

NOFO Informational Webinar

ISOTOPE R&D AND PRODUCTION – RESEARCH DEVELOPMENT AND TRAINING IN ISOTOPE PRODUCTION DE-FOA-0003530

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January 29, 2025

FOA Issue Date:	January 17, 2025
Submission Deadline for Pre-Applications:	February 17, 2025, at 11:59 PM Eastern Time
Pre-Application Response Date:	February 28, 2025, at 11:59 PM Eastern Time
Submission Deadline for Applications:	April 17, 2025, at 11:59 PM Eastern Time

Disclaimer : *This presentation summarizes the contents of the NOFO. Nothing in this webinar is intended to add to, take away from, or contradict any of the requirements of the NOFO. If there are any inconsistencies between the NOFO and this presentation or statements from DOE personnel, the NOFO is the controlling document.*



U.S. DEPARTMENT OF
ENERGY

Office of
Science

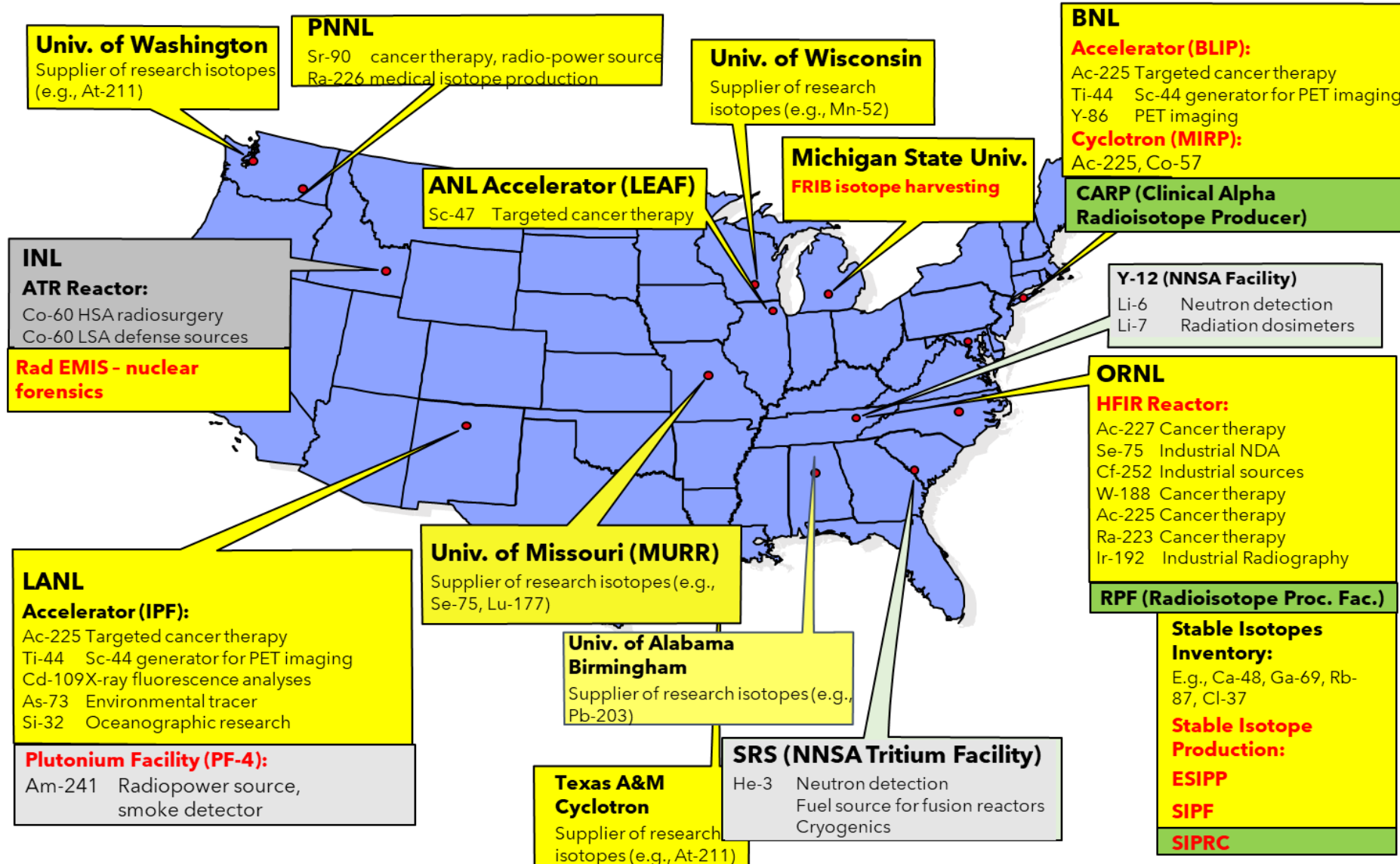
Webinar Goals

- ◆ Specifics of the DOE Isotope Program
- ◆ How to read/interpret the NOFO
- ◆ Common Questions
- ◆ Q&A / open discussion
 - Please use the Q&A function in the Zoom toolbar to communicate your questions.

Purpose, Encouragement, and Transparency

- ◆ DOE IP is committed to supporting the cutting-edge R&D necessary to maintain the U.S. presence as a global leader the field of isotope science and to foster the development of the next generation workforce.
