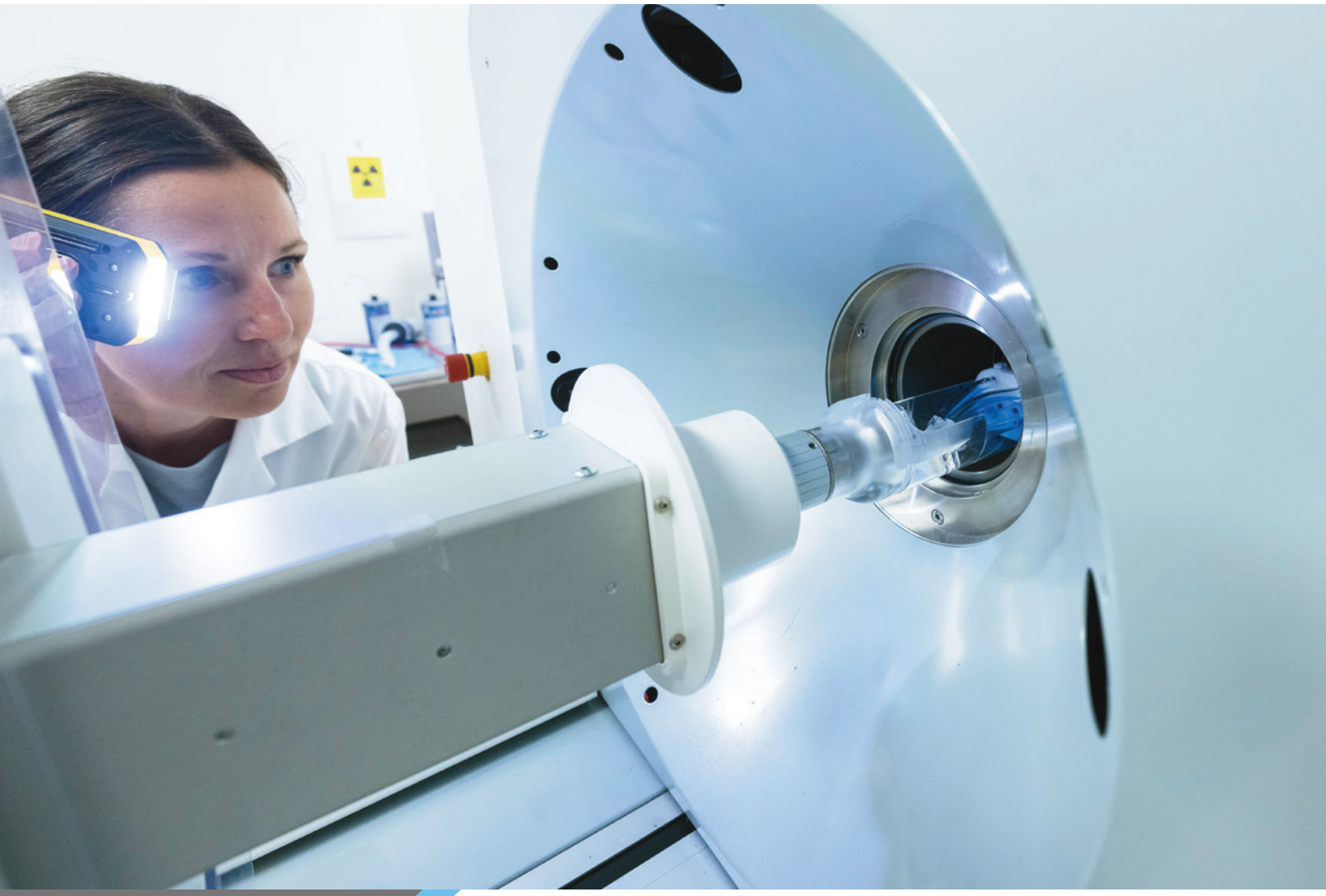
Saskatchewan Cyclotron Facility

Activity & Achievement Report

April 2024 - March 2025



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Fedoruk Centre
SYLVIA FEDORUK CANADIAN CENTRE FOR NUCLEAR INNOVATION

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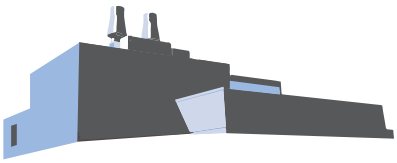
INTRODUCTION

About the Saskatchewan Cyclotron Facility

The Saskatchewan Cyclotron Facility (Facility) is operated by The Sylvia Fedoruk Canadian Centre for Nuclear Innovation Inc. (Fedoruk Centre) under an operating license agreement with the Univeristy of Saskatchewan (USask).

