

eBIC for Industry

Flexible cryo-EM services to suit all levels



The electron Bio-Imaging Centre (eBIC) at Diamond Light Source offers bespoke services to industry clients wanting to learn or de-risk the adoption of cryo-EM in their research projects. By offering flexible access to world-class cryo-EM facilities, including dedicated Glacios and Krios microscopes, and highly-experienced scientists, eBIC for Industry lowers the barrier to entry for a technique traditionally requiring large capital and training investments.

Situated within the integrated synchrotron environment, our services represent a unique offer to industry, with a cross-over between structural techniques like MX and SAXS as well as dedicated experts for industry, and streamlined support services.

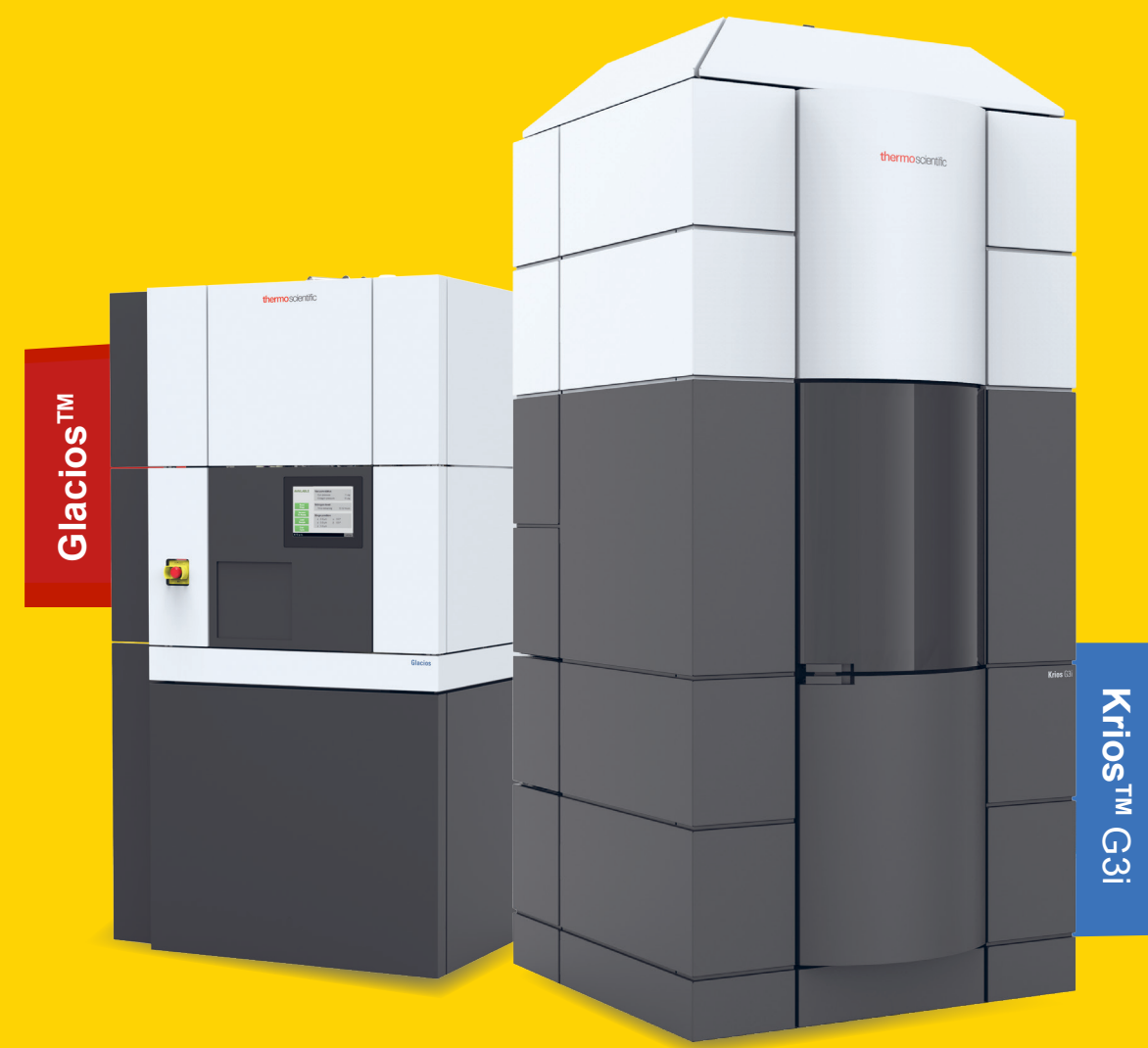
On-demand access to world-class facilities and expertise

