



#HorizonEU

HORIZON EUROPE

THE EU RESEARCH & INNOVATION PROGRAMME 2021 – 27

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EU Delegation to Japan

This presentation is based on the political agreement of 11 December 2020
on the Horizon Europe. Information on some parts is pending revision.

19 March 2021

Research
and
Innovation



Horizon Europe is a tool to:

- **to upgrade bilateral research/institutional collaboration to multilateral collaboration** - higher quality research output
- **to join the world's best research teams:** to learn how large research projects are run, what is the top science in your field, how science communication is done...
- **to jointly address global challenges in any field of science / TRLs / opportunities for collaboration with industry / standards**
- **to further internationalise universities:** joining global research teams, establish doctoral courses, communication in EN, host individual researchers from overseas, exchange research results, twinning activities
- **to develop researchers' career at any level**

HORIZON EUROPE

EURATOM

SPECIFIC PROGRAMME: EUROPEAN DEFENCE FUND

*Exclusive focus on
defence research
& development*

Research
actions

Development
actions

SPECIFIC PROGRAMME IMPLEMENTING HORIZON EUROPE & EIT*

Exclusive focus on civil applications



Pillar I EXCELLENT SCIENCE

1

European Research Council

2

Marie Skłodowska-Curie

Research Infrastructures



Pillar II GLOBAL CHALLENGES & EUROPEAN INDUSTRIAL COMPETITIVENESS

3

Clusters

- Health
- Culture, Creativity & Inclusive Society
- Civil Security for Society
- Digital, Industry & Space
- Climate, Energy & Mobility
- Food, Bioeconomy, Natural Resources, Agriculture & Environment



Pillar III INNOVATIVE EUROPE

European Innovation
Council

European Innovation
Ecosystems

European Institute of
Innovation & Technology*

monobeneficiary grants
and mobility schemes

collaborative research

WIDENING PARTICIPATION AND STRENGTHENING THE EUROPEAN RESEARCH AREA

Widening participation & spreading excellence

Reforming & Enhancing the European R&I system

Fusion

Fission

Joint
Research
Center

* The European Institute of Innovation & Technology (EIT) is not part of the Specific Programme



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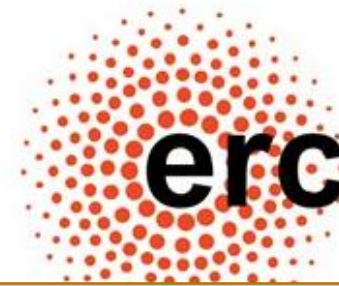
monobeneficiary grants and mobility schemes



Marie Skłodowska-Curie Actions to fund doctoral programmes and postdoctoral researchers

Doctoral Networks
Doctoral programmes in and outside academia incl. joint & industrial doctorates

Postdoctoral Fellowships
Support to excellent postdoctoral researchers



ERC grants

European Research Council schemes to fund frontier research projects run by individual researchers





European Research Council

Scientific Freedom as a Basic Value

- Scientific excellence as the only evaluation criterion.
- Support to the individual scientist – no consortia!
- No predetermined subjects (bottom-up).
- Simple application procedures.

Recognition and Visibility to Individual researchers

ERC allows to:

- work on a research topic of own choice, with a team of own choice
- gain true financial autonomy for 5 years
- negotiate with the host institution the best conditions of work
- attract top team members (EU and non-EU) and collaborators
- move with the grant to any place in Europe if necessary (portability of grants)
- attract additional funding and gain recognition; ERC is a quality label



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ERC funding schemes for individual PIs

Aim: to fund frontier research projects run by individual PIs

Starting Grants (StG)

1 Principal
Investigator
(2-7 years after PhD)
up to € 2.5 Mio
for 5 years

Consolidator Grants (CoG)

1 Principal
Investigator
(7-12 years after PhD)
up to € 3.0 Mio
for 5 years

Advanced Grants (AdG)

1 Principal
Investigator
up to € 3.5 Mio
for 5 years

Synergy Grants (SyG)