Since its opening in 2015, the Facility has been maintained in a competitive state of readiness for access by academic and industrial researchers for the production of radiopharmaceuticals that are needed in medical imaging at regional hospitals.

TIMELINE



2015

The Facility opened on USask campus, with the Facility assuming operational responsibility.

2016

The first cancer patient was scanned at Royal University Hospital (RUH) using fluorodeoxyglucose (FDG) produced at the Facility.

Fluorodeoxyglucose (^{18}F)

$4.2M

2020

A $4.2M renovation to the Facility was completed in March 2020 with the opening of the Innovation Wing to meet growing research and industry needs.

2024

The Facility surpassed its previous achievement of supporting over 3,000 annual patient scans at RUH by providing enough batches of FDG to RUH to support over 3,800 patient scans*.

See Chart 1 on page 11

OVER 3800 SCANS

OPENING REMARKS

Message from the Executive Director

Jeter Hall, Ph.D.
Fedoruk Centre
Executive Director

Joining the Fedoruk Centre as executive director in July 2025 is an honour and an exciting opportunity.

My career has centred on both fundamental discoveries in nuclear science and their real-world applications. This perspective makes it especially meaningful to join the team at the Facility with a strong legacy of safe, reliable isotope production and proven record of supporting world-class research at USask.

As I enter this role, my initial focus will be on strengthening the collaborative environment to enable both the staff and users to achieve greater impact in nuclear medicine and industrial uses of radioactive isotopes.

In the following pages, you'll read about the achievements of the Facility during the reporting period ending in March 2025. During this period, Fedoruk Centre staff at the Facility supported 11 researchers and their teams in advancing groundbreaking work, while also meeting the increasing demand for life-saving radioisotopes used in medical imaging and therapies. These accomplishments demonstrate the strength of the research ecosystem built over the past decade and its growing importance across health care, industry and the economy.

I'm proud to enter this role and work with an organization with such great achievements and I'm confident that we can accelerate good outcomes for the health and economy in Saskatchewan through collaborative research and development in nuclear science.

Message from the Facility General Manager

Dale Schick-Martin,
Saskatchewan Cyclotron Facility General Manager

Nine years after initial commissioning, the Facility has matured into a resilient resource for the province and the country.

During the reporting period, the Facility provided services to public institutions in Alberta, Saskatchewan, Manitoba and Ontario and private companies in Saskatchewan and Ontario. The Fedoruk Centre master supply agreements for delivery of FDG to hospitals in Saskatchewan (496 deliveries), Alberta and Manitoba (30 deliveries), as well as for the Western College of Veterinary Medicine (21 deliveries). In Saskatchewan alone, this supported over 3,800 PET-CT patient scans.

The Facility also manufactured radioisotope and radiochemical products for researchers, including FDG, $^{57}CoCl_2$, and ^{89}Zr-oxalate. Other isotopes were received and handled safely for researchers under the Facility license: ^{65}Zn, ^{64}Cu/^{67}Cu, ^{68}Ge/^{68}Ga, ^{161}Tb, ^{177}Lu, and ^{225}Ac.

The Facility workstations include a wide range of specialized equipment, all accessible through user-access agreements. Working more closely with USask's Safety Resources group has allowed us to streamline user access and harmonize our safety program for many of our users.

Many thanks to the Fedoruk Centre team, whose enthusiasm and cohesion are helping to build a reputation for the Saskatchewan Cyclotron Facility as a client-focused resource that is maintained in a competitive state of readiness for access by researchers from academia and industry.

The Facility provides access to radiopharmaceuticals to academic and industry clients for use in nuclear imaging and for research for a number of areas.