- Industry-dedicated instruments and laboratories
- Full scientific consultancy and 1:1 support from experienced cryo-EM scientists
- Streamlined user, data, logistics, and legal functions
- Objective assessment of project suitability and progress

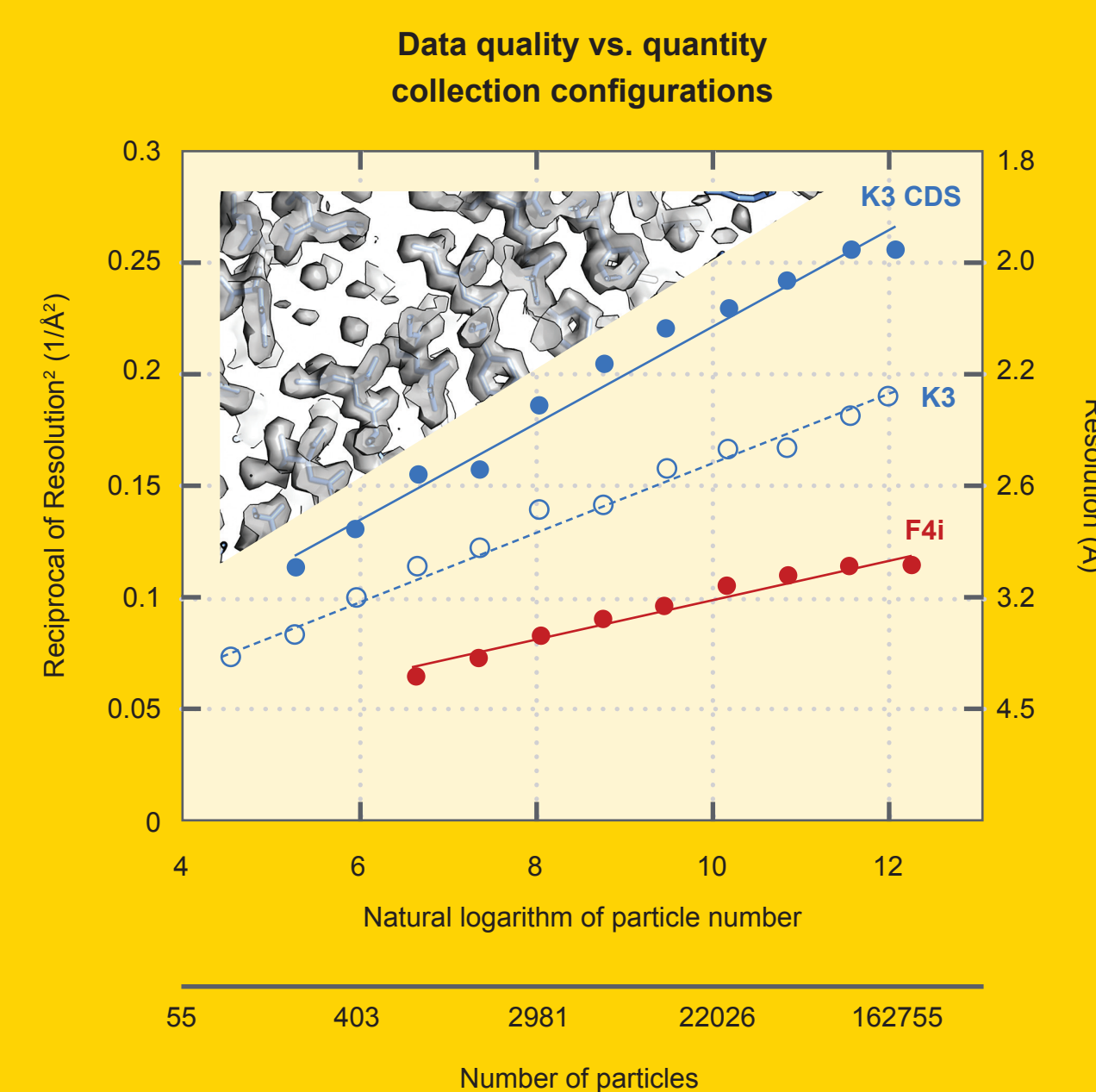


State-of-the-art capabilities for data collection

- Screening and preliminary data collection on our Glacios for rapid feedback
- High-throughput and best resolution data collection on our industry-dedicated Krios
- GPU cluster supporting real-time processing



