

SEMINAR NOTICE

Department of Physics and Engineering Physics University of Saskatchewan

SPEAKER: D. Schick-Martin
Sylvia Fedoruk Canadian Centre for Nuclear Innovation Inc.

TOPIC: *Capabilities and Applications of the TR-24 Cyclotron at the Saskatchewan Cyclotron Facility.*

DATE: Tuesday February 3rd, 2026

TIME: 3:30-4:30 p.m.

The Sylvia Fedoruk Canadian Centre for Nuclear Innovation Inc. (Fedoruk Centre) operates the Saskatchewan Cyclotron Facility at the University of Saskatchewan. The Facility is a multi-user research and production facility supporting radiopharmaceutical and radiochemical innovations as well as routine production of clinical [¹⁸F]fluorodeoxyglucose (FDG). The Facility houses a TR-24 cyclotron (manufactured by Advanced Cyclotron System Inc., Richmond, B.C.), which is a variable energy proton machine, inside of a shielding vault with 2.5m thick concrete walls. The cyclotron is capable of delivering up to 300 μ A of proton current at 17-24 MeV to a target system located at the end of a beamline. These targets are used to routinely produce radioisotopes such as carbon-11, nitrogen-13, fluorine-18, copper-64, zirconium-89 and actinium-225. The Facility is outfitted with several radiochemistry labs with hot cells, shielded fumehoods or lead castles used to safely handle, separate, purify and label compounds with these radioisotopes. The Facility also has analytical and imaging instruments to support testing and development of tracers with potential clinical, veterinary, agricultural or industrial applications. Finally, the Facility has a clean space suitable for manufacturing clinical radiopharmaceuticals under Good Manufacturing Practices (GMP) which are used every day at Royal University Hospital in patient care.