FACILITY USER INNOVATIONS

User Access

The Fedoruk Centre offers access for researchers and students from academia and industry to advance their programs of innovation in nuclear imaging, therapies or life sciences at Facility workstations. Workstation access is arranged through user agreement and preparatory discussions described at our webpage on Facility services: **fedorukcentre.ca/our-offering/cyclotron-lab-services.php**

For research in the public domain, rates for workstation access are set to recover the full cost of Facility operation if a single user occupied all workstations full-time. Rates are increased, to recover the full cost of operating the entire Fedoruk Centre (including Project funding and Program partnership investments), if a single user occupied all workstations full time for proprietary research. This pricing rationale respects the principles that taxpayer funds are not applied to the benefit of individuals or single companies outside a fair and open decision-making process, and that the Fedoruk Centre is a not-for-profit corporation, delivering societal and economic benefits to Saskatchewan.

During the reporting period, the Fedoruk Centre and USask executed four new agreements for academic user access to Facility capabilities. Two user access agreements were executed with industry clients for proprietary research. Actual Facility access during the reporting period enabled 11 individual research leaders and their teams to occupy Facility workstations for about 7,000 hours in total.

Fedoruk Centre staff support researchers and their teams in the production and use of radioisotopes for use in human health, biology and agriculture.

Trends of user access to the Facility to advance their research programs are revealed in Table 1. During the reporting period, 14 tour events were held at the Facility for stakeholders, delegates, potential clients and interested members of the public.

Table 1 – Users Accessing the Facility to Perform Research

User Type	Fiscal Year Ending March 31				
	2021	2022	2023	2024	2025
Industry Researchers	3	6	12	5	6
Faculty Researchers	4	3	2	2	2
Post-doctoral Research Associates	10	14	8	8	11
Graduate Students	11	18	22	23	16

User-Driven Research

In Table 2, some examples are listed to illustrate the *public-domain* research that was led by USask scientists with support from the Facility.

Table 2 – Examples of Research Led by USask Researchers During the Reporting Period

Project Title or Description	Principle Investigator
Development of Nuclear Imaging Tools for Pre-clinical Evaluation of Lung Inflammation	Aulakh
Radiolabelled Imaging Agents for Cancer in Mouse Models	Fonge
Radiochemical Method Development Towards Next-generation Radiopharmaceuticals Using Radiometals and Radiofluorine	Price
3'-^{18}F-ABA: a PET Probe to Image ABA Transport in Plants	Phenix
Monitoring Xylem and Phloem Flow of Abscisic Acid in Live Canola Seedlings Under Drought Conditions Using PET	Phenix
Targeted Radionuclide Therapy (TRT)	Geyer
Radioimmunotherapy for Cancer and Multiple Schlerosis	Dadachova
Vizamyl-^{18}F Production Validation Testing	Geyer
Synthesis of ^{18}F-Labelled Benzene and Toluene for Use in Soil Imaging	Siciliano
Utilization of Novel Bispecific Antibody for Tumor Imaging in Human and Canine	Toosi
Analysis of the Biosynthetic Process of Polyunsaturated Fatty Acids in Alga Emiliania Huxleyi	Qiu

A radiochemical technologist with Iotron Medical Inc., prepares an automated synthesis unit for isotope purification.

Highlights of User Research and Development

USask College of Medicine researcher, Dr. Ron Geyer (PhD), at his lab. (Photo: submitted)

Advancing Medical Research and Trials Through Access to Fedoruk Centre Radioisotopes

Through resources and technical support from the Facility, Dr. Ron Geyer (PhD), USask's College of Medicine, and his team are advancing the development of new imaging probes and therapeutics for cancer and Alzheimer's disease. Working through the Centre for Biologic Imaging and Research Development (C-BIRD), the group focuses on moving promising molecules from early concepts into preclinical studies and clinical trials.

Over the past year, access to radioisotopes produced at the Facility and its Health Canada-compliant infrastructure enabled the team to label antibodies and peptides, track them in living systems, and evaluate their potential as diagnostic or therapeutic tools. This foundation supported two active clinical trials: one using zirconium-89-labeled antibiotics to detect cancer (NCT04235114), and another employing a fluorescent probe for image-guided surgery (NCT04459065), primarily used in patients with lung cancer.

A third trial, now advancing toward Health Canada approval, will use an amyloid-targeting probe to evaluate an Alzheimer's disease therapeutic. The probe is designed to detect amyloid plaques in the brain. This is especially important in early diagnosis and evaluating potential treatments. Longer term, the aim is to establish local production of these probes at the Facility, expanding access to advanced imaging tools for patients in Saskatchewan and beyond.