- ◆ There are many scientific disciplines that are integral components to the field of isotope science. Just because an institution doesn't currently have a production capability should not eliminate them from participating in competitive R&D and engaging in workforce development.
- ◆ While regulations prohibit discussions that might be perceived as providing a competitive advantage or guidance, the DOE IP will attempt to answer questions regarding nuanced language or intent in the NOFO, as well as general responsiveness. Other questions will be considered and answered to the fullest extent possible.

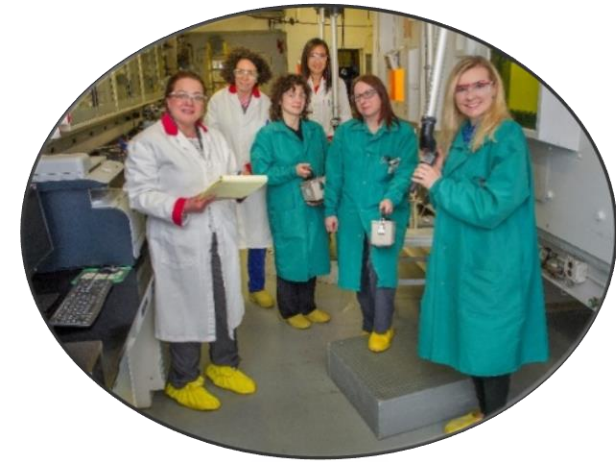
DOE IP Production Sites



Accelerator Facilities

Brookhaven National Laboratory Brookhaven Linac Isotope Producer (BLIP)

- BLIP beam line directs 200 MeV protons with up to 160 μA intensity to targets; parasitic operation with nuclear physics programs for more cost-effective isotope production.



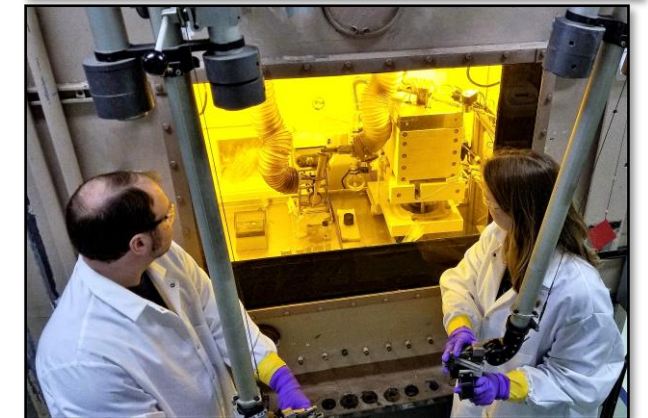
Los Alamos National Laboratory Isotope Production Facility (IPF)

- Diversion of 100 MeV protons with up to 380 μA intensity to target station.
- Irradiates targets while LANSCE operates for NNSA.



Argonne National Laboratory Low Energy Accelerator Leaf Facility (LEAF)

- 50 MeV/25 kW electron linear accelerator
- Newest addition to program
- Responsive to NSAC recommendation



Reactor Facilities



Idaho National Laboratory Advanced Test Reactor (ATR)

- Office of Nuclear Energy is steward
- High Specific Activity Co-60 for medical applications
- Developing Ir-192 for industrial radiography



