



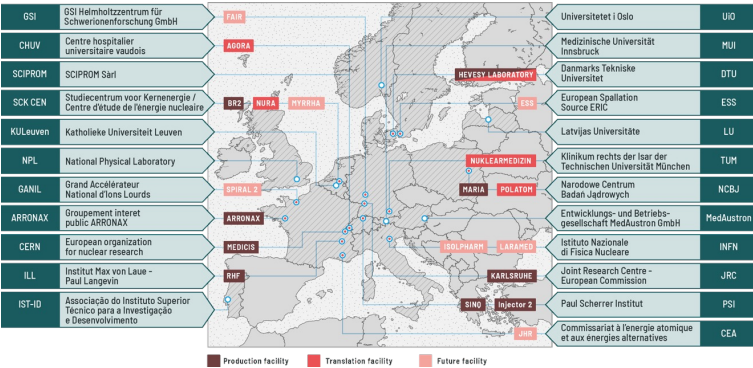
TOWARDS OUR 2ND CALL FOR PROJECTS

Outcome of 1st call and towards 2nd call for projects

APPLY FOR RADIONUCLIDES !!

15th June 2022

PRISMAP : The European medical radionuclide programme after a little more than 1 year !



Open key national and regional research infrastructures to all European researchers

Submitted to the INFRA-2-2020 Call
During the (1st) COVID outbreak ...

Today

9 projects were selected at our 1st call
COVID is back to sleep (until when ?)
But yet another crisis has risen (Riga's neighbor is a country in war)

We are about to launch our 2nd call for projects

Objectives of the project

- 1. Provide access to new radionuclides and new purity grades for medical research**
- 2. Create a common entry port and web interface for the starting research community**
- 3. Enhance clarity and regulatory procedures to promote research with radiopharmaceuticals**
- 4. Unlock the biomedical research through better data on radionuclides**
- 5. Ensure the long-term sustainability of PRISMAP**

The consortium : production facilities

MEDICIS

European organization for nuclear research - CERN



PSI

Paul Scherrer Institut – PSI



Hevesy Laboratory

Danmarks Tekniske Universitet – DTU



BR2

Belgian Nuclear Research Centre — SCK CEN



ARRONAX

Groupement interet public ARRONAX — ARRONAX



RHF

Institut Max von Laue - Paul Langevin – ILL



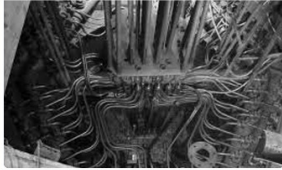
JRC Karlsruhe

Joint Research Centre - European Commission – JRC



NCBJ

Narodowe Centrum Badań Jądrowych — NCBJ



While ILL is in shutdown, most of the facilities will be providing radionuclides for the 1st call for project

