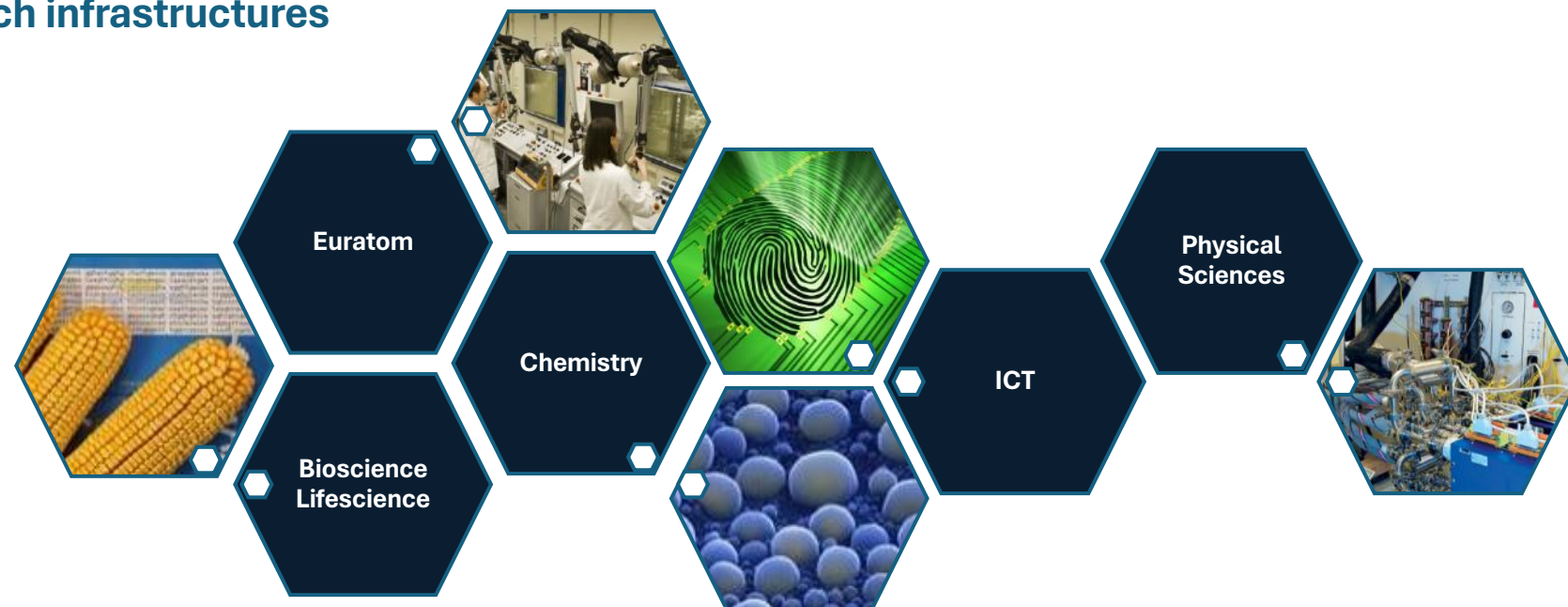


JRC Research Infrastructures

Landscape of JRC Research Infrastructures

JRC hosts **53 physical research infrastructures**

- **34** non-nuclear RIs
- **19** nuclear RIs



39 capable of opening to external users

Integration with EU Landscape RIs

- **Collaboration with ESFRI-ERICs + ESFRI Roadmap 2026**

Vital for the JRC, **demonstrates the relevance, uniqueness and complementarity of our RIs** as part of a world-class network of RIs in different fields of science.

- ✓ **CERIC-ERIC** (Central European Research Infrastructure)
- ✓ **ICOS-ERIC** (Integrated Carbon Observatory System)
- ✓ **ELI-ERIC** (Extreme Light Infrastructure)

- **Participation in HE and Euratom Consortia**

- ✓ **ERIES** (Engineering RIs for European Synergies)
- ✓ **OFFERR** (Sustainable Nuclear Energy Technology Platform)
- ✓ **Present in 15 INFRA WP HE calls**

JRC in the EU RITI Strategy

Mobilising Investments

To strengthen the research and technology infrastructure capacities, the **Joint Research Centre** is preparing a series of **Flagship projects** in view of offering scientists from academia and research institutions, as well as from small businesses, industry, start-ups and scale-ups, further **opportunities to develop and test their innovations** in a unique research and technology infrastructure continuum with a European perspective.

Attracting and growing talent in Europe

Organisations such as CERN, the **Joint Research Centre**, the European Molecular Biology Laboratory or Imec host scientists, engineers and innovators who come from over 100 different countries, making them **global centres of excellence**.