Zr89-DFO-nimotuzumab production for clinical trial in the GMP space at the Facility. (Photo: submitted)

By supplying isotopes, regulatory expertise, and a production environment that bridges laboratory research with clinical application, the Facility plays a pivotal role in supporting the C-BIRD program. These advances position Saskatchewan as a contributor to cutting-edge molecular imaging and clinical innovation.

The Fedoruk Centre is Helping to Advance Actinium-225 Cancer Therapy with CNL and Actineer

Canadian Nuclear Laboratories (CNL) and Actineer continue to work closely with the Fedoruk Centre to advance the production process for Actinium-225 (Ac-225), a medical isotope that has the potential to enable ground-breaking new cancer treatments. That work culminated in the first accelerator-produced Ac-225 at the Facility using CNL Radium-226 (Ra-226) on novel targets developed by CNL in 2024. This achievement was publicly recognized at the 2024 CNIC Awards, where CNL, the Fedoruk Centre, and Advanced Cyclotron Systems Inc. Received the 2024 Ecosystem Innovation Award for being the first organizations in Canada to produce Ac-225 using a cyclotron and Ra-226 targets.

Since then, CNL and the Fedoruk Centre continue to optimize and improve cyclotron aspects of the

Ac-225 production process with an emphasis on increasing yields and robustness. As a direct result of this work, radiopharmaceutical companies with drugs in trials around the world will have access to significantly more supply of high-purity Ac-225 starting in 2026, enabling advancement of Targeted-Alpha-Therapy (TAT). Overall, this work demonstrates that Canada continues to serve as a world leader in medical isotope development and production, and that way is led by the research facilities and staff at the Fedoruk Centre.

"Working with the team at the Fedoruk Centre has been an excellent experience for CNL. The state-of-the-art facility and professional, knowledgeable team have helped us to achieve major milestones on the road to the production of commercial quantities of Ac-225," commented Peter D'Amico, Senior Director of CNL's Isotope Business. "We were thrilled to be recognized by the CNIC this year, but the real award for all those involved will be the knowledge that regular production of current good manufacturing practice (cGMP) Ac-225 is set to commence supplying clinical trials in Canada and across the globe in the very near future."

"For Actineer, the Fedoruk Centre is more than a service provider—it's a cornerstone of our mission," said Joseph Oliverio, CEO of Actineer. "Their critical research and development and irradiation services empower us to push the boundaries of innovation, accelerating the development of life-saving therapies and bringing hope to cancer patients around the world."

Left to Right: Joseph Oliverio, President and CEO of Actineer, Ram Mullur, Vice-President Strategic Development, Canadian Nuclear Laboratories, John Root, Fedoruk Centre Executive Director, and James Scongack, COO and Executive Vice President, Bruce Power.

CAPABILITY AND PERFORMANCE

Fedoruk Centre staff visually inspect the cyclotron's water-cooling system

Infrastructure Upgrades

A motorized stage and collimator system was built to support solid target irradiation on the ARTMS Quantum Irradiation System (QIS). The device was presented at the 19th Workshop on Targetry and Target Chemistry in Heidelberg, Germany. The system improves alignment of the target to the cyclotron's beam without requiring manual adjustment from staff between irradiations.

Products

The isotope ^{89}Zr has been produced at the Facility and supplied to users as needed for over four years. The capability has allowed the Fedoruk Centre to participate in a Collaborative Research Project (CRP) with the International Atomic Energy Agency (IAEA), and work with leading ^{89}Zr producers from around the world. The final meeting of the CRP was held in April 2024 in Poland with the Fedoruk Centre as the sole representative of Canadian ^{89}Zr innovation in attendance. Through the reporting period, a 2-resin method was developed which improves the separation of niobium out of the ^{89}Zr product and increases the apparent specific activity in labelling tests.

In 2023, the Fedoruk Centre secured a contribution of $410,650 for *Commercializing Capabilities at the Saskatchewan Cyclotron Facility* from the Regional Innovation Ecosystems (RIE) program of Prairies Economic Development Canada (Prairies Canada). As part of this project, development of three products concluded during the reporting period: $^{68}GaCl_3$, Na^{18}F, and ^{18}F-PSMA. All products are now

available to users and clients upon request. The development and validation of ^{18}F-PSMA has led to a collaboration with the Centre for Probe Development and Commercialization (CPDC) to move the compound to a licensed drug product, which would make it available clinically for RUH.