The consortium : biomedical research facilities

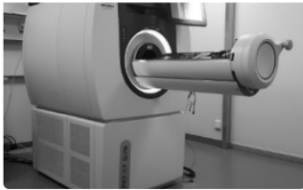
Hevesy Laboratory

Danmarks Tekniske
Universitet – DTU



Agora

Centre hospitalier
universitaire vaudois
— CHUV



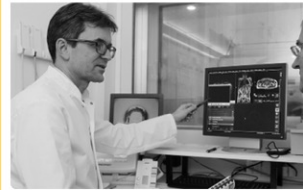
Nura

Studiecentrum voor
Kernenergie / Centre
d'étude de l'énergie
nucleaire — SCK CEN



Nuklearmedizin

Klinikum rechts der Isar der
Technischen Universität
München — TUM



POLATOM

Narodowe Centrum Badań
Jądrowych – NCBJ



TUM • Munich, Germany

Services available

Targeting agent and chelator development

Radiolabelling strategy

Preclinical studies

Chemical and radiochemical characterisation

In vitro characterisation

In vivo characterisation

Toxicity/dosimetry

Regulatory documents

Radiopharmaceutical GMP manufacturing

Clinical trial

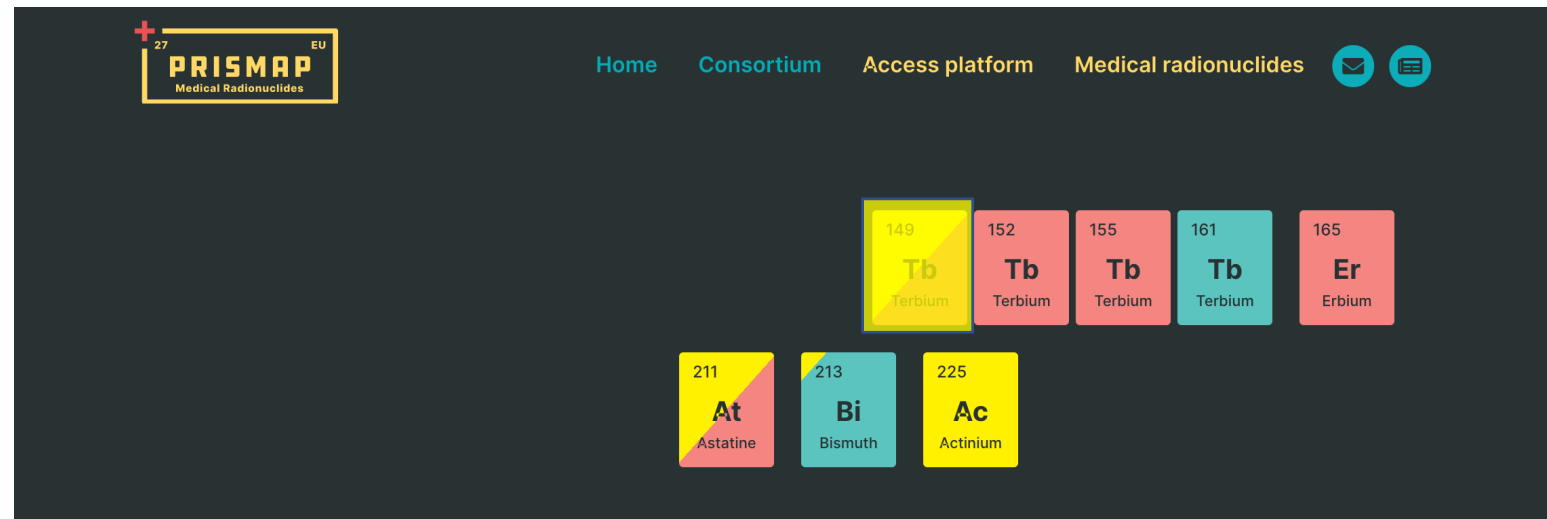
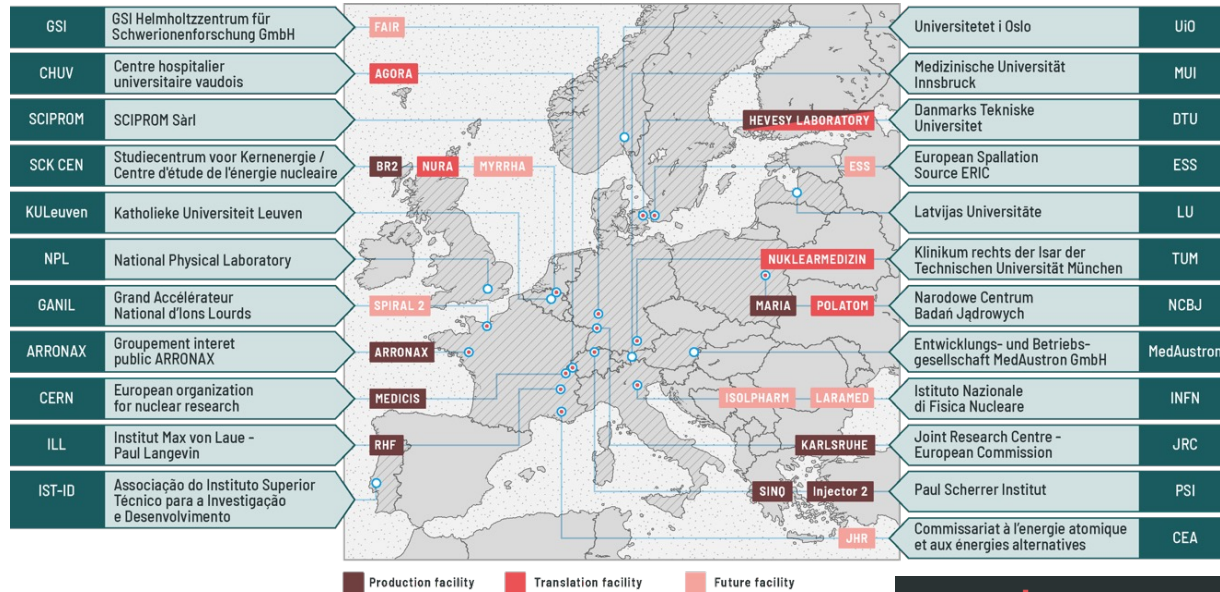
Prismap.eu – day one isotopes


