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**SAN
DIEGO**
CALIFORNIA, USA

Tuesday, February 21

1:30 PM – 3:00 PM

Room 9

Delmic

Streamline the Cryo-ET Workflow and Get More Useful Biological Insights With Delmic's METEOR and CERES Systems

Cryo-ET is a powerful imaging technique that allows protein complexes in their near-native cellular environment to be resolved at a nanometre resolution. Unfortunately the uptake of this powerful technique is hampered by its current error prone workflow, which often results in damaged, contaminated, and devitrified samples that cannot be used for data analysis. At Delmic we developed a host of technologies to unleash cryo-ET's full potential.

We will present METEOR, a fluorescent light microscope that is directly integrated into a cryo-FIB/SEM. It allows the user to skip unnecessary transfer steps and therefore decrease ice contamination. The presence of the targeted fluorescent signal in the lamellae can be checked during and after the milling process and cryo-CLEM data quality is improved. METEOR can therefore dramatically increase cryo-ET sample yield.

We will also present the CERES Ice Defence System, which increases sample throughput and quality by minimizing ice contamination throughout the cryo-ET sample preparation workflow. We will show that the samples can be prepared contamination free in the CERES Clean Station, a dedicated and moisture free workstation for cryo-ET sample preparation. From this workstation the samples can be transferred to the cryo-FIB/SEM using the CERES Vitri-Lock providing a high vacuum, anhydrous environment. In the FIB/SEM the sample is protected by the CERES Ice Shield, which protects against amorphous ice build-up on the sample. This protection is crucial for high cryo-ET data quality and allows long automated milling sessions.

Delmic's cryo solutions allow researchers to obtain better quality cryo-ET results, higher throughput, and higher resolution.

Speaker

Marit Smeets, Product Manager, Delmic