Fedoruk Centre staff entering a clean room to prepare daily doses of radioisotopes for shipment to regional hospitals and to support clients from academia and industry in their research

Trends

Key indicators are used to reveal trends in Facility performance and use. One key indicator is on-time delivery of FDG to RUH. We strive to deliver hospital orders every day to ensure patients get on-time diagnosis. This year, one delivery was missed due to excessive particle ingress to the clean space caused by wildfire smoke. The trends of the Facility performance are presented in Table 3.

Table 3 – Trends of Facility operational performance indicators

Performance Indicator	Fiscal Year Ending March 31				
	2021	2022	2023	2024	2025
Workstation availability – ready for user access (percentage of total time)	95.8%	97.0%	98.2%	96.2%	94.3%
Workstation occupancy by users (percentage of available time)	14.7%	15.3%	13.2%	11.8%	5.1%
Unplanned outages of cyclotron (days)	4	5	4	10	0
Unplanned outages of Facility production (days)	5	6	6	12	1

The Facility's 24 MeV cyclotron relies on strong magnetic fields and high-voltage systems to accelerate particles at incredible speeds.

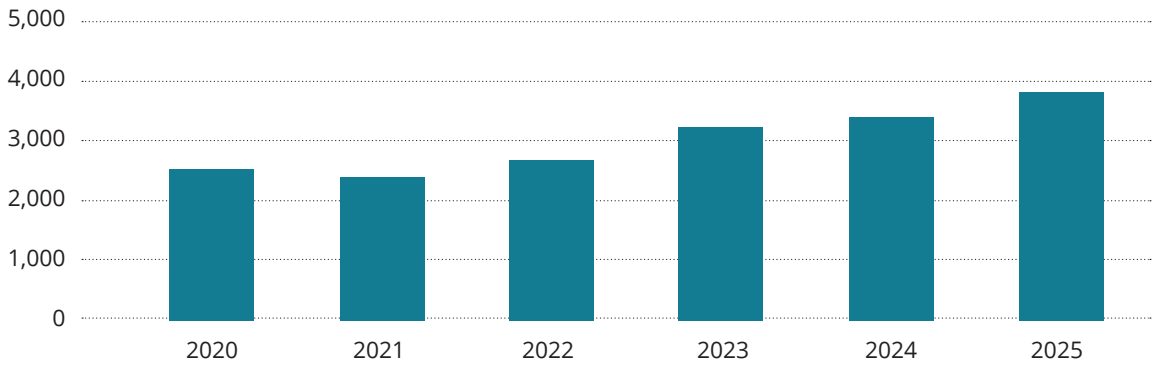
Production of FDG and Other Isotopes

The Facility manufactures the nuclear imaging agent FDG for daily delivery to the PET-CT scanner at the RUH in Saskatoon. Typically, production begins at 4:00 am each morning with proton-irradiation of an ^{18}O-enriched water target, to generate the positron-emitting isotope ^{18}F, followed by chemical processing and testing for quality control. Delivery of FDG is made to the RUH by 8:00 am for patient diagnoses.

During the reporting period, the Facility team made 414 FDG deliveries to the RUH. This included 28 extra-delivery days scheduled to reduce the PET-scan patient waitlist. The Facility also provided 18 deliveries of FDG to the Western College of Veterinary Medicine and 37 batches of FDG to hospitals in Alberta and Manitoba. The number of PET-CT scans received by patients at the RUH with FDG produced at the Facility is pictured in Chart 1.

Number of PET-CT scans at RUH

Chart 1 – Number of patient PET-CT scans at RUH with FDG produced by the Facility



Additional radioisotopes were produced at the Facility for researchers, including ^{18}F, ^{57}Co and ^{89}Zr. A summary and multi-year comparison of isotope production for research is presented in Table 4.

