



Competitive DOE IP Funding Opportunities for R&D and Training

DOE Office of Science's Office Hours
April 8, 2024

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Office of Science for Isotope R&D and Production
U.S. Department of Energy

Statement of Commitment



The DOE Office of Science (SC) microsite on Diversity, Equity & Inclusion is now posted on the SC website.

The entirety of the statement can be found at:

<https://science.osti.gov/sc-2/research-and-conduct-policies/diversity-equity-and-inclusion/>


“The DOE Office of Science (SC) is fully committed to fostering safe, diverse, equitable, and inclusive work, research, and funding environments that value mutual respect and personal integrity. Effective stewardship and promotion of diverse and inclusive workplaces that value and celebrate a diversity of people, ideas, cultures, and educational backgrounds is foundational to delivering on the SC mission. The scientific community engaged in SC-sponsored activities is expected to be respectful, ethical, and professional.

The DOE SC does not tolerate discrimination or harassment of any kind, including sexual or non-sexual harassment, bullying, intimidation, violence, threats of violence, retaliation, or other disruptive behavior in the federal workplace, including DOE field site offices, or at national laboratories, scientific user facilities, academic institutions, other institutions that we fund, or other locations where activities that we support are carried out...”

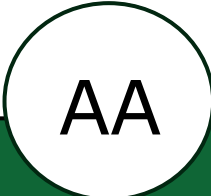
The Faces of DOE IP



 Vacant Admin Assistant	 Andrea Conrad Financial Management Specialist Budget Formulation	 Jehanne Gillo Director	 Deanna Ammons Financial Management Specialist Budget Execution	Bill Newton Subcontract Support Leonard Mausner Subcontract Support
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Ethan Balkin
Radioisotope Production R&D



AA
Ade Ademiluyi
Alternative Isotope Production



Kenneth Brooks
Isotope Program Operations (NIDC)




Arne Freyberger
Isotope Accelerator Facilities



April Gillens
Stable Isotopes



Khianne Jackson
Isotope Program Initiatives



Jon Neuhoff
Isotope Reactor Facilities



Julie Ezold
Technical Advisor



Produce and/or distribute radioactive and stable isotopes that are in short supply; includes by-products, surplus materials and related isotope services



Maintain the infrastructure required to produce and supply priority isotope products and related service



Conduct R&D on new and improved isotope production and processing techniques which can make available priority isotopes for research and application. Develop workforce.