Research as '**one of the most valuable global goods**'

Ursula von der Leyen

State of the Union speech

10 September 2025



Launched on 17 September 2025

Flagship Research Infrastructure Projects

Security, space and defence

- **Border** security research infrastructure
- Counter **drone** living lab
- European Laboratory for Space, Connectivity and **Quantum** Technologies
- Secure Laboratory for hosting classified meetings*

Digital

- JRC **Data** Sharing Innovation Laboratory
- **Earth Observation** Sandbox
- HPC Infrastructure for **AI applications** in justice and home affairs
- JRC Advanced **Computing** Infrastructure

Biotechnology and Lifesciences

- JRC Flagship **Biotechnology and Life Science** EU Research Infrastructure
- Dynamic Collaborative Labs
- JRC **Environmental** Biotechnology Laboratory

Clean Industrial Deal

- Multi-fuel refuelling station for **alternative fuels**
- European Hub for **Energy** Digital Twins
- European **Solar** Test Installation Outdoor Testing and Calibration facility
- **Gas** dispersion and fire safety testing facility
- Safety of liquid **hydrogen** and hydrogen derivatives testing facility
- Scalable Autonomous and **Automated Vehicle** testing Infrastructure for Safe and resilient traffic
- **Smart Grid** Interoperability Hub
- EU **Soil** Monitoring Reference Laboratory
- European **Water** Academy and its technology testing centre

19 FRIs Proposed
MFF 2028-2034

JRC contribution to the RITI Strategy

Support to implementation



Bolstering Accessibility

Action 14: *Test joint research and technology infrastructures transnational access schemes addressing priority areas e.g. advanced materials, clean energy, quantum technologies, AI or health and biotechnology*



Opening JRC Research Infrastructures

Part of JRC Strategy 2030

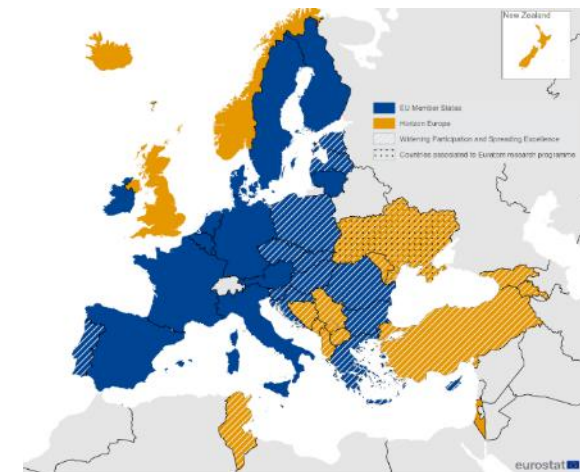
- ✓ Open to scientists working in **academia and research organisations, industry and SMEs**
- ✓ Access to users from institutions in **Member States and Associated countries**
- ✓ **Facilitate** access to institutions from **WPSE** countries (waive access costs + support travel and subsistence)

Offering access to JRC RIs

- makes JRC RIs **available** in view of limited resources in Europe
- enhances dissemination of **scientific knowledge**
- boosts **competitiveness**
- bridges the **gap** between research and industry
- provides **training and capacity building**



<https://ec.europa.eu/jrc/en/research-facility/open-access>



Widening Participation and Spreading Excellence (WPSE) countries

Research Infrastructures opening access

European Laboratory for Structural Assessment (ELSA) (Ispira, IT) Reaction Wall HopLab Consumer Products Safety (Ispira, IT) NanoBiotech - Nanobiotechnology Laboratory ECVAM - EU Reference Laboratory for Alternatives to Animal Testing Battery and Hydrogen technologies facilities (Petten, NL) BESTEST – Battery Energy Storage Testing ELTEST – Electrolyser Testing facilities GASTEF – High Pressure Gas Testing Facility	FACILITIES NOW OPENING ACCESS European research infrastructure for nuclear reaction, radioactivity, radiation and technology studies in science and applications (EUFRAAT) (Geel, BE) GELINA – Neutron time-of-flight facility for high-resolution neutron measurements HADES – Underground laboratory for ultra-low level gamma-ray spectrometry MONNET – Tandem accelerator based fast neutron source RADMET – Radionuclide Metrology laboratories Actinide User Laboratory (ActUsLab) (Karlsruhe, DE) PAMEC – Properties of Actinide Materials under Extreme Conditions FMR – Fuels and Materials Research HC-KA – Hot Cell Laboratory Laboratory of the Environmental & Mechanical Materials Assessment (EMMA) (Petten, NL) LILLA – Liquid Lead Laboratory SMPA – Structural Materials Performance Assessment Laboratories AMALIA – assessment of nuclear power plants core internals MCL – Micro-Characterisation Laboratory
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Since 2017, 17 RIs have opened access to external users at the JRC sites of Ispira, Karlsruhe, Petten and Geel:



EUFRAT, GEEL



ACTUSLAB, KARLSRUHE



EMMA, PETTEN



NANOBIOTECH, ISPRA



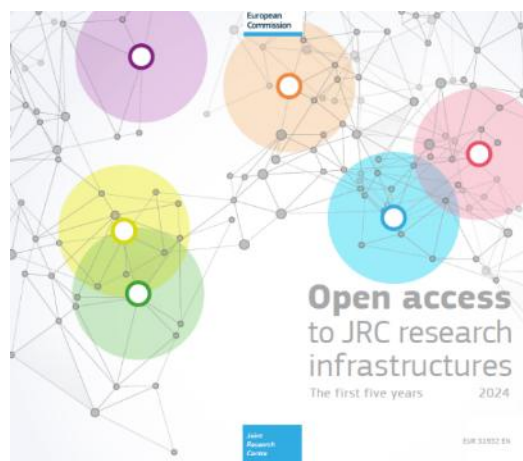
ELSA, ISPRA



ENERGY STORAGE, PETTEN

Statistics experiments (2017-2024)

- Opened calls 87
- Received Proposals 285
- Agreements signed 197 (7 out of 10)
- User Institutions **147** (11% from SME/Industry)
- Users: **683** (34% female)
- Countries: 30
 - ✓ 23 MS
 - ✓ 7 ACs
 - ✓ 1 International
 - ✓ 17 WPSE



Brochure Open Access to JRC RIs 2024

Training and capacity building

- **Addressed** to groups of users from universities, research or public institutions, and from SMEs
- Preferably with **existing** or under **construction/upgrading** RIs **similar** or **complementary** to those of JRC
- Or planning to **submit proposals** for access to experiments
- **Full week stays**, with participation of groups from several institutions and countries.



EU Science Hub Platform for T&CB

FACILITIES NOW OPENING ACCESS

European Laboratory for Structural Assessment (ELSA) (Ispira, IT)

Reaction Wall

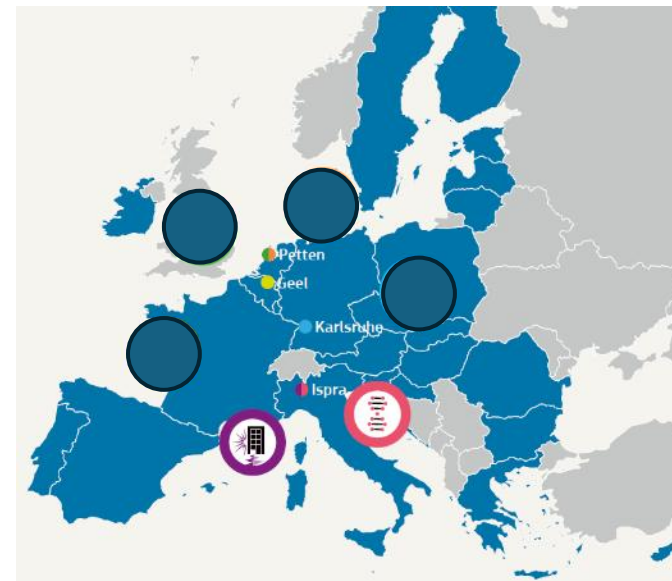
HopLab

Consumer Products Safety (Ispira, IT)

NanoBiotech - Nanobiotechnology Laboratory

Statistics training (2017-2024)

- Opened calls 8
- Received Proposals 80
- Selected Proposals 63 (8 out of 10)
- User Institutions **68** (2 SMEs)
- Users **177** (54% female)
- User Stay Days 798
- Countries 25
 - ✓ 13 MS
 - ✓ 12 ACs
 - ✓ 15 WPSE



Statistics Western Balkans (2017-2024)

■ Institutions forwarding calls	15
■ Selected Institutions	13
■ Users	25

Experiments

✓ North Macedonia	5 users	1 institution
✓ Serbia	10 users	2 institutions

Training and Capacity Building

✓ Albania:	1 user	1 institution
✓ Bosnia and Herzegovina:	1 user	1 institution
✓ North Macedonia:	1 user	1 institution
✓ Serbia:	7 users	7 institutions

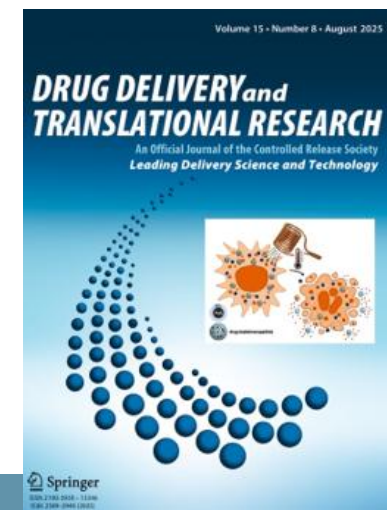


JRC Nanobiotechnology Laboratory

- Expertise and facilities across a **range of disciplines**, including biology, (nano)biotechnology and material science
- **Exploratory research** on gene editing technologies and lipid nanoparticle formulation.
- Expertise in **regulatory science, standardisation** and **harmonisation**
- Strengthening **skills and careers** for competitive European life sciences