Table 4 – Number of Isotope Batches Produced at the Facility for Researchers

Isotope	Calendar Year					
	2019	2020	2021	2022	2023	2024
^{11}C	45	25	41	74	21	0
^{13}N	0	0	3	0*	0*	0
^{18}F	101	42	83	161	131	32
^{64}Cu	12	10	0	0	0	0
^{89}Zr	28	31	29	11	18	11
^{68}Ga	0	0	3	0	1	0

*Some ^{11}C productions were performed with the intention of using the co-produced ^{13}N

Several other isotopes were received and handled safely for researchers under the Facility license, including: ^{65}Zn, ^{64}Cu, ^{67}Cu, ^{68}Ga (from a generator), ^{161}Tb, ^{177}Lu, and ^{225}Ac.

SAFETY

Licensing and Compliance

The Facility operates a TR24 cyclotron, labs for the safe handling of nuclear substances, equipment to manufacture and qualify radiopharmaceuticals for clinical applications in humans, and capacity to hold living specimens for preclinical research and other life sciences. These activities are regulated under the authorities of the Canadian Nuclear Safety Commission (CNSC), Health Canada (HC), the Public Health Agency of Canada (PHAC) and USask, with key licenses and permits being:

- CNSC Class II Facility and Prescribed Equipment license
- CNSC Nuclear Substances and Radiation Devices (NSRD) license
- HC Drug Establishment License (DEL)
- USask Biosafety permit

The Fedoruk Centre's professional and technical staff work together to ensure compliance with terms of all these licenses permits, and to comply with the Canada Labour Code, and guidelines of the Canadian Council on Animal Care.

We appreciate the cooperation of our users in helping us ensure the Facility is a safe, respectful workplace, compliant with the requirements of our licensing authorities. Some notable areas of growth include:

The Fedoruk Centre continues to harmonize its safety practices with the USask for on-campus users.

During the reporting period, the Facility was inspected by the CNSC in a routine audit. Three items were noted and corrected within four weeks of receiving the report. The CNSC assessed the Facility with a “satisfactory” grade, indicating all license requirements were met and the safety program was operating sufficiently.

Over the calendar year 2024, no staff at the Facility received even ten percent of the regulatory whole-body exposure limit (50mSv) for the year.

Fedoruk Centre staff monitoring production in the clean space

Radiation and Safety Training

Our radiation protection program guides all the safety protocols at the Facility. The program includes an Occupational Health and Safety Committee that meets quarterly and conducts biannual Facility inspections.

Staff and users are trained and qualified as Nuclear Energy Workers (NEWs). Everyone is expected to conduct their work in a manner to ensure radiation exposures are below the administrative limits established through the Radiation Protection Program, respecting the principle of ALARA (As Low As Reasonably Achievable) and well under CNSC regulatory limits for all NEWs.

Fedoruk Centre staff safely handle significant quantities of radioactive materials in the hot cells, which require barriers containing 16 times more lead than typical hospital barriers to keep staff safe while they support high-impact research.

PUBLICATIONS ARISING FROM FACILITY ACCESS

1. **The Bifunctional Dimer Caffeine-Indan Attenuates α-Synuclein Misfolding, Neurodegeneration and Behavioral Deficits after Chronic Stimulation of Adenosine A1 Receptors**
   Elisabet Jakova 1,†, Omozojie P. Aigbogun 2,† , Mohamed Taha Moutaoufik 3,‡ , Kevin J. H. Allen 4,5, Omer Munir 6 , Devin Brown 2 , Changiz Taghibiglou 6 , Mohan Babu 3 , Chris P. Phenix 2 , Ed S. Krol 5 and Francisco S. Cayabyab 1,*
   International Journal of Molecular Sciences **25**: 9386 (2024)

2. **Comparison of Sedation and General Anesthesia Protocols for 18F-FDG-PET/CT Studies in Dogs and Cats: Musculoskeletal Uptake and Radiation Dose to Workers**
   Alexandra F. Belotta, Shannon Beazley, Matthew Hutcheson, Monique Mayer, Hugues Beaufrère, Sally Sukut
   Veterinary Radiology & Ultrasound **33** (2024)

3. **In Vitro and In Vivo Comparison of Random versus Site-Specific Conjugation of Bifunctional Chelating Agents to the CD33-Binding Antibody for Use in Alpha- and Beta Radioimmunotherapy**
   Allen KJH, Frank C, Jiao R, Malo ME, Bello M, De Nardo L, Meléndez-Alafort L, Dadachova E
   ACS Omega **9**(50): 50000-50011 (2024)