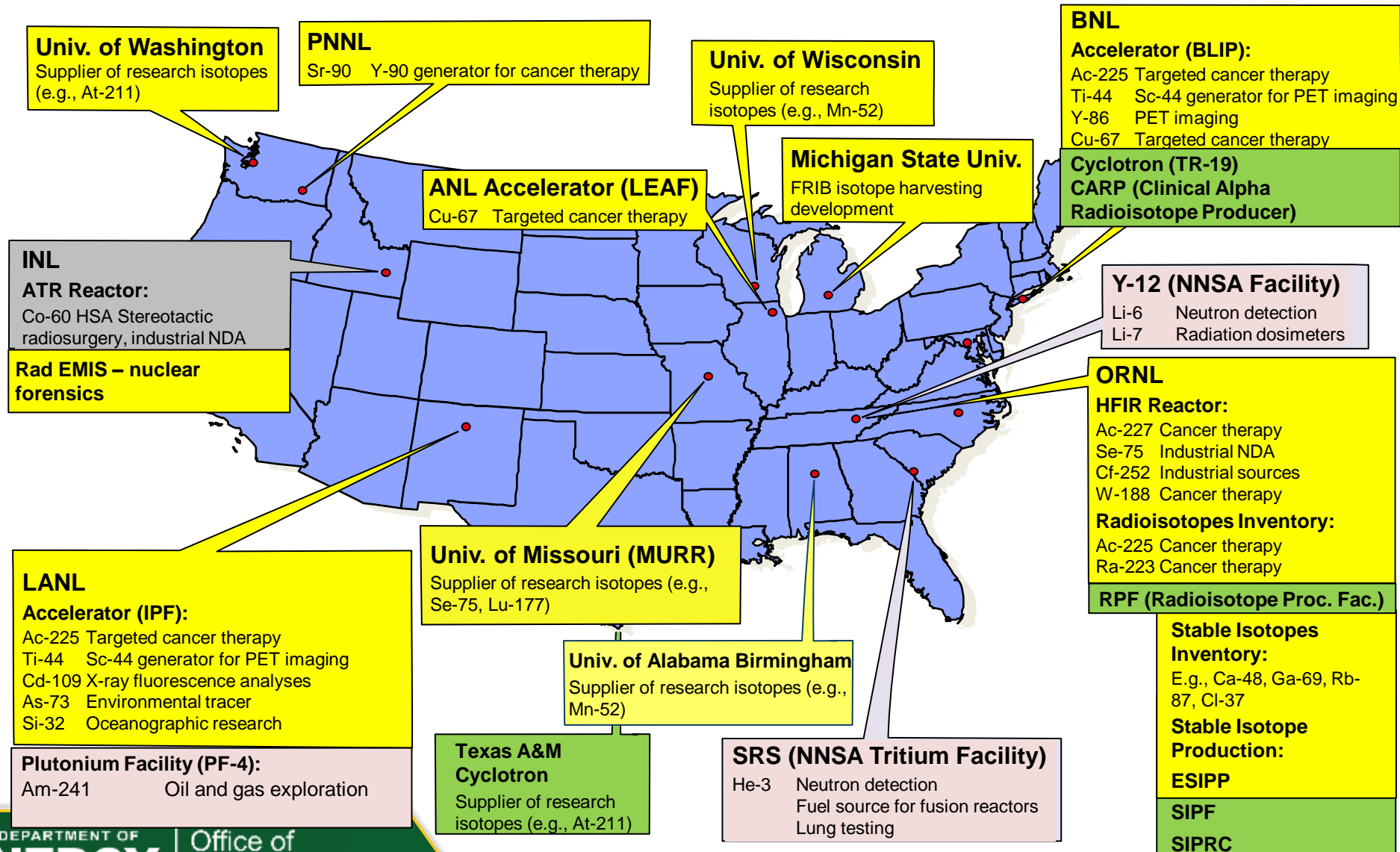


Ensure robust domestic supply chains. Reduce U.S. dependency on foreign supply to ensure National Preparedness.

Remember three things: Mission, Law & Role

DOE IP Production Sites- 2024

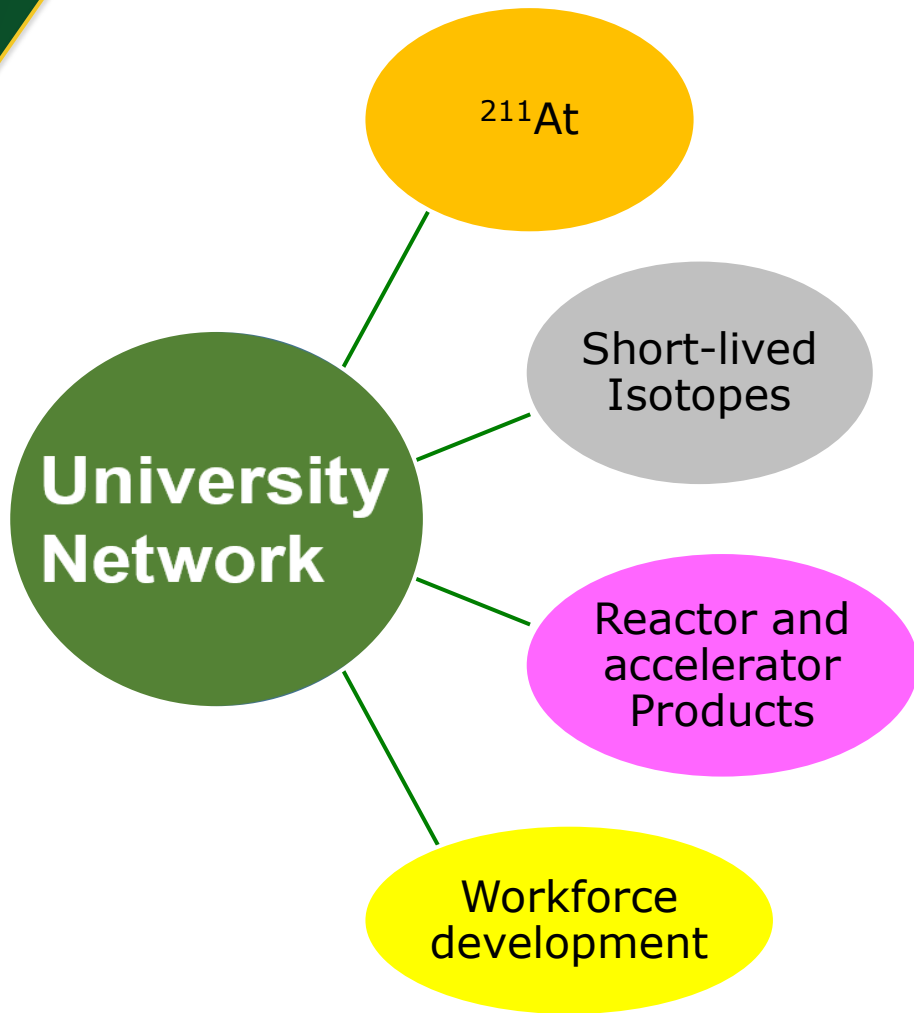
Unique collection of accelerators, reactors, other capabilities