[Home](#)
[Consortium](#)
[Access platform](#)
[Medical radionuclides](#)


| | | | | | | | | | | | | |
|-----------------------------|-----------------------------|---------------------------|---------------------------|-------------------------------|-------------------------------|------------------------------|------------------------------|-----------------------------|-----------------------------|-----------------------------|----------------------------|----------------------------|
| 44 Sc Scandium | 47 Sc Scandium | 64 Cu Copper | 67 Cu Copper | 111 Ag Silver | 135 La Lanthanum | 153 Sm Samarium | 149 Tb Terbium | 152 Tb Terbium | 155 Tb Terbium | 161 Tb Terbium | 165 Er Erbium | 169 Er Erbium |
| | | | | 175 Yb Ytterbium | 211 At Astatine | 213 Bi Bismuth | 225 Ac Actinium | | | | | |

| Parameter | Specification |
|-----------------------|---|
| Half-life | 4.04 h |
| Daughter | Stable Ca-44 |
| Branching Ratio/Decay | 94.3% β^+ , 5.7% EC |
| Production | Ca-44(p,n)Sc-44 [or Ca-44(d,2n)Sc-44 at ARRONAX] |
| Purification | 1 or 2 steps column separation |
| Chemical Form | In 0.05 M HCl, 0.1 M HCl, 4.85 M NaCl/0.13 M HCl or 1 M NaOAc |
| Specific Activity | 2 GBq/mg |
| Radionuclidic Purity | 99.8% (0.2% Sc-44m) |
| Radiochemical Purity | Labelling up to 25 MBq/nmol DOTANOC or DOTATATE |
| Identification | 1157 keV gamma line present |
| Appearance | Clear and colourless solution |
| pH | Depends on chemical form |
| Activity available | Up to 1 GBq |
| Availability | On demand |
| Grade | Research grade or preclinical grade, n.c.a. |

Prismap.eu – 9 projects were selected out of 12



User Selection Panel – What is it ?

