

# Provincial Isotope Sector Briefing New Brunswick

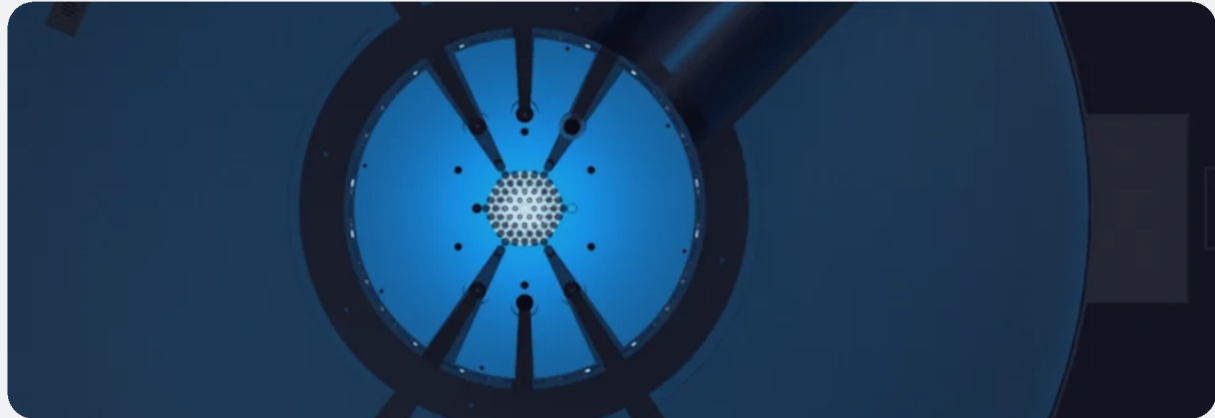


Image from Eden Radioisotopes

## Executive Summary



### Advancing Research

Leading academic institution in both nuclear expertise and stable isotope innovation, strengthening cross-sector research and funding opportunities.



### Investing in future infrastructure

Investing in new PET-CT scanners and exploring isotope production capabilities.



### Collaboration

Partnerships with the University of New Brunswick to drive training and research in health and nuclear technologies.

## Isotope Infrastructure

**2006**

The Saint John Regional Hospital became one of the first sites in Atlantic Canada to install a PET-CT scanner.



**2013**

The Dr. Georges-L.-Dumont University Hospital Centre received a new PET-CT scanner to expand access to patients.



**2020s**

New Brunswick continues to invest in medical imaging with a new PET-CT scanner at the Horizon Saint John Regional Hospital.



In 2026, NB Power announced its plans to explore the potential of producing radioisotopes at the Point Lepreau Nuclear Generating Station. NB Power has established an isotope team to develop a conceptual strategic plan as well as lead the development of business and commercial agreements.



New Brunswick is advancing new nuclear technologies such as advanced Small Modular Reactors (aSMR) like the ARC-100, which has the potential of producing large quantities of isotopes via its fast-spectrum neutrons. The ARC reactor has 12 built-in slots for target irradiation.



New Brunswick is also exploring greater production capabilities for medical isotopes. In 2025, Edén Radioisotopes and Cross River Infrastructure Partners announced a Memorandum of Understanding to explore the development of a new nuclear medicine radioisotope reactor and hot cell processing facility in New Brunswick. The new reactor is targeting the production of HSA Mo-99, NCA Lu-166, Tb-161, and other thermal-spectrum products.

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## Workforce Development and Education

The University of New Brunswick (UNB) offers several programs across various sectors such as: biomedical sciences, engineering, biotechnology, health sciences, and more. At the Centre for Nuclear Energy Research (CNER), UNB's researchers undertake various projects and advance the development of technologies that can support Canada's nuclear isotope industry.



MoU signed with UNB, CNL and AECL to pursue collaborative research opportunities in a variety of areas including medical isotope development and to create dynamic learning opportunities for students



UNB has partnered with Nova Scotia's Dalhousie University to establish **Dalhousie Medicine New Brunswick (DMNB)**. The DMNB includes laboratory-based research teams, health services researchers, clinical research teams, and medical education research in collaboration with the Research in Medicine program. The Saint John Regional Hospital is an active teaching site for the DMNB.



UNB is also home to a robust **stable isotope program**. The Stable Isotopes in Nature Laboratory (SINLAB), located within the UNB Biology Department and established through the Canadian Rivers Institute in 1999, is one of few stable isotope labs in Canada. The SINLAB uses Continuous Flow Isotope Mass Spectrometry (CFIRMS) technology to analyze a variety of BULK substrates (e.g., muscle, blood, feather, claw, horn, plankton, insects, biofilm, sediment etc.) for stable isotopes of carbon, nitrogen, and hydrogen. **For over 20 years, academic, private, and government researchers from around the globe have relied on the SINLAB for isotope analyses.**

## Patient Access to Life-Saving Radiopharmaceuticals



Boston Scientific's **TheraSphere™ Y-90 Glass Microspheres** is approved for use in New Brunswick for liver cancer.

## Clinical Trials



New Brunswick is a part of the **Atlantic Clinical Trials Network (ACTN)**, which is a pan-Atlantic initiative working to strengthen and accelerate clinical research across Eastern Canada.



**Research NB**, an organization dedicated to supporting and promoting research excellence in New Brunswick, works to attract researchers and clinical talent to create opportunities for New Brunswick's research ecosystem.

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## Leading Companies and Organizations - CNIC Member Spotlight



### Saint John

ARC is a clean energy technology company developing the ARC-100, an aSMR offering inherently safe, reliable, carbon free power and the creation of life-saving medical isotopes.



### Fredericton

CNL is Canada's premier nuclear science and technology organization, and a world leader in developing nuclear technology for peaceful and innovative applications.



### Fredericton

NB Power is New Brunswick's Power company. NB power works to provide consistent, safe, reliable and sustainable energy.



### Fredericton

With programs across biomedical sciences, chemical and civil engineering, biotech, & health sciences, UNB provides hands-on training for careers in isotopes.

## References

[AECL & CNL build on longstanding relationship with the University of New Brunswick through collaborative research agreement - AECL](#)

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[Atlantic Provinces Partner to Create Atlantic Clinical Trials Network - CNTN](#)

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[Saint John Campus - Department of Diagnostic Radiology - Dalhousie University](#)

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[Dr. Georges-L.-Dumont University Hospital Centre receives new PET/CT scanner](#)

[Eden Radioisotopes and Cross River Infrastructure Partners Sign MOU to Explore Development of a New Generation Medical Radioisotope Reactor in New Brunswick](#)

[Health - Research NB](#)

[History — Stable Isotopes in Nature Laboratory](#)

[Medical Isotopes | ARC Clean Energy](#)

[Stable Isotopes in Nature Laboratory](#)

[The University of New Brunswick joins the CNIC to advance research, development, and education in medical isotopes – Canadian Nuclear Isotope Council](#)