Green boxes under development

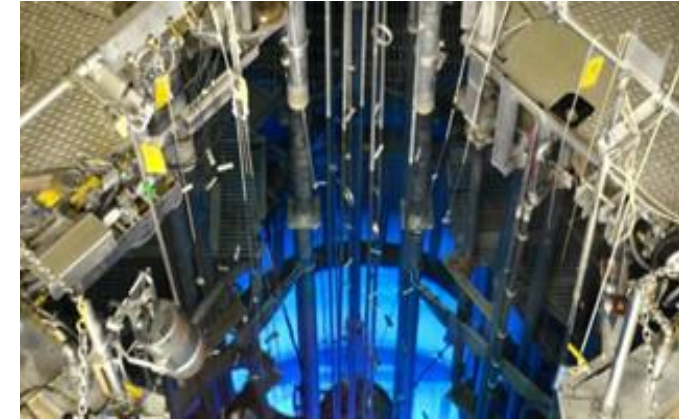
13/19 facilities added while under SC management

University Isotope Network

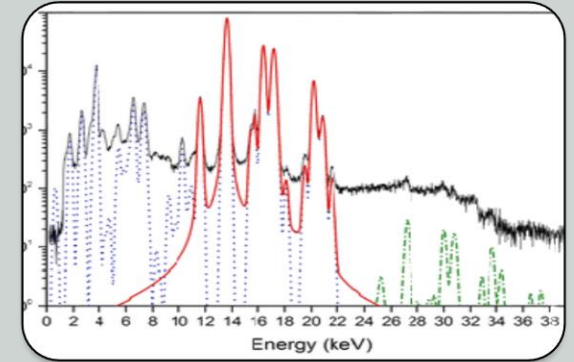
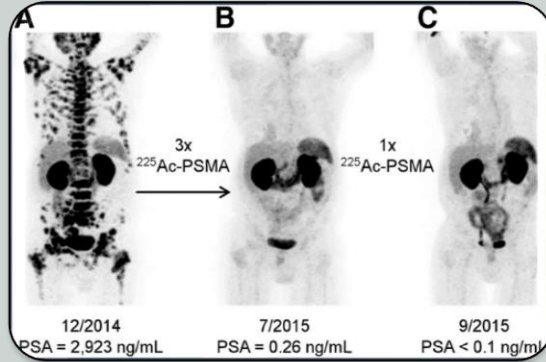
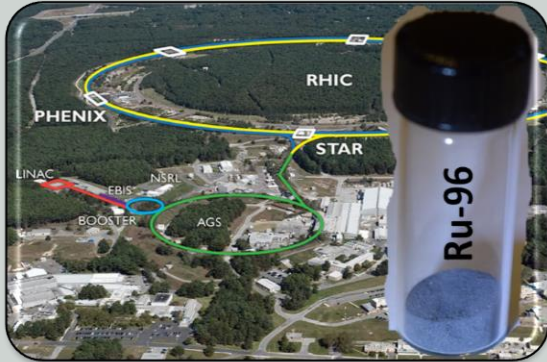


University Network continues to grow

- ▶ UW, UMO/MURR, MSU, UAB, UWM, **TAMU**
- ▶ Cost-effective
- ▶ R&D on isotope production
- ▶ Boutique isotope production
- ▶ Workforce development



Applications of Isotopes



Basic Research

- Physics
 - Super Heavy Elements
 - Nuclear Physics
- Environment
- Materials
- Agriculture
- Analytical Chemistry
- Geosciences