■ <https://www.prismap.eu/access/selection-procedure/>

| Internal members | External members |
|--|---|
| Thierry Stora European organization for nuclear research – CERN PRISMAP coordinator and PRISMAP programme leader | Francesco Cicone Magna Graecia University of Catanzaro Nuclear medicine specialist with particular focus on radionuclide therapy and dosimetry and on amino acid PET imaging of brain tumours, PRISMAP ethics advisor. |
| Charlotte Duchemin European organization for nuclear research – CERN Radionuclide production schedule and overall logistical chain including transport and applications | Sandra Heskamp Radboud University Medical Centre Professor of Nuclear Imaging and Therapy in Immuno-oncology, preclinical. |
| Ferid Haddad Groupement d'intérêt public ARRONAX PRISMAP access platform and help desk | Cornelia Hoehr University of Victoria/Canada TRIUMF particle accelerator centre Life Sciences Department Head - R&D, Deputy Associate Laboratory Director - Life Sciences, Research interests in Targetry & Accelerator-Based Medical Isotope Development and in Nuclear Medicine. |
| Ulli Köster Institut Max von Laue - Paul Langevin PRISMAP production of medical radionuclides | Paul Lecoq Metacrystal SA Head of physics division, European academy of sciences (EURASC), fellow of the IEEE association, founder of the European Center for Research in Medical Imaging, SME representative, extensive experience with H2020 projects. |
| David Viertl Centre hospitalier universitaire vaudois – CHUV PRISMAP medical application of radionuclides | Kristoff Muylle Vrije Universiteit Brussel Former president of EANM, large network in NM, Head of Nuclear Medicine Department at AZ Delta, Nuclear Medicine Physician at UZ Brussel. |
| Kirsten Leufgen SCIPROM Sàrl PRISMAP communication, legal and financial affairs | Katherine Vallis University of Oxford Professor of Experimental Radiotherapeutics, Group Leader at Oxford Institute for Radiation Oncology, Honorary Consultant in Clinical Oncology at Oxford University Hospitals NHS Trust, radiopharm, new isotopes, therapy. |

Project submitted in 2 files (part A+B)
scientific part B : 1-4 is used to make a 1st evaluation

| | |
|---|-----------|
| 1 Scientific excellence | 1 |
| 1.1 Motivation | 1 |
| 1.2 Project objectives | 2 |
| 1.3 Access of ²¹¹ At in Belgium | 2 |
| 2 Project implementation | 3 |
| 2.1 Workpackages | 4 |
| 2.1.1 WP 1: Target characterisation and influence of production methods | 4 |
| 2.1.2 WP 2: Analysis of activity balance during target processing and labelling | 5 |
| 2.1.3 WP 3: Analysis of biodistribution of ^{211/210} At-labelled sdAb | 5 |
| 2.1.4 WP 4: dissemination output | 5 |
| 3 Expected outcome | 7 |
| 4 The research team and infrastructure | 8 |
| 4.1 Short description about the research team | 8 |
| 4.2 The available infrastructure | 9 |
| 5 Co-funding beyond PRISMAP | 10 |
| Bibliography | 11 |

Question raised, hearings are organized
Final decision

Output of the project

- <https://www.prismap.eu/about/outcomes/>
 - Jensen, Mikael, Naidoo, Clive, Bertreix, Philippe, Frosio, Thomas, Viertel, David, Köster, Ulli, & Cocolios, Thomas Elias. (2022). Prismap D9.1-First public report from the PRISMAP work package 9 (WP9, transport and logistics) (1.0). Zenodo. <https://doi.org/10.5281/zenodo.6606494>
 - Decristoforo, C., Hayashi, S. F., Bordeau, C., Haddad, F., Viertel, D., Deville, C., Naidoo, C., Pedersen, K. S., Jensen, M., Köster, U., Correia, J. G., Gano, L., Bruchertseifer, F., Baete, K., Mikolajczak, R., Collins, S., Geistlich, S., Van Der Meulen, N., Ponsard, B., Van De Voorde, M. & Campillos, M., Standards for clinical translation. (2022). doi: 10.5281/ZENODO.6599181
 - Cocolios, Thomas Elias, ., Doms, Lucas, ., Ferrari, Piero, ., Payne, Oliver, . & Bernerd, Cyril, .DFT calculations for Ca and Ti containing molecules.(2022). doi: 10.5281/ZENODO.6607408

Where are the projects coming from ?

Added Value using Terbium-161 over Lutetium-177 in Combination with the metabolically more stable GRPR Ligand AMTG for Targeted Radiotherapy of GRPR-expressing Malignancies? – A Preclinical Evaluation

Dr. rer. nat. Thomas Günther, Chair of Pharmaceutical Radiochemistry
TU Munich (DE)

Development and preclinical evaluation of a mesothelin-targeting theranostic agent (161Tb)