2 – 4 Principal
Investigators
up to € 14 Mio
for 6 years

ERC funding scheme for groups of individual PIs

**Aim: to fund frontier research
projects jointly run by a small
group of individual PIs**



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Marie Skłodowska-Curie Actions (MSCA) key features

- **Support the mobility, training** (including transferable skills) **and career development** of researchers from **all over the world** through excellent doctorates, postdoctoral fellowships and collaborative projects
- Stimulating **international, inter-sectoral and interdisciplinary** cooperation
- For researchers at **every stage** of their career
- Promotion of **attractive working and employment** conditions (financing rate of up to 100%, Charter and Code)
- Support excellent research in all domains (**bottom-up**)
- Open to all organisations. Participation of **non-academic sector** strongly encouraged, especially industry and SMEs
- Impacting **researcher careers, organisations, structures and the ERA**



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The Actions

Doctoral Networks

Doctoral programmes in and outside academia incl. joint & industrial doctorates

Postdoctoral Fellowships

Support to excellent postdoctoral researchers

Staff Exchanges

Support for exchanges of any type of R&I-related staff

COFUND

Co-funding doctoral and postdoctoral programmes

MSCA and Citizens

Public outreach events (Night)



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Objective of Doctoral Networks

The objective of Doctoral Networks is to implement doctoral programmes by partnerships of organisations from different sectors across Europe and beyond to train highly skilled doctoral candidates, stimulate their creativity, enhance their innovation capacities and boost their employability in the long-term.

Types of Doctoral Networks

Doctoral Networks implement doctoral programmes, by partnerships of universities, research institutions and infrastructures, businesses including SMEs, and other socio-economic actors from different countries across Europe and beyond. These doctoral programmes will respond to well-identified needs in various research and innovation areas, expose the researchers to the academic and non-academic sectors, and offer research training, as well as transferable skills and competences relevant for innovation and long-term employability.

Besides standard Doctoral Networks, incentives have been introduced to promote two specific types of doctorates as well.

1. **Industrial Doctorates.** They train PhD candidates who wish develop their skills and step outside academia, in particular in industry and business. Individual participants must be enrolled in a doctoral programme and jointly supervised by the academic and non-academic partners.
2. **Joint Doctorates.** They provide a highly integrated type of international, inter-sectoral and interdisciplinary collaboration in doctoral training leading to a joint doctoral degree or multiple doctoral degrees awarded by the participating institutions. PhD candidates must be enrolled in a joint programme and be jointly supervised.

What does the funding cover?

All areas of research may be funded and Doctoral Networks can last for up to 4 years (up to 5 years in the case of Joint Doctorate projects).

The duration of each fellowship is between 3 and 36 months (between 3 and 48 months in the case of Joint Doctorate fellowships).

Each beneficiary must recruit at least one doctoral candidate and can also organise secondments for them anywhere in the world.

Researchers funded by Doctoral Networks

- must not have a doctoral degree at the date of their recruitment
- can be of any nationality
- should be enrolled in a doctoral programme during the project
- should spend at least 50% of their time outside academia, for Industrial Doctorates
- should comply with the mobility rules: in general, they must not have resided or carried out their main activity (work, studies, etc.) in the country of the recruiting organisation for more than 12 months in the 36 months immediately before their recruitment date

The EU provides support for each recruited researcher in the form of

- a living allowance
- a mobility allowance
- if applicable, family, long-term leave and special needs allowances



Apply for PhD vacancies funded by MSCA Doctoral Networks projects

Search Jobs and Opportunities

Take advantage of EURAXESS and find your job, funding or hosting opportunity. thousands of vacancies and fellowships from Europe and around the world.



