



# JOINT PROGRAMMING INITIATIVE ON ANTIMICROBIAL RESISTANCE

A world map composed of small grey dots, centered behind the main title.

## JPI AMR Future Strategy 2020 - 2025 Vision, Achievements and Future

Argentina, Canada, Belgium, Czech Republic, Denmark,  
Estonia, Finland, France, Germany, Greece, Ireland, Israel,  
Italy, Japan, The Netherlands, Norway, Poland, Romania,  
Spain, South Africa, Sweden, Switzerland, Turkey,  
The United Kingdom.

June 26, 2017

Excerpt Edition w. Executive Summary and Future Strategy

# Executive Summary

## The Challenge - Lives Are at Stake

Antibiotics have saved millions of lives throughout the many decades it has been in use as a common drug. However, antibiotic resistance is *now* a global health security challenge. When bacteria become resistant to commonly used drugs, society needs to respond with concerted actions. Only together can we divert from a trajectory leading to up to 10 million human lives being extinguished yearly because of antibiotic resistant bacteria, this by 2050 if projections become reality. Collaboration is the cornerstone of JPIAMR and collaboration is key - resistant bacteria knows of *no* nations borders. Currently, there are few new antibiotics in development.

## The JPIAMR – The key to turn the tide of AMR

The Joint Programming Initiative on Antimicrobial Resistance, JPIAMR, is a unique international collaborative platform that coordinates national funding and supports collaborative action for filling knowledge gaps on antimicrobial resistance with a One Health perspective. By mobilising existing and new resources, the JPIAMR creates a greater critical mass and attracts new researchers into the AMR field. Our shared Strategic Research Agenda, outlines the key areas to address and provides guidance for countries to align their AMR research agendas nationally and internationally. This to meet major challenges that *no* individual country is capable to handle on its own. Today 24 countries have joined JPIAMR as members. The collaborative platform is now internationally recognized. JPIAMR interacts with stakeholders such as WHO, ASEAN, G7 and the USA. G20 and G7 now include activities by JPIAMR in declarations and resolutions. JPIAMR coordinates research priorities and calls with the EC, IMI and pharma industry together with close cooperation with EC DG Research, DG Santé and many efforts aligning with European health authorities. The current platform extends well beyond Europe including members such as Japan, Argentina, South-Africa and other nations. New members are added continuously to this global and unique platform.

## The Future – Global Collaboration Creates Transformative Changes

The mission for JPIAMR for the years 2020-2025 is stated as: **“To join forces across nations by leading the alignment, coordination, and support to Antimicrobial Resistance One Health collaborative research and global policy activities”**.

The overarching major goals are:

- To **align national and international research programmes.**
- To **support and coordinate transformative research.**
- To **support and coordinate the JPIAMR Virtual Research Institute.**
- To **promote innovation and translation of research results.**
- To **bridge the gap between research and policy.**

JPIAMR support new evidence and innovations that reduce the burden of antimicrobial resistance through coordinated global collaborative research in Europe and around the world. Also aiming to undertake further research to better understand how resistance develops and spreads in the environment. And to develop diagnostic tools and better surveillance methods as well as validating smarter strategies for using antibiotics in healthcare and agriculture.

JPIAMR will contribute to *faster global progress* of research and innovation on antimicrobial resistance. To ultimately find new cures and methods to harness drug resistant bacteria. The **Virtual Research Institute** is a dynamic network of research facilities, changing the way resources are shared and used.

The scientific and societal challenge of AMR is likely to be greater in the next 10 years.

**JPIAMR is the key to turn the tide of AMR in Europe and beyond.**

# The JPIAMR Future Strategy 2020-2025

**This excerpt focuses only on the core of JPIAMR's Future Strategy 2020-2025.**

*JPIAMR is an international collaborative platform for nations all over the world, which coordinates national funding and supports collaborative action for filling knowledge gaps on AMR with a One Health perspective. Our Strategic Research Agenda outlines the key areas to address and provides guidance documents for countries to align their AMR research agendas nationally and internationally.*

## 1. Vision, Future Major Goals and Objectives

### 1.1 Ambition and vision

The **vision** of JPIAMR by 2025 is to actively be:

***“Turning the tide of AMR in Europe and beyond”***

The JPIAMR **mission** for the next years (2020-2025) is:

***“To join forces across nations by leading the alignment, coordination, and support to Antimicrobial Resistance One Health collaborative research and global policy activities”***

JPIAMR's **main aim** for the next years (2020-2025) is:

***“To provide new evidence and innovations that reduce the burden of antimicrobial resistance through coordinated global collaborative research in Europe and around the world.”***

The SRA, mission and vision highlights how JPIAMR would face the problem of AMR “by producing new research and creating networks that can create long-term momentum for other areas in society”, by “providing scientific evidence” and “finding routes for novel antibiotics and new anti-infectious strategies”.

All initiatives to control the problem at a global scale, including those highlighted as “urgently needed”, demand the “... support of theoretical and applied research to better understand the origin, spread, evolution and development of resistance in microorganisms”. **This is what makes JPIAMR different from other bodies: to combat the challenges of identifying and exploring novel strategies/approaches and to add scientific evidence.** The JPIAMR calls, workshops and SRA reflect the input of JPIAMR in searching for novel ways to approach the problems.

### 1.2 Major goals and objectives

The **goals** of JPIAMR are:

1. **To develop global AMR research strategies and programmes through alignment of national and international research programmes**, by defining and implementing the JPIAMR Joint Strategic Research Agenda (SRA) and setting common (research) priorities in open consultation with the European Commission, WHO, TATFAR, G7/G20 public and animal health authorities, industry (such as EPFIA, BEAM Alliance), the scientific community, and other relevant stakeholders.

The short, medium and long term objectives of goal 1 are:

- By 2020, JPIAMR is continuing to establish inter-/intra-governmental platforms to align national and international initiatives on AMR research and drug discovery and development within the framework of UN, WHO, OECD, G7/G20 and EU.
  - By 2020, the potential of European partnership in AMR research is realised by expanding JPIAMR membership to cover most European countries.
  - By 2023, the EU (through its EU AMR Action plan) and all JPIAMR member states have developed national strategies and action plans that include research priorities aligned with the updated JPIAMR SRA of 2023.
  - By 2025, international alignment of AMR research is further strengthened through inclusion of countries from all continents.
2. To **support and coordinate transformative research** through open, national and joint transnational competitive calls for proposals in strategic areas of AMR research, where efficiencies of scale can be achieved by avoiding duplication and fragmentation, promoting and pooling of AMR research resources and infrastructures, creating research networks and mobilising the best human talent (increasing scientific capacity).

The short, medium and long term objectives of goal 2 are:

- By 2020, the JPIAMR portfolio of funded research projects reaches a critical mass to enable cross-interaction between projects at the JPIAMR annual conference.
  - By 2020, the JPIAMR database of AMR research funding, outputs, and infrastructures for promoting collaboration, use, and increased trans-national access is completed.
  - By 2020, JPIAMR has joint transnational capacity programmes to mobilise researchers to enter the field of AMR research.
  - By 2023, JPIAMR has joint transnational grant programmes in all relevant AMR research areas, with regular calls for proposals.
  - By 2023, JPIAMR has supported a programme in collaboration with ESFRI and ERIC for increasing access to, use of, and collaboration between AMR research resources and infrastructures.
3. To **support and coordinate the JPIAMR Virtual Research Institute (JPIAMR-VRI)**, a dynamic network of AMR research facilities, comprising a platform for scientific interaction between the member states, and a joint transnational research capacity in the area of AMR, providing close contact between JPIAMR and the scientific community.

The short, medium and long term objectives of goal 3 are:

- By 2020, the first network(s) of research institutions is/are established.
  - By 2023, the JPIAMR prevention and interventions research network of hospitals and primary care institutions is operational, and will be complementing existing clinical trial networks initiatives.
4. To **promote innovation and translation of research results** into health care, health policy and animal health policy through a permanent dialogue with industry and its networks (such as BEAM Alliance), public-private partnerships (such as IMI), and relevant policy makers and managers.