| | SCREENING | COLLECTION | |
|--|--------------|---------------------|----------------|
| Detector | TFS Falcon4i | AMETEK Gatan K3* | |
| Attached system | Glacios™ | Krios™ G3i | |
| Mode | Counting | Counting CDS | Counting |
| Acquisition software | EPU (3.3) | EPU (3.2) | |
| Size | 4096 x 4096 | 5760 x 4092 | |
| Dose rate | 8.8 e-/pix/s | 5.9 e-/pix/s | 17.2 e-/pix/s |
| Total dose | 49 e-/Å² | 43 e-/Å² | 40 e-/Å² |
| Pixel size | 0.85 Å | 0.83 Å | |
| Exposure time | 4 s | 5 s | 1.6 |
| Frames | N/A | 40 | 40 |
| Acquisition rates (12 um APIS with 1um hole spacing) | ~385 (1 SPH) | ~385 (3-8 SPH) | ~700 (3-8 SPH) |
| Movies size | 569 MB | 221 MB | |
| Movie format | EER | LZW-compressed tifs | |
| Average dataset size | 3.5 TB | 3.7 TB | 6.8 TB |



Flexible and scalable access modes

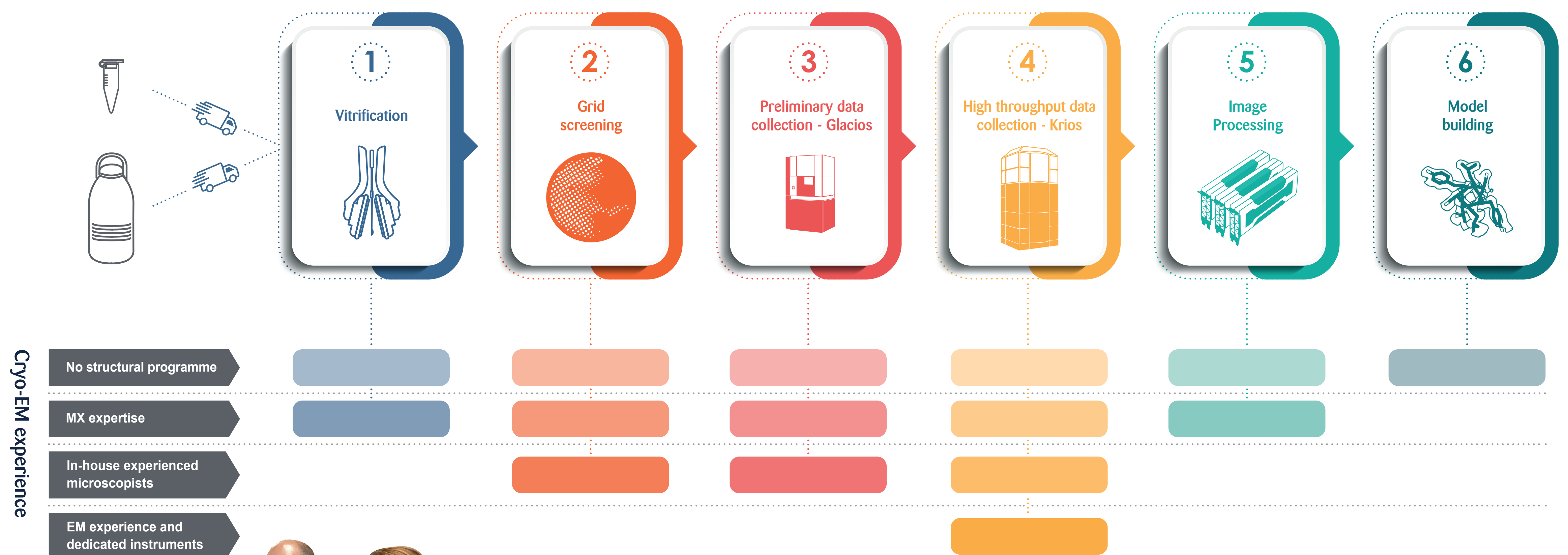
- 1 Rental:** come and use our labs and microscopes in person
- 2 Remote:** send grids and log into the microscopes to collect the data yourself
- 3 Mail-in:** send your grids and our experts will collect data for you
- 4 Full-service:** we freeze, screen, collect, and solve your structures