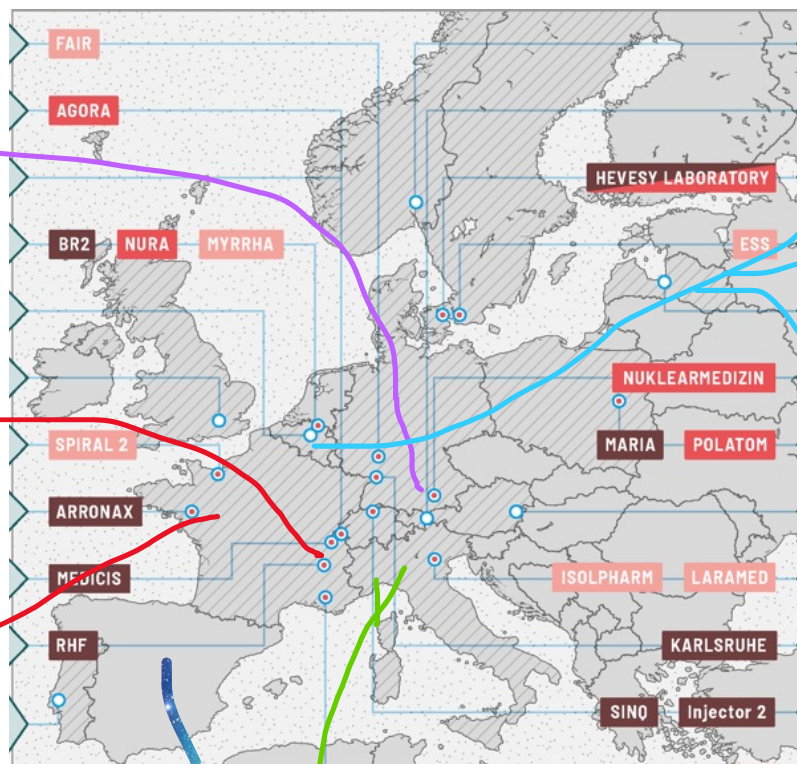
Dr Boissat, UGA – Inserm, La Tronche (FR)

Imaging applications of 165Er and its surrogate 155Tb (Otto-165)

Mr Isidro Da Silva , CEMHTI Radiochemistry
Orleans (FR)

Selective oncological theragnostic based on radioactively labeled exosomes (TheragnEso) (161Tb)

Dr Beatriz Salinas Rodríguez
Radiochemistry unit,
Fundación para la investigación Biomédica del Hospital Gregorio Marañón
Madrid (ES)



Improved FAP-radiotheranostics for personalized cancer treatment (211At)

Pr. Filipe Elvas, Molecular Imaging Center
Antwerp (BE)

Dedicated phantom measurements to develop and validate quantitative 225Ac- (micro)SPECT imaging (213Bi)

Dr Michel Koole, Imaging and Pathology
KU Leuven (BE)

The FIAPo project: Feasibility of increased 211At production by 210Po assessment

ir Matthijs Sevenois, In vivo cellular
& molecular imaging lab (ICMI)
VU Brussels (BE)

Towards 161Tb-PSMA cell targeting treatment of prostate cancer biochemical recurrence: Comparison with 177Lu-PSMA

Dr. Margarita Kirienko, Fondazione IRCCS Istituto Nazionale dei Tumori Milano (IT)

Dual 152Tb/149Tb radiolabeling and preclinical validation of an AAZTA-FAPi ligand for diagnostic and theranostic applications

Prof. Enzo Terreno, Department of Molecular Biotechnology and Health Sciences , Torino (IT)

PRISMAP.EU – What's coming next – 2nd call

- Our web interface : <https://www.prismap.eu/radionuclides/portfolio/>




| Parameter | Specification |
|-----------------------|---|
| Half-life | 4.04 h |
| Daughter | Stable Ca-44 |
| Branching Ratio/Decay | 94.3% β^+ , 5.7% EC |
| Production | Ca-44(p,n)Sc-44 [or Ca-44(d,2n)Sc-44 at ARRONAX] |
| Purification | 1 or 2 steps column separation |
| Chemical Form | In 0.05 M HCl, 0.1 M HCl, 4.85 M NaCl/0.13 M HCl or 1 M NaOAc |
| Specific Activity | 2 GBq/mg |
| Radiochemical Purity | 99.8% (0.2% Sc-44m) |
| Radiochemical Purity | Labelling up to 25 MBq/nmol DOTANOC or DOTATATE |
| Identification | 1157 keV gamma line present |
| Appearance | Clear and colourless solution |
| pH | Depends on chemical form |
| Activity available | Up to 1 GBq |
| Availability | On demand |
| Grade | Research grade or preclinical grade, n.c.a. |