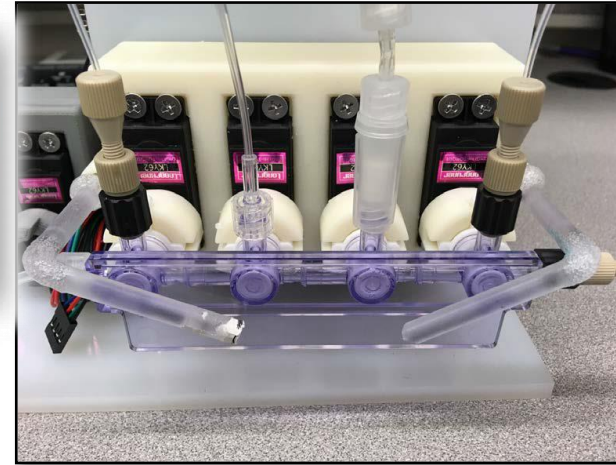
Oak Ridge National Laboratory High Flux Isotope Reactor (HFIR)

- Office of Basic Energy Science is steward
- Radiochemical Engineering Development Center (REDC) – extensive processing capabilities

Other Isotope Program Sites

Y-12 National Security Complex

- Li-6 (neutron detection)
- Li-7 (dosimeters)



Pacific Northwest National Laboratory

- Radiochemical Processing Laboratory
- Process Automation

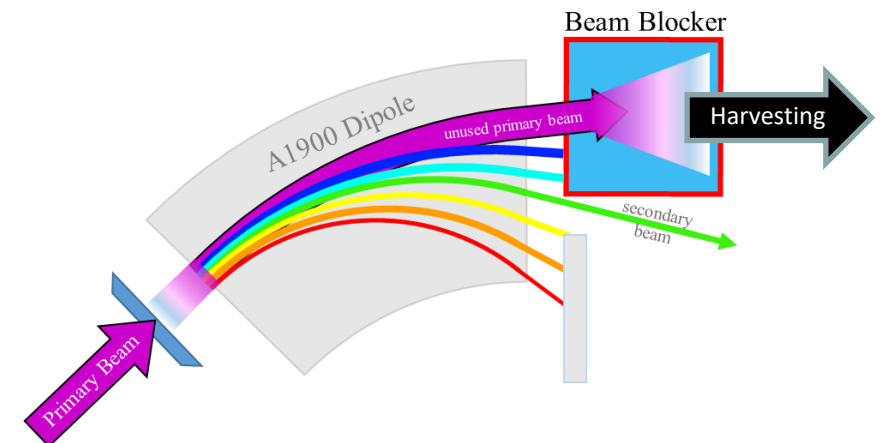
Savannah River Site (SRS)