Services tailored to meet your requirements

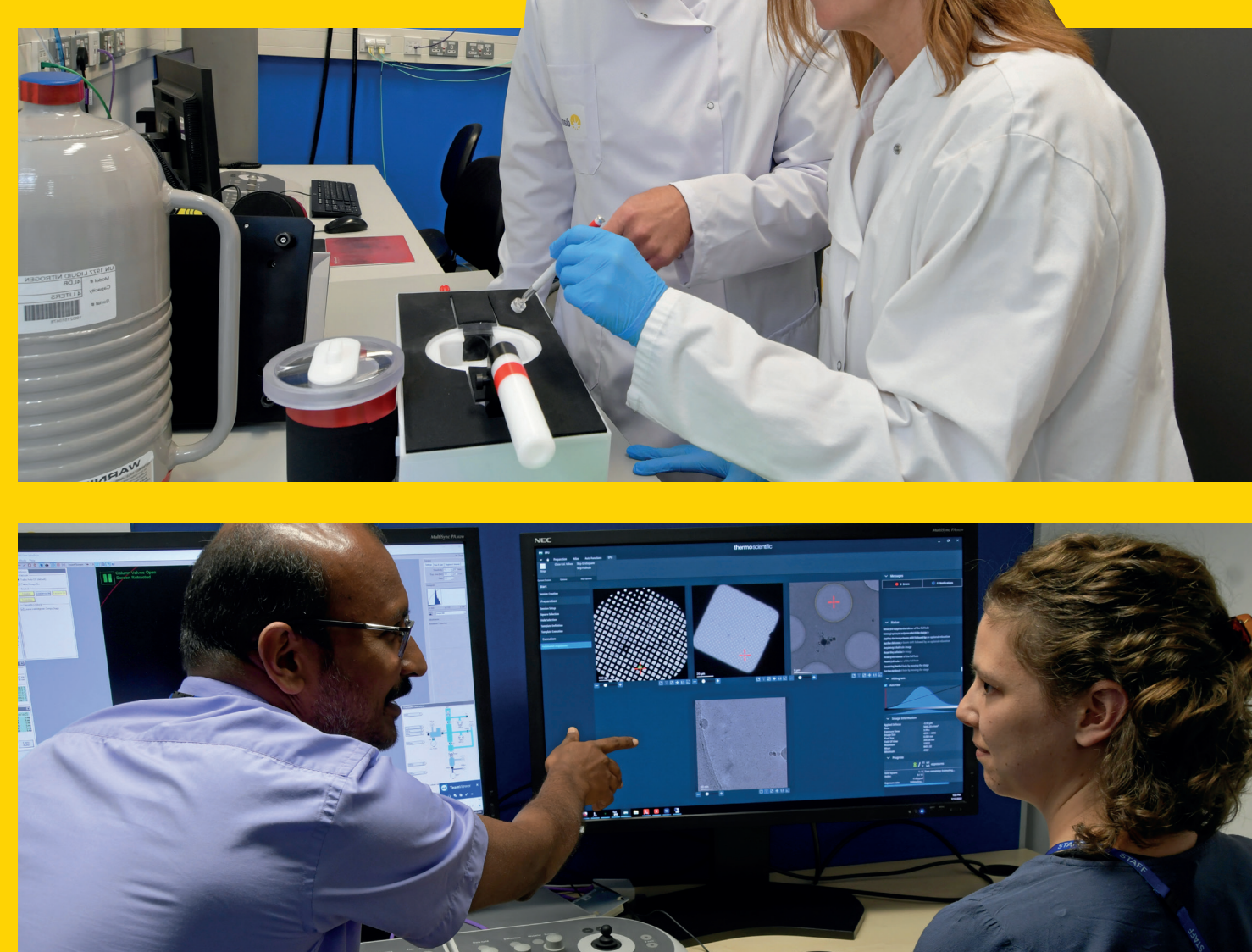
Full support for companies adopting cryo-EM

- From start-ups without labs to existing microscope owners
- Lower upfront costs and de-risking of EM adoption, with scalable access
- Clients can participate in all aspects of the experiment
- Industrial scientists can enter or leave the pipeline at any stage