EURAXESS |

<https://euraxess.ec.europa.eu > jobs > search>

Doctoral Networks

Researcher Profile

1 First Stage Research

Funding Programme

1 Horizon Europe - MS

Filter results

☐ Select all (16)

ERC

☒ Horizon Europe - MSCA

Filter by

Search results (8423)

Offer Type

Select

Country

Select

Research Field

Select

Researcher Profile

Select

Sector

Select

Positions

Select

Funding Programme

Select

Funding Type

Select

Search results (109)

Save Search

Horizon Europe - MSCA

First Stage Researcher (R1)

Job Offer

Hide Filters

Simple view Sort results

JOB POLAND

Institute of Organic Chemistry Polish Academy of Sciences | Posted on: 12 June 2025

Two research assistants - PhD students positions in the MSC Doctoral Network "PhotoBrane" in a project focusing on the synthesis and fabrication of cross-linked, photo-responsive Langmuir layers based on amphiphilic dyes

MSC Doctoral Network: "Photo-switchable ultra-thin membranes for molecular separation" – PhotoBraneJob descriptionThe work will be carried out within the framework of the Horizon Europe Marie Skłodowska-Curie Doctoral Training Network PhotoBrane – "Photo-switchable ultra-thin membranes for molecular..."

Work Locations: Number of offers: 2, Poland, Institute of Organic Chemistry of the Polish Academy of Sciences, Warsaw, 01-224, Kasprzaka 44/52 Street

Research Field: Chemistry » Organic chemistry

Researcher Profile: First Stage Researcher (R1)

Funding Programme: Horizon Europe - MSCA

Application Deadline: 10 Jul 2025 - 20:00 (Europe/Warsaw)

Share

Job Information

Organisation/Company	Institute of Organic Chemistry
Research Field	Chemistry » Organic chemistry
Researcher Profile	First Stage Researcher (R1)
Positions	PhD Positions
Country	Poland
Application Deadline	10 Jul 2025 - 20:00 (Europe/M
Type of Contract	Temporary
Job Status	Full-time
Hours Per Week	40
Offer Starting Date	1 Oct 2025
Is the job funded through the EU Research Framework Programme?	Horizon Europe - MSCA
Reference Number	Grant agreement ID: 1011687
Marie Curie Grant Agreement Number	101168776
Is the Job related to staff position within a Research Infrastructure?	No

Offer Description

MSC Doctoral Network: “Photo-switchable ultra-thin membranes for molecular separation” – PhotoBrane

Job description

The work will be carried out within the framework of the Horizon Europe Marie Skłodowska-Curie Doctoral Training Network **PhotoBrane** – “**Photo-switchable ultra-thin membranes for molecular separation**”. PhotoBrane is at the forefront of innovation, developing next-generation photo-tunable and photo-regenerable membranes. These groundbreaking membranes potentially transform industries such as energy conversion, biomedical applications, water purification, and environmental protection by enhancing selectivity, permeability, and operational longevity.

The proposed doctoral research project “Synthesis and fabrication of cross-linked photo-responsive Langmuir layers” will be concerned with the synthesis of two-dimensional light-responsive polymers at the air-water interface. A variety of amphiphilic dyes, especially photo-switches, will be linked via covalent bonds. The latter should enable the preparation of molecularly thin, but chemically and mechanically stable and free-standing membranes that enable light-controlled molecular sieving as innovative separation process. Secondments to European partner institutions are mandatory. The research conducted in this position is expected to form the basis of a doctoral dissertation, leading to the award of a PhD degree.

Where to apply

E-mail rekutacja@icho.edu.pl

Requirements

Research Field	Chemistry » Organic chemistry
Education Level	Master Degree or equivalent

Skills/Qualifications

Eligibility: Candidates can be of any nationality, but they must not have resided or carried out their main activity (work, studies, etc.) in Poland for more than 12 months in the 3 years immediately before the recruitment date. They must also be in the first four years (full-time equivalent research experience) of their research careers and have not been awarded a doctoral degree.

required competencies

- MSc in organic chemistry
- very good knowledge of organic chemistry
- knowledge of the English language in speech and writing
- previous work in the laboratory in the field of organic synthesis

Benefits

Offer

Terms of employment: full-time contract for 36 months, salary: ~12 600 PLN/month including employer costs (~7500 PLN net)

Benefits: private medical care package, co-financing Multisport card

Career development opportunities: *work in a young, dynamically developing team, access to research infrastructure, possibility of cooperation with foreign centers, possibility of further professional development at IChO PAS*

Eligibility criteria

Eligibility: Candidates can be of any nationality, but they must not have resided or carried out their main activity (work, studies, etc.) in Poland for more than 12 months in the 3 years immediately before the recruitment date. They must also be in the first four years (full-time equivalent research experience) of their research careers and have not been awarded a doctoral degree.


