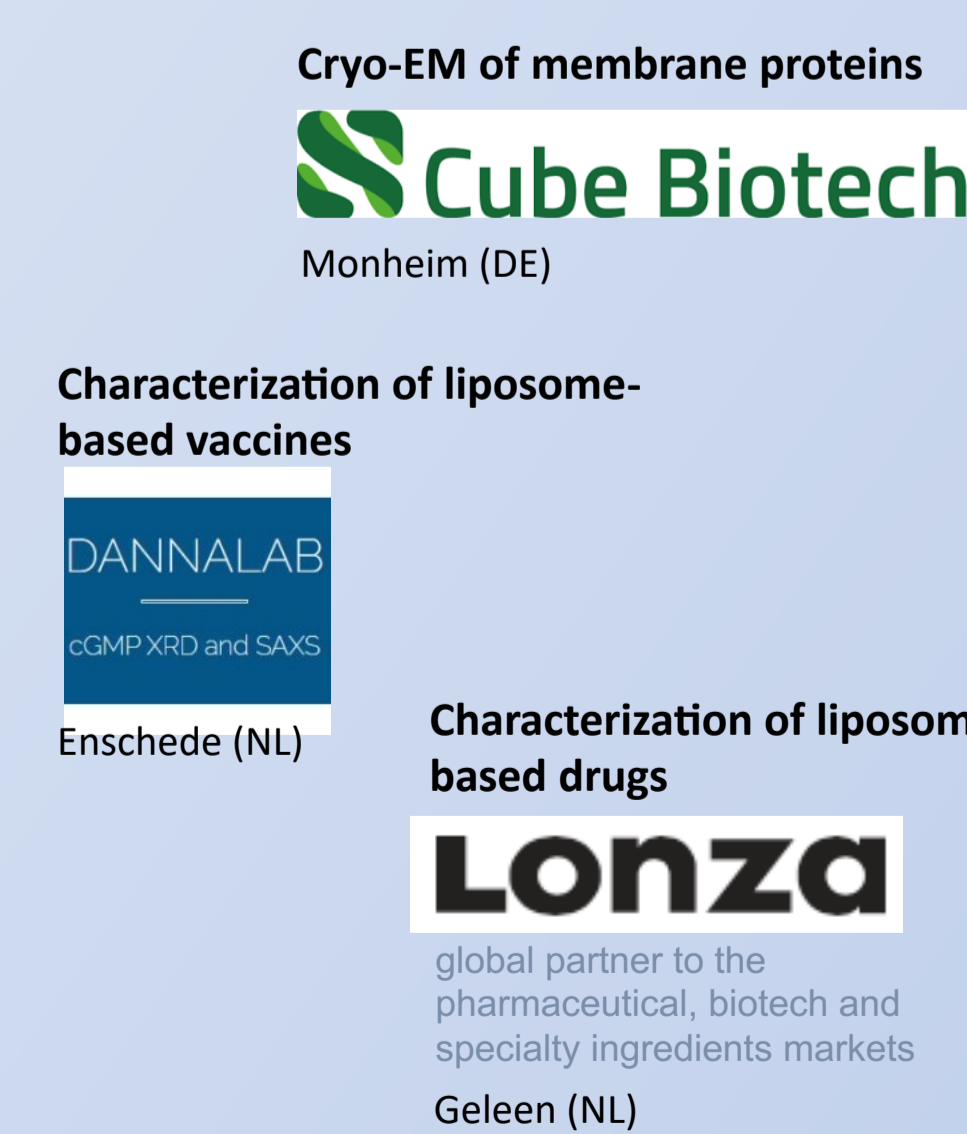


Targeted in situ lamella milling on human RPE-1 cells using Aquilos2 cryo-FIB SEM with integrated METEOR fluorescence microscope

Berkamp, S., Sundermeyer, P., Sachse, C., *et al.* (2023). Correlative Light and Electron Cryo-Microscopy Workflow Combining Micropatterning, Ice Shield and an In-chamber Fluorescence Light Microscope. Bio-protocol 13(24): e4901. DOI: 10.21769/BioProtoc.4901.

ER-C-3 Facility External Projects

Industrial Users



Academic Users