New radionuclides

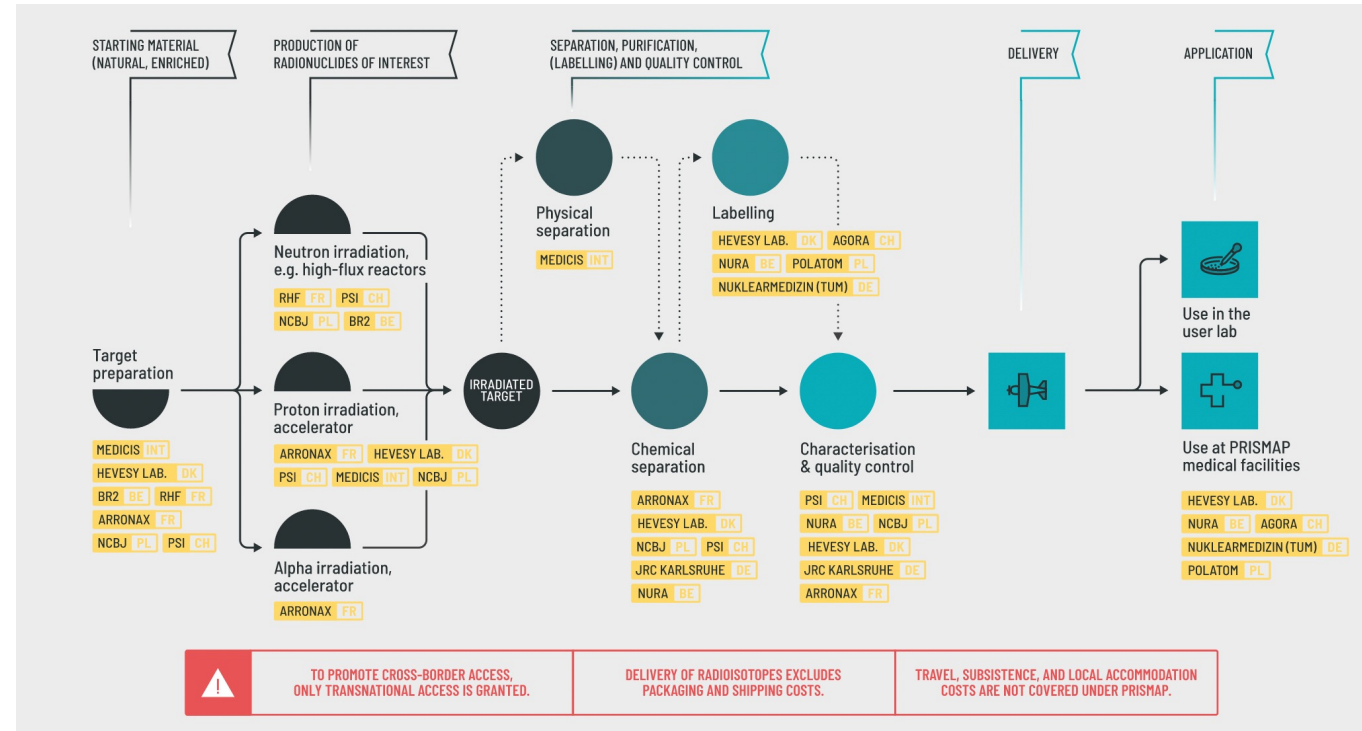
(⁴³Sc, ⁵²Mn, ¹⁰³Pd, ¹⁶⁵Tm, ¹⁹⁹Au, ²²⁹Th)