Medicine

- Therapies
- Imaging/Diagnostics
- Research
- Dental

Industry

- Standards
- Inspections
- Testing
- Sources
- Nuclear Data
- Forensics

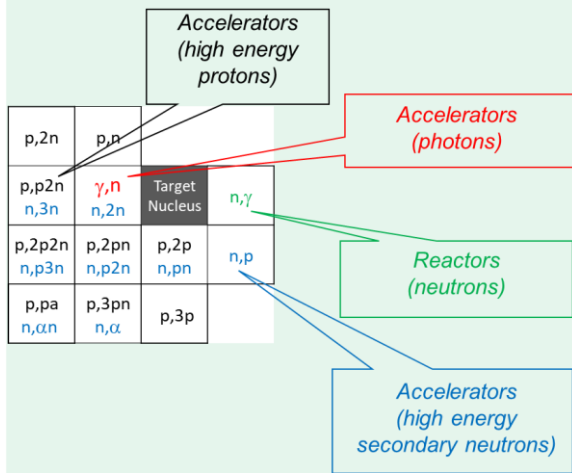
National Security

- Communication
- Detection
- Nuclear Data
- Global Positioning
- Sources

Variety of R&D

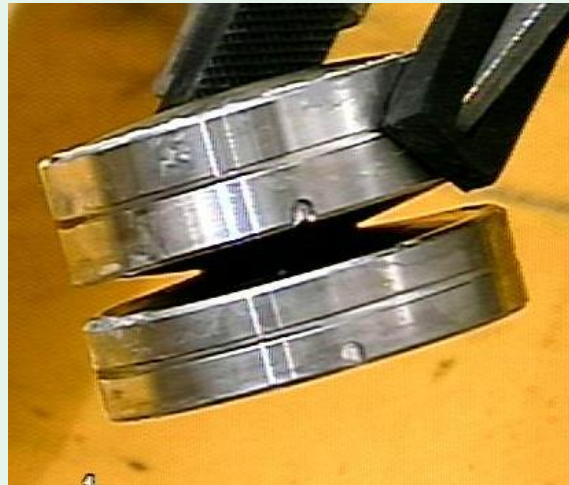
Transmutation

Radioisotope production enabled by nuclear data through neutron, charged particle, and photo nuclear reactions.



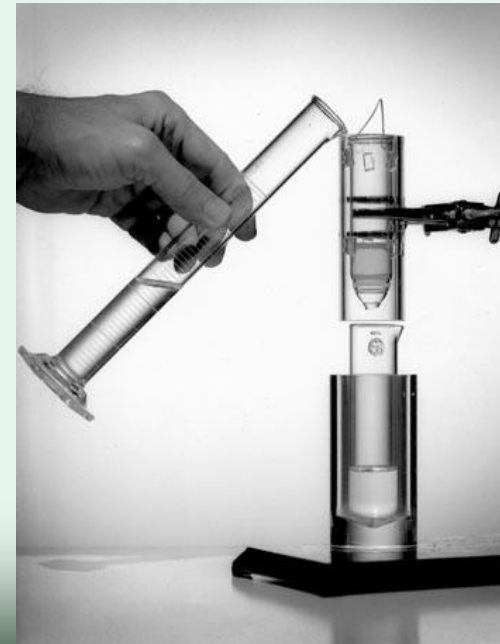
Targetry

Thermal hydraulics
Materials
Particle transport modeling



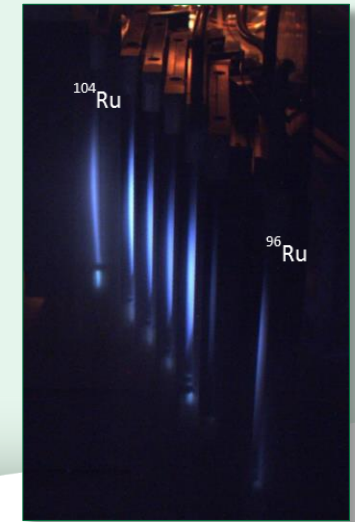
Processing

Separations science for the recovery and purification of radio isotopes
Process automation and remote handling