4. **Radioimmunotherapy Combating Biofilm-associated Infection In Vitro**
   Ye Z, van der Wildt B, Nurmohamed FRHA, van Duyvenbode JFFH, van Strijp J, Vogely HC, Lam MGEH, Dadachova E, Weinans H, van der Wal BCH, Poot AJ
   Frontiers in Medicine (Lausanne) **11**: 1478636 (2024)

5. **Recent Advancements in Radiopharmaceuticals for Infection Imaging**
   Dadachova E, Rangel DEN
   Methods in Molecular Biology **2813**: 205-217 (2024)

6. **Initial insights into the Interaction of Antibodies Radiolabeled with Lutetium-177 and Actinium-225 with Tumor Microenvironment in Experimental Human and Canine Osteosarcoma**
   Giri S, Allen KJH, Prabaharan CB, Ramirez JB, Fiore L, Uppalapati M, Dadachova E.
   Nuclear Medicine and Biology **134-135**: 108917-25 (2024)

7. **Antibody-Mediated Depletion of Autoreactive T Lymphocytes through PD-1 Improves Disease Outcomes and Visualizes T Cell Activation in Experimental Autoimmune Encephalomyelitis**
   Frank C, Salapa HE, Allen KJH, Levin MC, Dawicki W, Dadachova E.
   The Journal of Immunology **212**(11):1647-1657 (2024)

8. **Lintuzumab-Ac225 Exerts Mutation Agnostic Antileukemic Activity in Preclinical Models of AML**
   Amanda Chin, Rubin Jiao, Kevin J.H. Allen, Jason Li, Mary Chen, Madhuri Vusirikala, Avinash Desai, Le-Cun Xu, Patrik Brodin, Monideepa Roy, Mackenzie Malo, Denis Beckford-Vera, Ekaterina Dadachova, Helen Kotanides
   Blood **144** (Supplement 1), 5801-5801 (2024)

9. **Automated radiosynthesis of Tyr3-octreotate derivative [18F]SiTATE via a merging of Silicon-Fluoride Acceptor (SiFA) and non-anhydrous, minimally basic (NAMB) chemistries**
   K Chavda, S Bangura, C Zaparaniuk, D Morim, Y Pu, E Price, J Inkster
   Journal of Nuclear Medicine **65** (supplement 2), 242383-242383 (2024)

10. **Zwitterionic Derivatives of the Bombesin Ligand RM2 for Improved Radiometal Delivery and Tissue Distribution for GRPR-Positive Tumors**
    D Rwizinkindi, S Raheem, B Toosi, R Geyer, E Price
    Journal of Nuclear Medicine **65** (supplement 2), 242187-242187 (2024)

11. **Synthesis and evaluation of bifunctional DFO2K: a modular chelator with ideal properties for zirconium-89 chelation**
    Akam K Salih, Elaheh Khozeimeh Sarbisheh, Shvan J Raheem, Moralba Dominguez-Garcia, Hillary H Mehlhorn, Eric W Price
    Dalton Transactions **53** (47), 18946-18962 (2024)

12. **225Ac-labeled anti-EGFR antibody drug radioconjugate elicits durable anti-tumor responses in mouse models of colorectal cancer**
    F. Tikum, N. Henning, A. Doroudi, J. Ketchemen, H. Babeker, F. Njotu, A. Monzer, E. Nwangele, M. Uppalapati, B. Gray, E. Torlakovic, H. Fonge;
    European Journal of Nuclear Medicine and Molecular Imaging **51**, S321-S322 (2024)

13. **Efficacy and safety of novel [225Ac]Ac-labeled anti-HER2 antibody drug adioconjugates against HER2 positive breast cancer xenografts**
J. Pougoue Ketchemen, A. Monzar, F. Ngoh Njotu, H. Babeker, A. Tikum, E. Nwangele, N. Henning, N. Hassani, A. Doroudi, H. Fonge;
European Journal of Nuclear Medicine and Molecular Imaging **51**, S42-S42 (2024)