- He-3 extraction from NNSA tritium
- Developing new sources of He-3

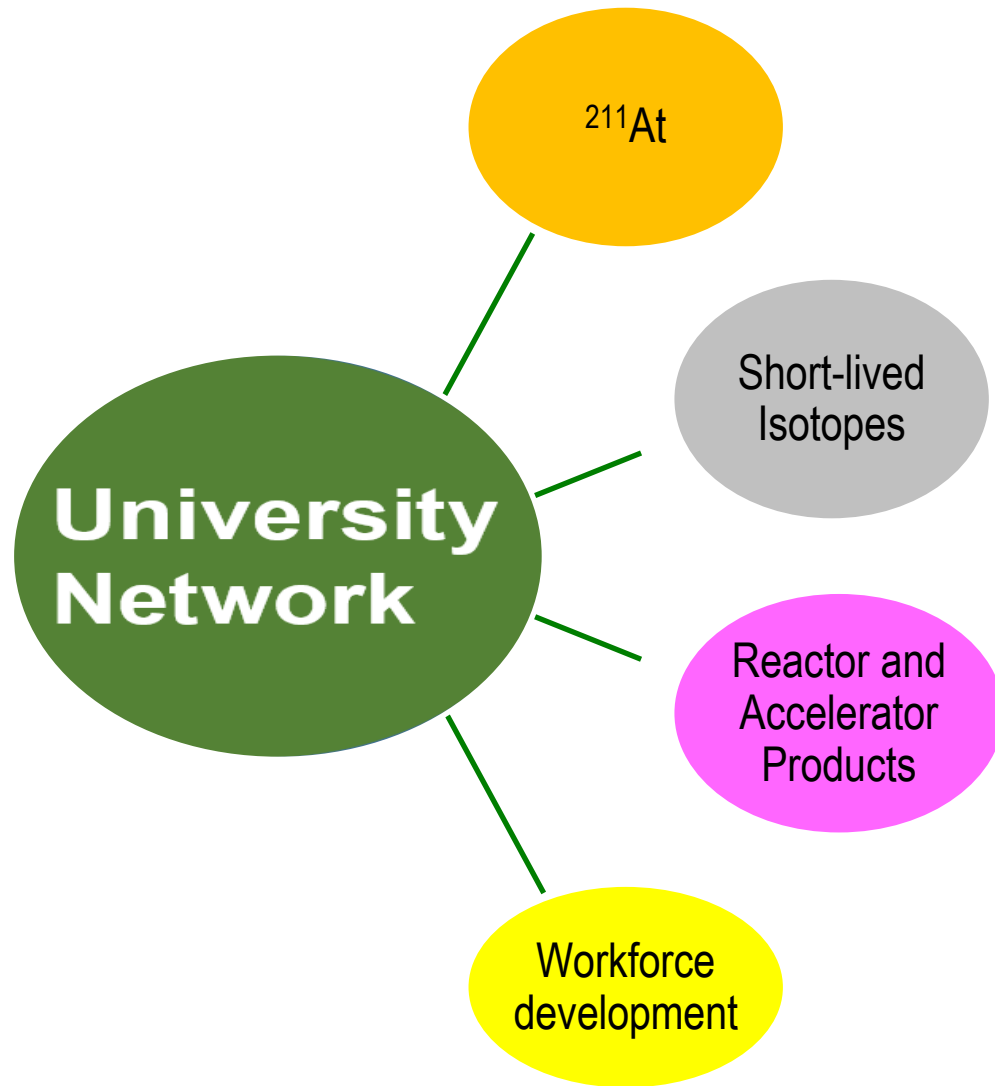


Facility for Rare Isotope Beams (FRIB)

- New accelerator for the study of nuclear structure and astrophysics
- Implementing isotope harvesting capabilities



University Facilities/UIN



- Unique capabilities and expertise
- Cost-effective
- R&D on isotope production
- Boutique isotope production
- Workforce development
- Regional networks
 - Example: At-211
 - 7.2-hour half-life
 - Therapeutic α -emitting isotope
 - 250 university, hospital and research facility cyclotrons in the U.S. are capable of isotope production
 - Only 5 with potential to produce At-211 and all are academic sites

UIN Members

- Univ. of Alabama, Univ. of Missouri, Texas A&M Univ., Univ. of Washington & Univ. of Wisconsin currently produce isotopes for the DOE Isotope Program

Getting Started

- ◆ The current R&D NOFO was released on January 17th.
- ◆ There have been three updates to the NOFO issued in the intervening time.
- ◆ Please ensure you are looking at the most recent update NOFO 3530-000003 which has the title, "Research, Development, and Training in Isotope Production."
- ◆ When looking at the NOFO, I'll be referring to page numbers.

I. Basic Information

U.S. Department of Energy (DOE)
Office of Science (SC)

Executive Summary
Isotopes are high-priority commodities of strategic importance for the Nation and are essential in medical diagnosis and treatment, discovery science, national security, industrial processes, advanced manufacturing, space exploration, communications, biology, archaeology, quantum information science, clean energy, environmental science, and other fields. Isotopes can directly enable emerging technologies and contribute to the economic, technical, and scientific strength of the United States. The DOE Office of Science Program for Isotope R&D and Production (also referred to as the DOE Isotope Program or DOE IP) routinely funds research and development (R&D) in isotope science to advance fundamental understanding and develop cutting edge and efficient technologies for enriching, producing, processing, recycling, and purifying radioactive and stable isotopes in short supply. This Notice of Funding Opportunity (NOFO) is narrowly focused on topics involving AI/ML, enhanced processing chemistry used in matter phase changes, and separation science. Applications incorporating effective ways to train the next generation of personnel with essential knowledge and skills related to the production, processing, and purification of radioactive and enriched stable isotopes are strongly encouraged.

