

Field of View

FOCUSING ON UPCOMING EVENTS

We have a few fun things planned for the GEM facility in the upcoming months.

- **9 December** – Cryo-EM workshop
- **15-17 December** – Biological TEM workshop

The Fine Print

MICROSCOPIC UPDATES

- The rate for staff time will increase \$10 by October 1st, which will increase all services that include assisted time from the GEM Staff. An updated price listing can be found on our website by clicking [here](#).
- GEM will be closed from 27 - 28 Nov. for the holidays.
- The Teneo and SU9000 will be down for maintenance from 13-16 November.

The Objective Lens

EM TOPICS THAT ARE UNDENIABLY INTERESTING

Critical Point Drying

Critical point drying is typically done for SEM imaging of biological samples. For samples to be compatible with the high-vacuum chamber of an SEM, they must be dry. Any liquid molecules would reduce imaging quality and interfere with the state of high vacuum. However, simply drying your sample can be very damaging.

Water has a high surface tension when it transitions from a liquid to a gaseous state, which can ruin fragile structures. So, how can you remove water from biological tissues safely?



Our Tousimis CPD

At the critical point of a substance, the characteristics of liquid and gas cannot be distinguished. So, by replacing water with a transition liquid, and then replacing that transition liquid with liquid CO_2 , you can easily reach the critical point of CO_2 without causing significant harm to the sample. A more in-depth explanation behind CPD can be found [here](#).

Aiden isn't a graduate student –yet– but he certainly is GEM's youngest user. He is part of a homeschool group called My Resilient Community, and they recently came to GEM on a short field trip. They toured all of the available microscopes at the facility and got to use the DVM6 afterwards.

However, he became very excited when he found out we could image his toy he brought along. After seeing the image of his Stormtrooper, he became much more interested in the light microscope. Instead of a powerful cosmic energy, maybe the Force is actually just a newly-acquired love of microscopy.

Fully Charged

CURRENT EVENTS, LITERALLY

Lunch & Learn

We recently hosted a Lunch & Learn sponsored by Thermo Fisher Scientific. Dr. Natalie Young, a Senior Product Specialist, presented on the screening capabilities of the Tundra. She emphasized how to prepare a sample and how the Tundra can be utilized to ensure a solid foundation for your project.



Dr. Jay Rai of TFS

We also got to enjoy the company of Applications Scientist Dr. Jay Rai. He gave a brief rundown of the specifications of the Tundra before giving a detailed demonstration of the instrument and its supporting software.

Beam Me Up, Scotty

SEE WHAT'S ON STAGE AT GEM

Toys From a Galaxy Far, Far Away



Sith Stormtrooper