



Charles River and ATEM Structural Discovery Announce Strategic Partnership to Provide Clients with Cryo-EM Capabilities

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Partnership will provide access to ATEM's leading cryo-EM platform

WILMINGTON, Mass.--(BUSINESS WIRE)--Oct. 18, 2021-- Charles River Laboratories International, Inc. (NYSE: CRL) and [ATEM Structural Discovery](#) (ATEM) today announced the formation of a strategic partnership to provide clients access to ATEM's cryo-electron microscopy (cryo-EM) service solutions. Cryo-EM is a technique that determines the 3D structures of proteins and is utilized to identify how proteins function, how they malfunction in disease and the most effective way to target them with therapies.

ATEM's leading platform integrates highly optimized biochemistry, hardware, and software to provide in-depth structural insights about challenging targets at a commercial scale. ATEM's technology directly images vitrified biological macromolecules in single-particle experiments at high resolution. Subsequently, reconstructed coulomb potential maps then allow the precise modeling of 3D atomic coordinates that elucidate the target structure. This leads to the identification of novel distinct binding sites and significantly improves the discovery of drug candidates.

Optimizing Candidate Selection

By combining ATEM's cryo-EM expertise with Charles River's end-to-end capabilities, the alliance has the potential to significantly accelerate drug discovery efforts from hit design through to lead optimization. With early insights into how lead candidates interact with their intended disease target, clients can interpret actual structural changes, allowing more informed prioritization and optimization of lead candidates.

Through the collaboration, Charles River clients will have access to ATEM's platform to support their drug discovery efforts. When utilizing ATEM's cryo-EM platform, clients will be provided with enhanced insights into challenging targets by viewing the 3D structure of full biochemical assemblies, ligand-bound complexes and biologic drugs. This partnership allows Charles River to enhance drug discovery projects by enabling structure-based design for a greater portfolio of targets.

AAV Capsid Ratio Analysis and mRNA Formulation Development in Support of Gene Therapies

Cryo-EM has become a powerful orthogonal tool to support both quality control and research and development (R&D) efforts in adeno-associated virus (AAV) vector-based gene therapies (i.e. full/empty capsid ratio analysis), as well as novel mRNA and plasmid-based drugs. By utilizing technologies including analytical ultracentrifugation (AUC), capillary isoelectric focusing (cIEF), transmission electron microscopy (TEM), and cryo-EM, clients can expect to receive qualitative and quantitative data to ensure improved dosing accuracy. Additionally, cryo-EM allows the use of minimal amounts of sample, fast turn-around times, and improved statistical accuracy.

For recombinant protein drugs, ATEM's models will provide fast track virus particle analysis as part of the adventitious agent testing on cell banks and bulk harvest samples, along with support for the development and optimization of downstream purification efforts through rapid TEM-based impurity screening and visualization.

Approved Quotes

- "We're very excited to offer ATEM's cryo-EM platform to our clients. By expanding our technology services through strategic partnerships, we're able to nimbly assess and meet our client's needs, while providing innovative solutions to accelerate their drug discovery and development." – Birgit Girshick, Corporate Executive Vice President, Discovery and Safety Assessment and Biologics Solutions, Charles River
- "Cryo-EM will expand the portfolio of drug targets that we can generate a 3D understanding of, enhance our knowledge of how to modulate these targets and enable computational drug design for more of our client projects. ATEM's cryo-EM expertise is a perfect complement to our established x-ray crystallography platform." – Grant Wishart, Director CADD & Structural Biology, Discovery, Charles River
- "The tremendous advances in cryo-EM technology are now enabling a large number of new and innovative possibilities in both structural biology and manufacturing or R&D related quality control applications. We are excited to partner with Charles River to build and offer these services at scale to their clients. ATEM offers deep and leading technical expertise, which combined with Charles River's market reach will help us to serve a rapidly growing market need." – Dr. Karl Bertram, Founder of ATEM Structural Discovery

About ATEM Structural Discovery

ATEM Structural Discovery is dedicated to offering state-of-the-art cryo-EM centered solutions, at scale, to its clients in the pharmaceutical and biotechnological industries. With our innovative technology and experience, we support the most challenging structure based discovery and quality control efforts. Our fully integrated, proprietary cryo-EM platform allows structural elucidation of previously unfeasible targets in your rational drug design campaigns. Find out how ATEM can accelerate your drug discovery at www.atem.bio.

About Charles River

Charles River provides essential products and services to help pharmaceutical and biotechnology companies, government agencies and leading

academic institutions around the globe accelerate their research and drug development efforts. Our dedicated employees are focused on providing clients with exactly what they need to improve and expedite the discovery, early-stage development and safe manufacture of new therapies for the patients who need them. To learn more about our unique portfolio and breadth of services, visit www.criver.com.

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