Additional standardized data provided

PRISMAP technical manager position open



Experimental program coordinator for MEDICIS and PRISMAP (SY-STI-RBS-2022-60-LD)



<https://jobs.smartrecruiters.com/CERN/743999831975545-experimental-program-coordinator-for-medicis-and-prismap-sy-sti-rbs-2022-60-ld->

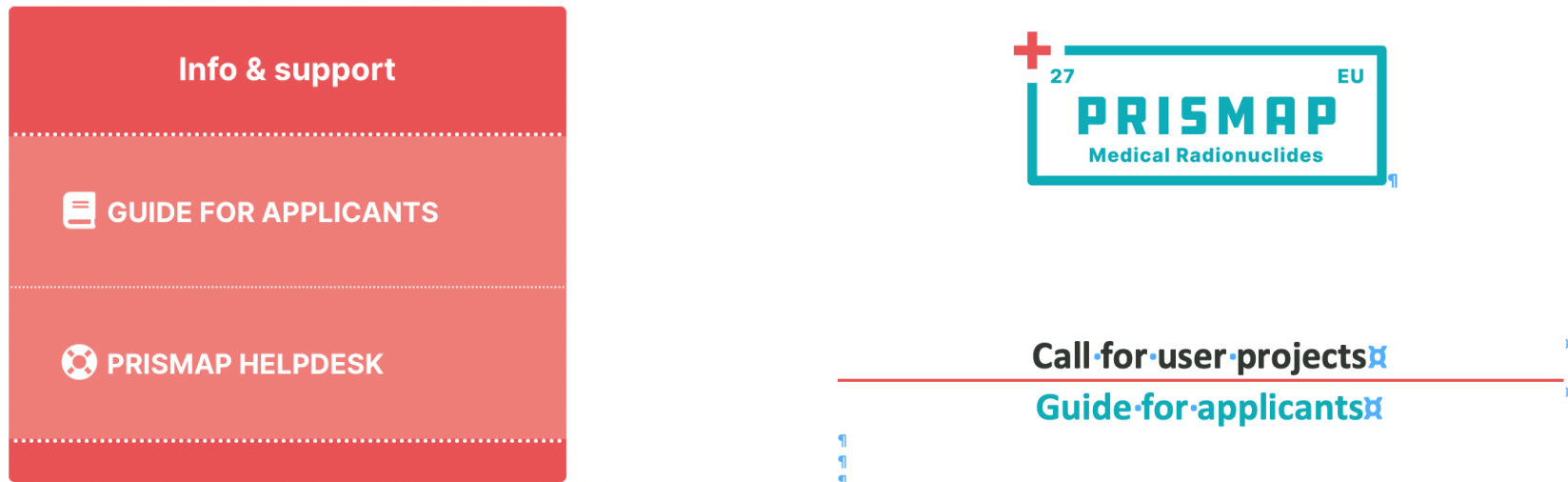
- <https://www.prismap.eu/radionuclides/medical-facilities/>

The collage features several key elements:

- Top Left:** Portraits of researchers and the DZG logo.
- Top Center:** Aerial view of the CHUV and AGORA facilities.
- Top Right:** Portraits of researchers and the sck:cen logo.
- Middle Left:** Laboratory equipment including a PET/CT scanner and a cyclotron.
- Middle Center:** A large building at night, likely the IRI facility.
- Middle Right:** Portraits of researchers and the IRI logo.
- Bottom Left:** A hot cell and laboratory equipment.
- Bottom Center:** A large building, likely the IRI facility.
- Bottom Right:** Portraits of researchers and the IRI logo.

PRISMAP.EU – What's coming next – 2nd call

- Our guide for Applicants: <https://www.prismap.eu/access/application-guidelines/>



- Helpdesk : <https://www.prismap.eu/access/helpdesk/>



DO YOU WANT TO DEVELOP A NEW PROJECT WITH A NEW RADIONUCLIDE ? APPLY !



WWW.PRISMAP.EU



WWW.TWITTER.COM/MEDRADIONUCLIDE



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