Selection process

List of required documents

- Candidate's *Curriculum Vitae*
- description of scientific achievements, including a list of publications, ongoing projects, etc.
- diplomas and certificates confirming qualifications, completed courses, completed training, etc.
- cover letter
- letters of recommendation and references from previous employers/supervisors

Contact

City	Warsaw
Website	https://www.icho.edu.pl/en
Street	Kasprzaka 44/52
Postal Code	01-224
E-Mail	rekrutacja@icho.edu.pl

Apply now 

Postdoctoral Fellowships

Support to excellent postdoctoral researchers

- **Open to all nationalities**
- **Duration:** 12-24 months
- Project must be carried out at a beneficiary in **Europe**
- **Mobility Rule:** not more than 12/35 months in the country of the beneficiary prior to the call deadline
- Researchers awarded by PhD and **not more than 8 years of research experience** prior to the call deadline; exceptions apply

MSCA Postdoctoral Fellowships 2025

HORIZON-MSCA-2025-PF-01-01

Topic Call for proposal

Search calls for proposals by key

 **Calls for Tenders** are not available

Find call by programme structure

Horizon Europe consists of three pillars

 **Pillar 1**
Excellent Science

European Research Council

Marie Skłodowska-Curie Actions

Research Infrastructures

Topic Q&As

Get support


General information

Programme
HORIZON

Call
MSCA Postdoctoral Fellowships 2025 (HORIZON-MSCA-2025-PF)

Type of action
HORIZON-TMA-MSCA-PF-GF HORIZON TMA MSCA Postdoctoral Fellowships - Global Fellowships

Type of MGA
HORIZON Unit Grant [HORIZON-AG-UN]

 Open For Submission


Deadline model
single-stage

Opening date
09 April 2025

Deadline date
10 September 2025 17:00:00 Brussels time

Type of action
HORIZON-TMA-MSCA-PF-EF HORIZON TMA MSCA Postdoctoral Fellowships - European Fellowships

Type of MGA
HORIZON Unit Grant [HORIZON-AG-UN]

 Open For Submission

Deadline model
single-stage

Opening date
09 April 2025

Deadline date
10 September 2025 17:00:00 Brussels time

Postdoctoral Fellowship

ERC grants

Budget for collaborative research

in current prices

Cluster 1	Health	€8.246 billion (including €1.35 billion from NGEU)
Cluster 2	Culture, Creativity & Inclusive Societies	€2.280 billion
Cluster 3	Civil Security for Society	€1.596 billion
Cluster 4	Digital, Industry & Space	€15.349 billion (including €1.35 billion from NGEU)
Cluster 5	Climate, Energy & Mobility	€15.123 billion (including €1.35 billion from NGEU)
Cluster 6	Food, Bioeconomy, Natural Resources, Agriculture & Environment	€8.952 billion
	JRC (non-nuclear direct actions)	€1.970 billion

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European Partnerships

HORIZON EUROPE PILLAR II - Global challenges & European industrial competitiveness

PILLAR III - Innovative Europe

[illegible]



Calls for proposals

Calls for proposals are funding opportunities issued by the European Union institutions, agencies and bodies. These are direct financial contributions, known as grants, that are awarded to third party beneficiaries (e.g., research organisations, public entities, non-governmental organisations, and private companies) to engage in activities that serve EU policies.

Encouraging collaboration with Japan in WP 2025 calls:

- HORIZON-CL4-2025-02-SPACE-81: EU-Japan cooperation on the exploitation of **Quantum Space Gravimetry data**, RIA
- HORIZON-CL4-2025-03-HUMAN-19: International cooperation in **semiconductors** (CSA)
- HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-01: **Integrated approaches for remanufacturing** (Made in Europe Partnership)
- HORIZON-CL4-2025-05-MATERIALS-42-two-stage: **Innovative Advanced Materials** (IAMs) for product monitoring, smart maintenance and repair strategies in **the construction sector** (RIA) (Innovative Advanced Materials for Europe partnership)
- HORIZON-CL4-2025-05-MATERIALS-43-two-stage: **Innovative Advanced Materials** (IAMs) for robust, **fast curing sealants and coatings** for manufacturing and final assembly (IA) (Innovative Advanced Materials for Europe partnership)
- ... and 400+ topics where entities in Japan are welcome to join