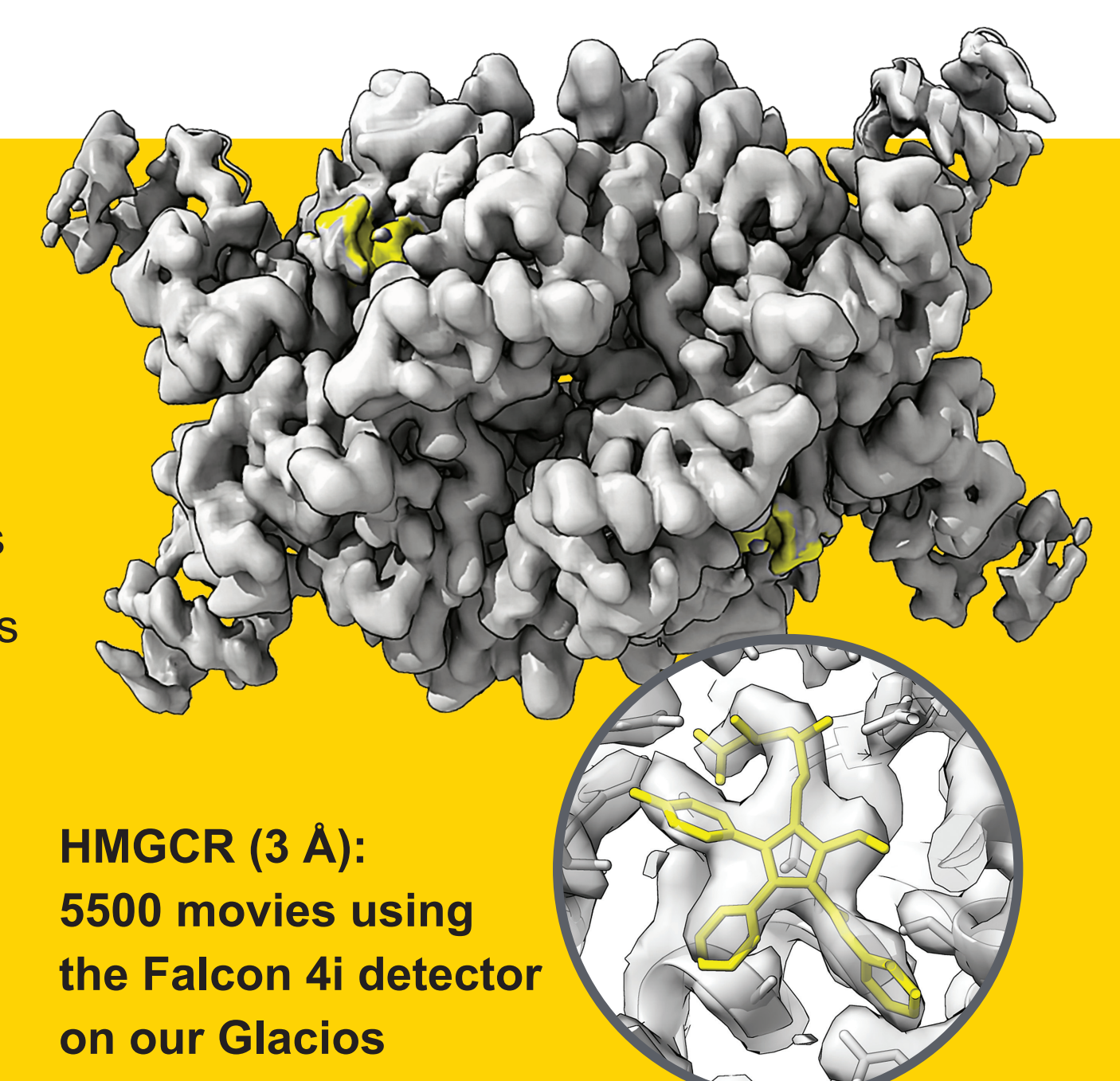
Applied training at any level

- Bespoke, hands-on, practical training in sample preparation and data collection
- Progress real samples whilst learning EM
- Attend in-person or remotely



Rapid structural insights for challenging proteins

- SPA structures of ligand/fragment-bound proteins
- Macromolecular complexes and flexibility analysis
- IHRSR of amyloid structures
- Rational vaccine design
- Antibody epitope mapping
- Drug delivery system and gene-therapy vector characterisation



HMGR (3 Å):
5500 movies using the Falcon 4i detector on our Glacios



For further information
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