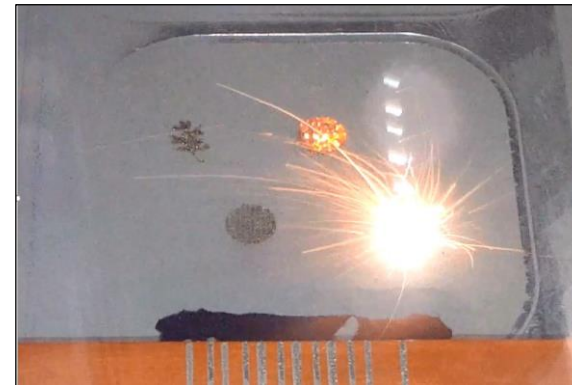
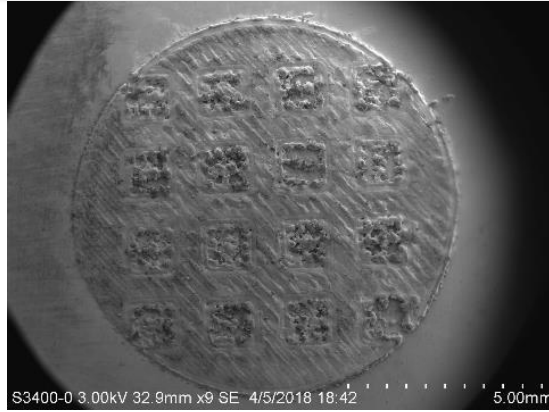
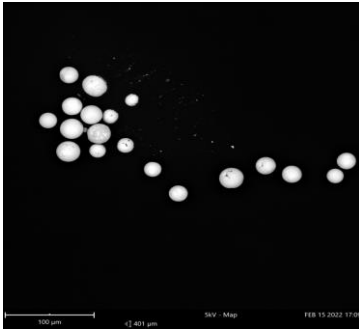
Enrichment

Isotope Program manages the Nation's inventory of stable isotopes
Have re-established enriched stable isotope production in the United States

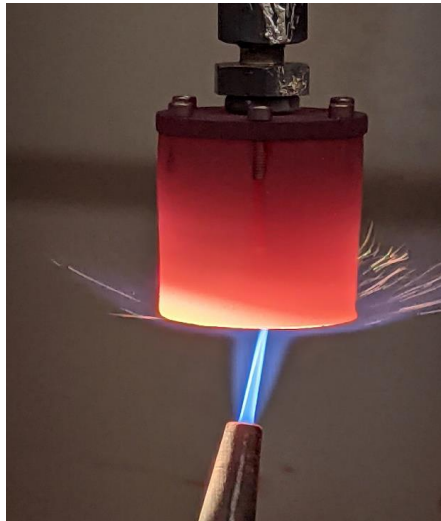
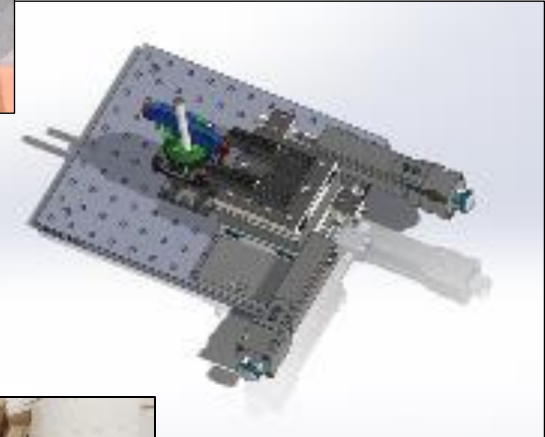


Variety of R&D

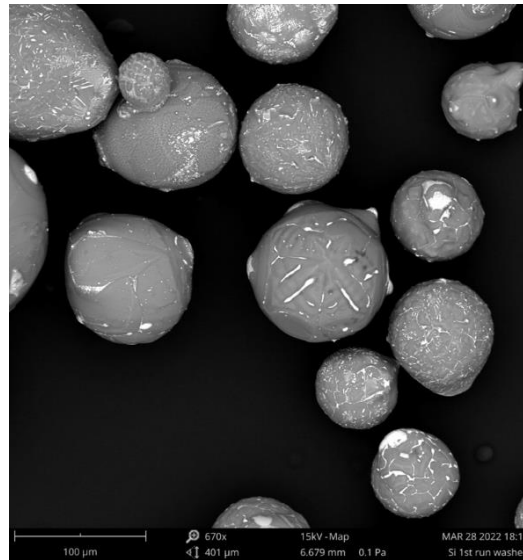
Precision dispensing: 19 Tungsten powder particles totaling 21 μg



Additive manufacturing of complex targets



Precision feedstock for additive manufacturing of functional materials – spheroidal powders with controllable properties. Aerosol jetting is one technique developed.