The short, medium and long term objectives of goal 4 are:

- By 2020, JPIAMR serves as a bridge between pre-clinical science, and clinical and commercial developers of new treatments and diagnostics.
  - By 2020, the JPIAMR database provides data on academic, SME and industry projects to facilitate the development of joint translational projects.
  - By 2020, all JPIAMR research grant programmes encourage multi-disciplinary and translational approaches with a One Health perspective.
  - By 2021, JPIAMR issues regular calls for proposals for joint public-private projects in areas of identified gaps and opportunities.
  - By 2025, JPIAMR has established a portfolio of research outputs and results of potential value to related industries, health care institutions and public health decision-makers.
5. To **bridge the gap between research and policy** by collecting and sharing information on funded AMR research projects, research infrastructures, research output and impact with the scientific community and other relevant stakeholders.

The short, medium and long term objectives of goal 5 are:

- By 2020, the JPIAMR Database is established as the main information system across JPIAMR member countries for data on funded AMR research projects, research infrastructures, and research output and impact.
- By 2021, JPIAMR actively seek input from policy-makers for identification and definition of research priorities for updating the SRA and future joint activities.
- By 2021, JPIAMR publishes a biannual analysis of policy initiatives of relevance for scientists, knowledge gaps and unnecessary duplications within AMR research.
- By 2021, JPIAMR facilitates communication between the research community and policymakers by creating meetings for systematic interactions and publication of an annual report on different areas of AMR, summarising research outcomes and evidence-based findings.
- By 2022, JPIAMR includes industry representatives, policy makers, and other stakeholders in its expert panels.
- By 2023, JPIAMR has initiated a secondment/exchange program for AMR scientists/policymakers.

## 2. **Expected impact**

By achieving the stated objectives, the expected impact by 2025 is:

- Coordinated and aligned national and international public and private AMR research initiatives, where the JPIAMR SRA serves as a global guideline for prioritisation of investments in research, innovation, and infrastructure with a One Health – One World perspective.
- Increased joint JPIAMR funding of research projects, mobility and training of researchers, and infrastructure, with a strong leverage effect on national AMR research budgets in Europe and beyond.
- Strengthening of the European Research Area by expanding the AMR research community networks to all European Union member states, supporting mobility, training, capacity building and facilitating access and use of infrastructures.
- Increased development of new drug candidates and alternatives to antibiotics, better diagnostics, and improved evidence-based measures to prevent the spread of AMR.
- Reduced knowledge gap between researchers, industry, and policymakers, thereby optimising prioritisation and funding of AMR research and innovation at national and international level.

### **3. Implementation**

#### **3.1. Research and innovation activities**

##### **Proposed activities and instruments for the implementation of the goals and objectives:**

##### **To support and coordinate transformative research, JPIAMR will:**

- Fund regular open national and joint transnational competitive calls for proposals in all strategic areas of AMR.  
*This includes calls for proposals for joint public-private projects, “bolt-on funding” to top up projects, exploiting synergies with calls of other funding instruments (such as IMI, GARD-DNDi).*
- Support networking and partnership among research communities and create joint transnational capacity programmes to mobilise the best human talent, thereby increasing scientific capacity.
- Organise scoping workshops, strategic workshops, intergovernmental workshops, projects workshops, and an annual JPIAMR annual conference to support or develop calls or updates, and adapt prioritisation of the SRA.
- Maintain the JPIAMR database of AMR research and infrastructures to promote collaboration, use and increased trans-national access.
- Support a programme in collaboration with ESFRI and ERIC for increasing access to, use of, and collaboration between AMR research resources and infrastructures.

##### **To support and coordinate the JPIAMR Virtual Research Institute (JPIAMR-VRI), JPIAMR will:**

- Coordinate and support JPIAMR-VRI, a dynamic network of AMR research facilities comprising a platform for scientific interaction between member states, and a joint transnational research capacity in the area of AMR.
- Support the development of the JPIAMR prevention and intervention research network of hospitals and primary care institutions.