Funding Details

Expected total available funding	Up to \$11,000,000 in current and future fiscal year funds
Expected number of awards	Between 8 and 12 awards are expected
Expected dollar amount of individual awards	Between \$100,000 per year and \$750,000 per year
Expected award project period	2 years

Key Facts

NOFO Title	Research, Development, and Training in Isotope Production
NOFO Number	DE-FOA-0003530
Announcement Type	Amendment 000002
Assistance Listing	81.049
Statutory Authority	The programmatic authorizing statute is: Section 646 of Public Law 95-91, U.S. Department of Energy Organization Act Section 901, et seq. of Public Law 109-58, Energy Policy Act of 2005
Governing Regulations	Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, codified at 2 CFR 200 U.S. Department of Energy Financial Assistance Rules, codified at 2 CFR 910 U.S. Department of Energy, Office of Science Financial Assistance Program Rule, codified at 10 CFR 605

Eligibility

- ◆ **All** colleges and universities, Non-Profit Research Institutions and DOE/NNSA National Laboratories are eligible and encouraged to participate either as an applicant or a sub-award recipient.
- ◆ Private industry is **ineligible**.
- ◆ 2-year awards
 - Work scope should only be proposed which can be completed within the performance period of 24 calendar months.
 - One should not propose work with the intention of needing a “no cost extension” from the outset.
- ◆ Multi-institutional teams, whether applied for as a prime applicant with subawards or as a collaboration, are limited to requests of no more than \$750,000 per year (\$1.5M total) for the entire effort not per institution.
- ◆ A single-institution proposal is limited to a request of no more than \$750,000 per year (\$1.5M total).
- ◆ Budget limits are indicative of total funds (direct costs + indirect costs)

Understanding the NOFO

- ◆ Pre-applications are required and must be submitted by an institutional representative
- ◆ Pre-applications and full applications are due no later than 11:59pm (Eastern) on their respective due dates
- ◆ NOFO Roadmap
 - The table of contents is hyperlinked & a convenient way to navigate the document
 - Pay careful attention to all page limits
 - Pages 1-12 provide a general overview of what the solicitation seeks
 - **R&D topics are listed on pages 6 and 7**
 - Pages 13-24 discuss the sections, their formatting and the appendices that **MUST** be included in the application (including, but not limited to, the narrative section, Data Management Plans, and Senior/Key Personnel Profiles).
 - Page 20 has a section specifically directed to Institutional Representatives
 - A description of specifics regarding allowable costs/categories for budget items (more detail is provided in a specific budget section on pages 27-28 & 61-65).
 - Pages 34-37 discuss the review process, merit review criteria, and program policy factors.

Common Questions

- ◆ There are significant changes to this NOFO from previous versions
 - *Question: Why are the changes so dramatic?*
 - *Answer: The current NOFO is indicative of the growth and development experienced by the Program over the better part of the last decade. The topics published represent current R&D needs.*
- ◆ *The NOFO mentions that responsive submissions will address one of the bullets listed on pages 6 and 7 of the NOFO. Does DOE IP expect to only receive proposals to these topics?*
- ◆ *What is the difference between a “prime and subaward proposal” and a “collaborative proposal”?*
- ◆ *Where can I find a list of DOE IP Points of Contact at DOE/NNSA National Laboratories and UIN sites?*
 - <https://science.osti.gov/-/media/Isotope-Research-Development-and-Production/pdf/DOE-IP-Isotope-Production-Site-Contact-List.pdf>

Common Questions (continued)

- ◆ Question: On page 69 the NOFO states that funds are not presently available for this award, but previously in the NOFO it states that awards will be made in FY25 and FY26 subject to availability of funds. So how do we interpret this?
 - Answer: This is nuanced language. DOE IP currently plans to support awards out of its FY 2025 allocation. While we do intend to make a second batch of awards in FY 2026, we do not yet have a budget for FY 2025 or FY2026. So, the wording provides freedom in making awards and the potential for a second batch of awards (obviously subject to availability of funds).
- ◆ Question: *I have a pending submission where the scope of proposed work will be substantially similar to, or duplicative of, the scope of work I intend to propose to this NOFO. Is this allowable?*
 - Answer: *You may submit the same scope of work to multiple solicitations as long as it is acknowledged in the current and pending support section of the submission. However, duplication of funding is not allowed. If a decision to fund both submissions occurs the cognizant Program Manager will then either negotiate work scope to ensure lack of duplicated effort or ask you to pick which award you would like to receive.*

For more information

- ◆ The FOA is the authoritative source for this competition:
 - <https://science.osti.gov/Isotope-Research-Development-and-Production/-/media/grants/pdf/foas/2025/DE-FOA-0003530-000003.pdf>
 - A link to a recording of this webinar will also be available within 7-10 days on the same page as the NOFO listing.
- ◆ If you still have questions, you can contact the Program Managers listed in the NOFO for technical questions.