Si-28 as a spheroidal powder



Robot for extraction of irradiated targets

Custom Designed and Fabricated Biofluidix Inkjet Printer for targets

Noteworthy Statements

- DOE IP is committed to fostering an inclusive funding environment to enable the development R&D capabilities and the training of the next generation workforce.
- There are many scientific disciplines that are integral components to the field of isotope production. Just because an institution doesn't currently have a production capability should not eliminate them from participating in competitive R&D and/or engaging in workforce development.
- Regulations impact what DOE IP can openly discuss and when.
 - Before an FOA is posted, conversations related to the specifics of a topic and their relevance to DOE IP programmatic priorities can be discussed, but notional ideas related to potential future FOAs, and their specifics are generally out of bounds.
 - When an FOA is "live on the street", discussions that might be perceived as providing a competitive advantage are prohibited, the DOE IP is happy to answer questions regarding nuanced language or intent in an FOA and the general responsiveness of an idea to the solicitation. Other questions will be considered and answered to the fullest extent possible.

- ▶ Hot Topics in Isotope R&D and Production FOA
 - ▶ Released biennially
 - ▶ Formerly entitled “Research Development and Training in Isotope R&D and Production”
- ▶ Topical FOA’s as they become relevant
 - ▶ Previous Release in FY21 of the “Advancing Novel Medical Isotopes for Clinical Trials” FOA
- ▶ Annual Continuation of Solicitation for the Office of Science Financial Assistance Program (“The Open Call”)
 - ▶ Who can apply?
 - ▶ How does DOE IP use it?
- ▶ Annual SC Early Career Research Program FOA
- ▶ Annual SC EPSCoR Program FOA
- ▶ SC Graduate Student Research (SCGSR) and SC Summer Undergraduate Laboratory Internship (SULI)

Eligibility and Teaming for Most IP R&D FOAs



- All colleges and universities, Non-Profit Research Institutions and DOE/NNSA National Laboratories
 - Private industry is ineligible to participate either as an applicant or a sub-award recipient.
 - 2-year awards
 - 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 for the entire effort **not per institution**.
 - A single-institution proposal is limited to a request of no more than \$750,000 per year.
 - Budget limits are indicative of total funds (direct costs + indirect costs)
- **MSIs and previously unfunded institutions are always encouraged to apply**
- Typical Questions :
 - What is the difference between a “prime and subaward proposal” and a “collaborative proposal”?
 - Where can we 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>

Workforce Development Funding



- ▶ R&D Awards, RENEW and FAIR
- ▶ Annual SC Early Career Research Program FOA
- ▶ Annual SC EPSCoR Program FOA
- ▶ SC Graduate Student Research (SCGSR) and SC Summer Undergraduate Laboratory Internship (SULI)
- ▶ Minority Educational Institution Student Partnership Program (MEISPP) Internships
- ▶ Support student and postdoctoral travel bursaries for conference attendance
- ▶ DOE IP co-funds the annual Nuclear and Radiochemistry Summer School with BES & NP

*Beginning in FY 2023, Office of Science solicitations required that applicants submit a plan for **Promoting Inclusive and Equitable Research, or PIER Plan**, along with their research proposals.*

- *This is a requirement for proposals submitted to all Office of Science solicitations, as well as invited proposals from the DOE national laboratories.*

PIER Plans are limited to 3 pages and should describe the activities and strategies that investigators and research personnel will incorporate to promote diversity, equity, inclusion, and accessibility in their research projects.

- *The complexity and detail of a PIER Plan is expected to increase with the size of the research team and the number of personnel to be supported.*
- *The PIER Plans are to be evaluated under a new merit review criterion as part of the peer review process.*

Additional information and FAQs: <https://science.osti.gov/grants/Applicant-and-Awardee-Resources/PIER-Plans>

Upcoming Events

- Isotope R&D and Production (DOE IP) DOE IP will hold virtual office hours on the second Monday of the month, 2-3pm ET. In cases where the second Monday falls on a federal holiday, the office hour will slide to the third Monday of the month. Upcoming topics include:
 - Monday, May 13, 2024, at 2pm ET – Working with a Program Manager Before, During, and After an Award
 - June’s topic will be announced shortly, please watch the website listed below.
- For more information on DOE IP office hours, including registration, upcoming topics, slides, and recordings, please visit <https://science.osti.gov/Isotope-Research-Development-and-Production/officehours>.
- We look forward to having you join our Office of Science network and office hours!

Thank You!