Pillar III

INNOVATIVE EUROPE:

stimulating **market-creating breakthroughs** and **ecosystems** conducive to innovation

European Innovation Council

Support to innovations with breakthrough and market creating potential

European innovation ecosystems

Connecting with regional and national innovation actors

European Institute of Innovation and Technology (EIT)

Bringing key actors (research, education and business) together around a common goal for nurturing innovation

The budget: **€10.6 billion**, incl. up to **€527 million** for ecosystems (including NGEU – Recovery Fund parts dedicated to EIC).

circa **€3 billion**



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European
Commission

EU Funding & Tenders Portal



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Large-scale production of liquid advanced biofuels and renewable fuels of non-biological origin

HORIZON-CL5-2026-02-D3-01

Topic

Call for proposal

Internal navigation

General information

Topic description

Conditions and documents

Budget overview

Partner search announcements

Start submission

Topic Q&As

Get support

Call information

General information

Programme

Horizon Europe (HORIZON)

Call

[Cluster 5 Call 02-2026 \(WP 2025\) \(HORIZON-CL5-2026-02\)](#)

Type of action

HORIZON-IA HORIZON Innovation Actions

Type of MGA

HORIZON Action Grant Budget-Based [HORIZON-AG]

Forthcoming

Deadline model

single-stage

Planned opening date

16 September 2025

Deadline date

17 February 2026

Topic description

Expected Outcome:

A quite wide portfolio of technologies, which are close to be deployed but still lack the real-world demonstration of economic viability, exists. Significant volumes of advanced renewable fuels of non-biological origin (RFNBOs) are needed to cover the current fleets and the sectors where renewable fuels are the main long-term solution, such as aviation and shipping.

Additional documents:

[HE Main Work Programme 2025 – 1. General Introduction](#)

[HE Main Work Programme 2025 – 8. Climate, Energy and Mobility](#)

[HE Main Work Programme 2025 – 14. General Annexes](#)

[HE Programme Guide](#)

[HE Framework Programme 2021/695](#)

[HE Specific Programme Decision 2021/764](#)

[EU Financial Regulation 2024/2509](#)

[Decision authorising the use of lump sum contributions under the Rules for Legal Entity Validation, LEAR Appointment and Financial](#)

[EU Grants AGA — Annotated Model Grant Agreement](#)

[Funding & Tenders Portal Online Manual](#)

[Funding & Tenders Portal Terms and Conditions](#)

[Funding & Tenders Portal Privacy Statement](#)



EN

Horizon Europe

Work Programme 2025

8. Climate, Energy and Mobility

HORIZON-CL5-2026-02-D3-01: Large-scale production of liquid advanced biofuels and renewable fuels of non-biological origin

Call: Cluster 5 Call 02-2026 (WP 2025)

Specific conditions

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 11.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 33.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: To ensure a balanced portfolio, grants will be awarded to proposals not only in order of ranking but at least also to one proposal that is the highest ranked within the area of liquid advanced biofuels and at least also to one proposal that is the highest ranked within the area of liquid renewable fuels of non-biological origin, provided that proposals attain all thresholds (and subject to available budget). This condition to ensure a balanced portfolio will also be considered to be met if a proposal addressing both areas is funded.

Expected Outcome: A quite wide portfolio of technologies, which are close to be deployed but still lack the real-world demonstration of economic viability, exists. Significant volumes of advanced biofuels and renewable fuels of non-biological origin (RFNBOs) are needed to cover the current fleets and the sectors where renewable fuels are the main long-term solution, such as aviation and shipping and energy-intensive industries. Therefore, an exceptional effort is needed to establish more successful projects where full-scale plants are built and operated based on the vast potential of sustainable feedstocks throughout the EU.