EU Science Hub - NanoBiotech



“This project greatly helped my research group, or rather its members at the time, to learn new techniques for characterizing nano-delivery systems, to find out more about the need to adapt the measurement conditions similar to those of biological systems in order to minimize false results and to standardize the analysis procedures as much as possible. Thank you to this project, our younger researchers have been able to improve their knowledge and skills in various aspects of the quality, efficacy and safety of nano-delivery systems”

University of Belgrade

Characterisation of drug delivery for safer nanomedicine products.

Laboratory for alternatives to animal testing

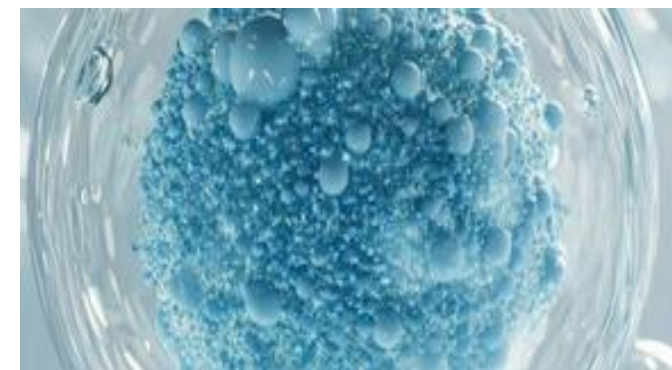
EURL ECVAM

For over 30 years, the JRC has been working on the 'Three Rs' – the **Replacement, Reduction and Refinement** of animal experiments

Validation, translation and promotion of New Approach Methodologies (**NAMS***) and In Vitro Biotech for medicines development and chemical testing.

* Action in the EU Life Science Strategy

- Coordinator of the **EU Network of Laboratories for the Validation of Alternative Methods** (EU-NETVAL)



[EU Science Hub – EURL ECVAM](#)

European Laboratory for Structural Assessment

- **ELSA Reaction Wall:** largest of its kind in Europe and one of the largest in the world.
- Test on **full-scale structures** for safety assessment against earthquakes and other natural and man-made hazards.
- **The HopLab facility:** study of materials and structural components to **very fast dynamic loads**.
- **World's largest** Hopkinson Bar, extending for more than 200 meters



Reaction Wall



HopLab

*“The course met my expectations. **Quick A-Z training** about experimental methods with focus on the pseudo-dynamic and substructuring.”*

*“**Very useful overview of the operation of such experimental facility.** The approach on the problem and the solutions the team is doing throughout the years. All the tiny details that matter during the experimental phase of a certain project”*

*“First, in-depth knowledge about the PSD and substructured testing procedures. Second, **scientific networking** with ELSA laboratory and the other EU institutions who joined the training.”*

Energy Storage Facilities

- **Electrolyser Testing Facility:** testing of electrolysers and fuel cells and stacks for performance and durability assessment, harmonisation and standardisation of test methods and protocols

Establish safety and reliability criteria for the installation of fuel cells in onboard maritime applications

Contribution to new interim International Maritime Organization (IMO) guideline (FC-SHIPS)



EU Science Hub ELTEST



- **Battery Energy Storage Testing:** analysis of the performance of battery materials and cell



EU Science Hub BESTEST

- **High Pressure Gas Testing Facility:** research and testing on high pressure hydrogen pipelines and components

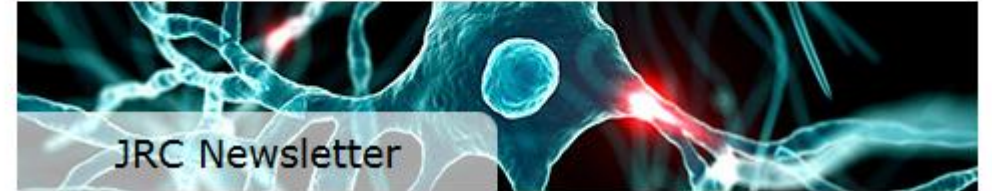


EU Science Hub GASTEF

Thanks

JRC Newsletter

You can [subscribe](#) to receive a monthly update direct to your inbox.



Any questions?

You can find me fabio.taucer@ec.europa.eu

Open access calls: <https://ec.europa.eu/jrc/en/research-facility/open-access>

JRC Research Infrastructures