EU programme for research infrastructures- providing access to novel radionuclides

Patricia Postigo McLaughlin

19 November 2025

European Commission

European Commission

What are Research infrastructures?

- ‘Research Infrastructures’ - born as EU policy-making term.
- First European RIs were created as international organisations. Gradual shift to EU method. From IOs to ERICs (a new EU legal form). All of them are part of the European ESFRI Roadmap of Research Infrastructures, agreed amongst EU MS and associated countries through ESFRI.
- The concept of ‘research infrastructure’ is based in Big Science installations, but from the 80s it expanded to include large scientific collaborations that use Big Science governance models.
- Today, the EU’s programme for research infrastructures funds access to scientific services offered by e.g. archives, collections, telescopes, light sources, research vessels, computing systems, or modelling tools. The concept of service is understood broadly.
- The diversity of this programme extends to PRISMAP, understood as research infrastructure because it operates as a scientific alliance offering access to a scientific resource: novel radionuclides.

European Commission

Why is access to radionuclides important

- Cancer remains one of the main causes of death in the world. Radionuclides play an essential role in diagnostic imaging, therapeutic interventions, and translational research.
- In Europe radionuclides are used in **10 million nuclear medicine diagnostic procedures and 100,000 therapeutic procedures every year.** These figures are expected to triple by 2035. Planning and investments are needed to increase access to theranostics.
- Novel radionuclides are investigated for their unique properties for new diagnostics or therapy. The development of novel radionuclides is a key part of cancer therapy and medical research in general.
- Unlike in other fields of medical research, researchers in medical radionuclides depend on a network of facilities producing and transporting these radioisotopes and laboratories where research with them is possible.
- This field of research requires a complex partnership of scientific facilities, laboratories and scientists, enabled by appropriate regulation that makes their research possible and agile.

European Commission

What PRISMAP has achieved

- PRISMAP has established a web-based entry platform for the production and dispatch of non-conventional radionuclides, but also as a long-term network for aiding in the advancement of emerging radionuclide research and distribution.

- The PRISMAP consortium brings together production facilities including intense neutron sources, an isotope mass separation facility, high-power accelerators, biomedical research institutes, and hospitals. This collaborative effort, involving 23 beneficiaries from 13 countries and including the IAEA, strives to simplify access for a diverse user community that includes SMEs, global pharma, nuclear centres, hospitals and universities.

- The PRISMAP portfolio consists of 27 radionuclides, which have been identified for their potential in diagnostic applications or in targeted radionuclide therapy, in particular targeted alpha therapy and Auger-electron therapy.

European Commission

The future of PRISMAP+

- PRISMAP+ will continue to deliver batches of radionuclides to research teams. User groups only need to send their proposal to a single access point and PRISMAP+ provides the required supply chain and biomedical research centers.
- The extension of this activity aims at keeping the momentum until the full deployment of ERVI, a EU-wide initiative to consolidate radioisotope production and supply that relies on the PRISMAP community as the seed of its research arm.
- While PRISMAP and some other related projects constitute the basis of what ERVI wants to achieve, the community will need to count on multiple other initiatives in the field of capacity, capabilities, legislation and funding. The role of the private sector in ERVI will be crucial to scale production.
- The current configuration of funding instruments in the EU budget 2021-2027 allow for this community to keep up its work but does not allow the scale that will be required.
- Novelties in FP10 proposal and other mechanisms in the EU budget 2028-2034.

The key challenges

- Distribution and logistics (including related legislation), *in particular* for novel radionuclides
- Supply of HALEU, of target materials and of some stable isotopes.
- Complex supply chain. Multiple sites, multidisciplinary expertise.
- Obstacles to scaling up production, depending on production methods.
- Regulatory complexity in pharmaceutical sector.

The road ahead

DG ENER is finalising a communication on ERVI, setting out an action plan for the next two years and the objectives for the next MFF starting in 2028. This communication will call for:

- Investment in innovative production facilities
- Research and innovation
- Market monitoring and forecasting
- Strategic international partnerships
- Enabling regulatory framework

The deployment of ERVI, in particular its research arm, will require coordinating different funding instruments across programmes. It is proposed that this be done via a SRIA that will delimit the contribution of each separate activity.

Thank you

www.esfri.eu / ESFRI Roadmap | www.esfri.eu / Homepage - European Commission