



# **Training Workshop on Radioisotope Production at Research Reactors**

**Hosted by the  
Government of Italy**

**through the  
University of Pavia**

**Pavia, Italy**

**21–25 September**

**Ref. No.: EVT2504032**

## **Information Sheet**

### **Introduction**

The IAEA supports Member States in deployment and utilization of advanced nuclear science and technology and promotes enhancement of the quality of products and analytical services.

Radioisotopes find a wide range of applications in various fields, including nuclear medicine, industry, civil society, agriculture, environmental studies and other areas. The production of radioisotopes, radiolabelled compounds, radioisotope generators, radiation sources and other products based on radioisotopes constitutes an important part of several national nuclear programmes and currently, the two main sources of artificial radioisotopes are accelerators and nuclear reactors.

The production of radionuclides in reactors primarily involves exposing appropriate target materials to an intense neutron flux for a sufficient duration. This process is mainly based on neutron capture in a target material, resulting in either activation or fission of the target material nuclei. Research reactors offer an attractive production route due to large available volume for irradiation, high neutron fluxes, simultaneous irradiation of several targets, economy of production and possibility to produce a wide variety of radioisotopes.

There are currently 235 research reactors worldwide in operational or temporary shutdown status<sup>1</sup>. Of these, 83 research reactor facilities in 39 countries report activity in isotope production.

This workshop is intended to assist Member States who have research reactor facilities used in capacity building, disseminate technology, knowledge and experience in the area of radioisotope production and applications. It will also foster collaboration and networking using research reactors.

## Objectives

The purpose of the event is to introduce and deliver the most recent, concise, information on the radioisotope production at research reactors - for basic research, medicine and industry. The event will provide hands-on training and theoretical knowledge for young professionals to sustain the capacity of Member States which produce radioisotopes.

## Target Audience

The meeting is intended for individuals involved in the utilization of research reactors for radioisotope production or considering development radioisotope production facilities.

Member States are invited to designate one or more participants for this meeting. Member States are strongly encouraged to identify suitable women participants.

## Working Language(s)

The working language of the meeting will be English. No simultaneous interpretation will be provided.

## Topics

The meeting will include presentations by experts, in sessions devoted to specific topics, with subsequent sessions at experimental set-ups and instruments, and post-experimental analysis in small groups thanks to the facilities made available by the University of Pavia, Italy.

The workshop programme will be designed to cover a range of topics including:

- Evaluation of the facility characteristics as available irradiation position channels, neutron spectra, or flux, and irradiation conditions;
- Methodology for the theoretical estimation of radioisotope production and resulting radioactivity;

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<sup>1</sup> IAEA Research Reactor Database: <https://nucleus.iaea.org/RRDB>.

- Target sample selection and preparation;
- Related radiation protection and safety considerations and procedures;
- Related radioisotopes recovery and labelling activities, and gamma spectrometry of the irradiated samples;
- Industrial overview for the production of radioisotopes and generation of radiopharmaceuticals;
- Quality assurance introduction of radioisotope production processes and radiopharmaceuticals generation.

## Participation and Registration

All persons wishing to participate in the event have to be designated by an IAEA Member State or should be members of organizations that have been invited to attend.

In order to be designated by an IAEA Member State or invited organization, participants are requested to submit their application via the InTouch+ platform (<https://intouchplus.iaea.org>) to the competent national authority (Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) or organization for onward transmission to the IAEA by **17 July 2026** following the registration procedure in InTouch+:

1. Access the InTouch+ platform (<https://intouchplus.iaea.org>):
  - Persons with an existing NUCLEUS account can sign in to the platform with their username and password;
  - Persons without an existing NUCLEUS account can register [here](#).
2. Once signed in, prospective participants can use the InTouch+ platform to:
  - Complete or update their personal details under ‘Complete Profile’ and upload the relevant supporting documents;
  - Search for the relevant event under the ‘My Eligible Events’ tab;
  - Select the Member State or invited organization they want to represent from the drop-down menu entitled ‘Designating Authority’ (if an invited organization is not listed, please contact [InTouchPlus.Contact-Point@iaea.org](mailto:InTouchPlus.Contact-Point@iaea.org));
  - If applicable, indicate whether a paper is being submitted and complete the relevant information;
  - If applicable, indicate whether financial support is requested and complete the relevant information (this is not applicable to participants from invited organizations);
  - Based on the data input, the InTouch+ platform will automatically generate the Participation Form (Form A) and/or the Grant Application Form (Form C);
  - Submit their application.

Once submitted through the InTouch+ platform, the application, together with the auto-generated form(s), will be transmitted automatically to the required authority for approval. If approved, the application, together with the applicable form(s), will automatically be sent to the IAEA through the online platform.

NOTE: The application for financial support should be made, together with the submission of the application, by **17 July 2026**.

For additional information on how to apply for an event, please refer to the [InTouch+ Help](#) page. Any other issues or queries related to InTouch+ can be sent to [InTouchPlus.Contact-Point@iaea.org](mailto:InTouchPlus.Contact-Point@iaea.org).

Selected participants will be informed in due course on the procedures to be followed with regard to administrative and financial matters.

Participants are hereby informed that the personal data they submit will be processed in line with the [Agency's Personal Data and Privacy Policy](#) and is collected solely for the purpose(s) of reviewing and assessing the application and to complete logistical arrangements where required. The IAEA may also use the contact details of Applicants to inform them of the IAEA's scientific and technical publications, or the latest employment opportunities and current open vacancies at the IAEA. These secondary purposes are consistent with the IAEA's mandate. Further information can be found in the [Data Processing Notice](#) concerning IAEA InTouch+ platform.

## Other Requirements for Participation

Applicants should submit a short CV and an explanation of how participating in the training will impact their development. Please send these additional documents via e-mail to [V.Semkova@iaea.org](mailto:V.Semkova@iaea.org). Applications without a short CV will not be considered.

In addition, applicants are expected to give short presentations on their research projects with relevance to the workshop and therefore are requested to submit an abstract of their work. The abstract will be reviewed as part of the selection process for presentations. The abstract should be in an A4 page format, should extend to no more than one page (including figures and tables) and should not exceed 300 words. It should be sent electronically to via e-mail to [V.Semkova@iaea.org](mailto:V.Semkova@iaea.org), not later than **17 July 2026**. Authors will be notified of the acceptance of their proposed presentations by **31 July 2026**.

## Expenditures and Grants

No registration fee is charged to participants.

The IAEA is generally not in a position to bear the travel and other costs of participants in the event. The IAEA has, however, limited funds at its disposal to help meet the cost of attendance of certain participants. Upon specific request, such assistance may be offered to normally one participant per country, provided that, in the IAEA's view, the participant will make an important contribution to the event.

The application for financial support should be made, together with the submission of the application, by **17 July 2026**.

## Visas

Participants who require a visa to enter Italy should submit the necessary application as soon as possible to the nearest diplomatic or consular representative of Italy.

## **IAEA Contacts**

### **Scientific Secretary:**

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Subsequent correspondence on scientific matters should be sent to the Scientific Secretary/Secretaries and correspondence on other matters related to the event to the Administrative Secretary.

## **Event Web Page**

Please visit the following IAEA web page regularly for new information regarding this event:

[www.iaea.org/events/ EVT2504032](http://www.iaea.org/events/EVT2504032)