Project results are expected to contribute to all of the following expected outcomes:

- Energy producers and consumers in transport and energy-intensive industries benefit from the mobilisation of building of industrial capacity for advanced biofuels and renewable fuels of non-biological origin;

<https://cordis.europa.eu/search>

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threats to agricultural production

x

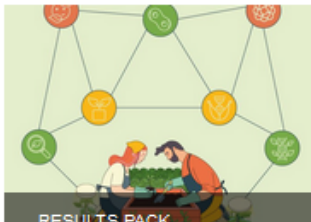
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Filters

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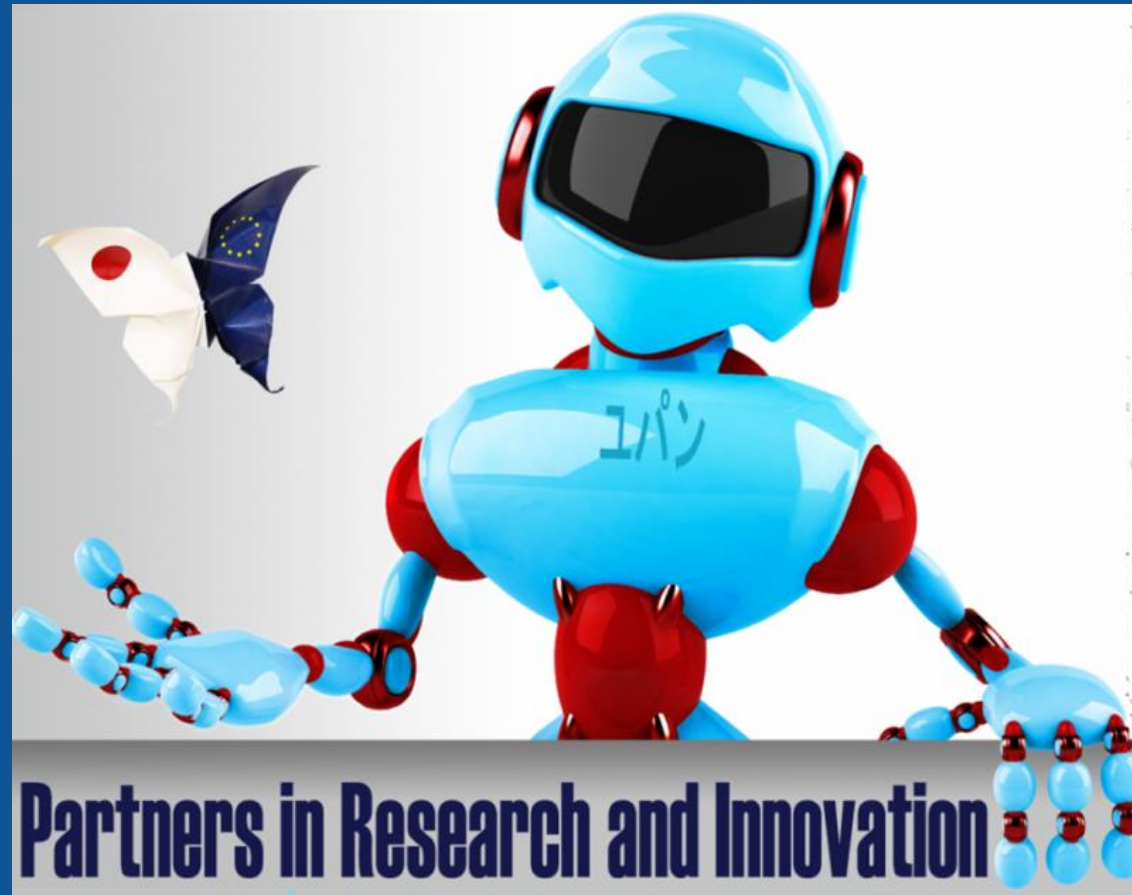
1 260 results for 'threats' AND 'to' AND 'agricultural' AND 'production'



Plant health: Protecting plants to safeguard our future



Plant health is an overarching term for emerging risks including pests, diseases and weeds, integrated pest management and innovation in plant protection. It has the potential to contribute to the wider goal of ensuring the sustainability of primary production on an economic, ecological and



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