14. **Highly potent [225Ac] Ac-macropa-trastuzumab-PEG6-DM1 antibody drug radioconjugate against HER2-positive breast cancer xenografts**
Jessica Pougoue Ketchemen, Fabrice Ngoh Njotu, Hanan Babeker, Alissar Monzar, Emmanuel Nwangele, Anjong Tikum, Nikita Henning, Nava Hassani, Sarah Frye, Randy Perron, Chris Byrne, Laura Bannister, Candice Didychuk, Qi Qi, Alireza Doroudi, Humphrey Fonge
Journal of Nuclear Medicine **65** (supplement 2), 242451-242451 (2024)

15. **Radioimmunotherapy of HER2-positive breast cancer using 225Ac-labeled trastuzumab and 67Cu-labeled pertuzumab biparatopic radioimmunoconjugates**
Emmanuel Nwangele, Jessica Pougoue Ketchemen, Alissar Monzar, Fabrice Ngoh Njotu, Hanan Babeker, Alireza Doroudi, Florence Tikum, Nikita Henning, Maruti Uppalapati, Humphrey Fonge
Journal of Nuclear Medicine **65** (supplement 2), 242368-242368 (2024)

16. **Long acting [225Ac] Ac-EBTATE is highly efficacious against somatostatin receptor-2-positive neuroendocrine tumors**
Fabrice Ngoh Njotu, Jessica Pougoue Ketchemen, Nikita Henning, Hanan Babeker, Anjong Tikum, Emmanuel Nwangele, Alissar Monzar, Nava Hassani, Brian Gray, Koon Pak, Maruti Uppalapati, Humphrey Fonge
Journal of Nuclear Medicine **65** (supplement 2), 241776-241776 (2024)

17. **Effectiveness of [67Cu]Cu-trastuzumab as a theranostic against HER2-positive breast cancer**
Jessica Pougoue Ketchemen, Fabrice Ngoh Njotu, Hanan Babeker, Stephen Ahenkorah, Anjong Florence Tikum, Emmanuel Nwangele, Nikita Henning, Frederik Cleeren & Humphrey Fonge
European Journal of Nuclear Medicine and Molecular Imaging **51** (7), 2070-2084 (2024)

18. **Efficacy of [67Cu] Cu-EB-TATE Theranostic Against Somatostatin Receptor Subtype-2–Positive Neuroendocrine Tumors**
Fabrice Ngoh Njotu, Jessica Pougoue Ketchemen, Anjong Florence Tikum, Hanan Babeker, Brian D Gray, Koon Y Pak, Maruti Uppalapati, Humphrey Fonge
Journal of Nuclear Medicine **65** (4), 533-539 (2024)

19. **225Ac/89Zr labeled anti nectin 4 radioimmunoconjugates as theranostics against nectin 4 positive triple negative breast cancer**
Hanan Babeker, Fabrice Njotu, Jessica Ketchmen, Florence Tikum, Alireza Doroudi, Emmanuel Nwangele, Maruti Uppalapati, Humphrey Fonge
Cancer Research Journal **84** (6_Supplement), 6029-6029 (2024)

20. **89Zr-matuzumab and 225Ac-matuzumab as a theranostic for epidermal growth factor receptor-positive KRAS wild-type colorectal and breast cancer xenografts**
Florence Anjong Tikum, Humphrey Fonge, Fabrice Njotu, Hanan Babeker, Jessica K Pougoue, Nikita Henning, Alireza Doroudi
Cancer Research Journal **84** (6_Supplement), 6027-6027 (2024)

21. **[225Ac]Ac/[89Zr]Zr-labeled N4MU01 radioimmunoconjugates as theranostics against nectin-4 positive triple negative breast cancer**
Hanan Babeker, Fabrice Ngoh Njotu, Jessica Pougoue Ketchemen, Anjong Florence Tikum, Alireza Doroudi, Emmanuel Nwangele, Maruti Uppalapati, Humphrey Fonge
bioRxiv, 2024.03. 04.583420 (2024)

22. **Effectiveness of 225Ac-labeled Anti-EGFR radioimmunoconjugate in EGFR-positive Kirsten rat sarcoma viral oncogene and BRAF mutant colorectal cancer models**
Anjong Florence Tikum, Jessica P Ketchemen, Alireza Doroudi, Anand K Nambisan, Hanan Babeker, Fabrice Ngoh Njotu, Humphrey Fonge
Journal of Nuclear Medicine **65** (3), 402-408 (2024)

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