##### **To promote innovation and translation of research results, JPIAMR will:**

- Update and promote the JPIAMR Strategic Research Agenda (SRA).
- Fund regular open national and joint transnational competitive calls for joint public-private projects in areas of identified gaps and opportunities, encouraging multi-disciplinary and translational approaches with a One Health perspective.
- Serve as a bridge between pre-clinical science, and clinical and commercial developers of new treatments and diagnostics through a permanent dialogue with health care, health policy and animal health policy, industry and their networks (such as the BEAM Alliance), public-private partnerships (such as IMI) and relevant policy makers and managers.
- Facilitate researcher mobility between academia and industry by organising fellowships programmes, summer schools, exchange and training programmes, and industry PhD awards.
- Provide data on academic, SME and industry projects, and a portfolio of AMR research outputs and results for related industries, health care institutions and public health decision-makers, to facilitate development of joint translational projects.

### **3.2. Policy Alignment**

**Proposed activities and instruments for the implementation of the goals and objectives:**

**To develop global AMR research strategies and programmes through the alignment of national and international research programmes, JPIAMR will:**

- Develop the governance model, international strategy, and membership policy, to make JPIAMR's operations adapted to an increased membership of most European countries and major middle-income countries globally.
- Facilitate and support the development of national strategies and action plans that include research priorities aligned with the updated JPIAMR SRA in all member countries.
- Influence and align international and intergovernmental AMR research initiatives, by developing a joint JPIAMR member state approach and position on strategic issues.
- Coordinate JPIAMR member state alignment with the activities and initiatives of the next EC Framework Programme and other EU initiatives.

**To bridge the gap between research and policy, JPIAMR will:**

- Organise strategic workshops to map the AMR landscape (for example funding, policies, infrastructures) and discover the opportunities for harmonisation.
- Include industry representatives, policymakers, and other stakeholders in JPIAMR's expert panels.
- Initiate an exchange/secondment programme for AMR scientists/policymakers.
- Collect and share information on funded AMR research projects, research infrastructures, research output and impact with the scientific community and other relevant stakeholders through the JPIAMR database and workshops, to facilitate communication between the research community and policy makers.
- Publish a biannual analysis of policy initiatives of relevance to scientists, knowledge gaps and unnecessary duplications within AMR research.
- Publish an annual for policymakers on AMR research.

### **3.3. Outreach activities**

In order to maximise the impact of JPIAMR, the results and knowledge of the funded research projects and additional activities generated by JPIAMR will be disseminated widely within the scientific community, as well as to a full range of potential users and uses beyond research, including commercial, investment, social, environmental, policy making, standard-setting, skills and educational training. JPIAMR will facilitate dissemination through its ongoing contacts and networking with industry and policy makers, and will help to segment the target audiences and to tailor the message appropriately. A network of JPIAMR member communication capacities and staff will be initiated by 2017/18. JPIAMR is deploying 21<sup>st</sup> century communication capacities to share and engage audiences and stakeholders on an international/global scale, embracing fragmented communications capabilities.

#### **Intellectual property rights issues - exploitation of results**

JPIAMR will not by itself generate knowledge that needs to be protected. Therefore, no intellectual property (IP) management is needed. However, the handling of IP within the funded research consortia will be part of a consortium agreement to be signed by all research project partners, which will follow the JPIAMR IP guidelines, as well as its open access and monitoring policy.

## **Dissemination activities**

JPIAMR will provide information materials, online and offline resources and infrastructure for dissemination of information and ensure increased awareness of the JPIAMR calls, supported projects, and other activities, which will facilitate stakeholder engagement and participation.

JPIAMR will develop promotional and marketing material to support internationalisation activities in particular, by branding the benefits and advantages of joining JPIAMR. A network of communicators among the participating agencies will be established to facilitate dissemination and communication.

Various JPIAMR social media, online tools and channels, including the JPIAMR website [www.jpiamr.eu](http://www.jpiamr.eu), are available to disseminate relevant information to relevant groups in order to facilitate knowledge transfer, including press releases, website “news” items, Twitter feeds, newsletters, videos, webinars, as well as group emails forwarded via the JPIAMR stakeholder database (contact details of more than 1500 individual stakeholders).

### **3.4. Monitoring and evaluation**

JPIAMR has had a monitoring and evaluation framework since 2013. Implementation of this policy is regular with monitoring and ex post evaluation of the funded projects (outputs and impacts), as well as self-evaluation of JPIAMR as an initiative. We also have a database of funded projects (at joint, national and EU level).

[www.jpiamr.eu/activities/evaluation-framework](http://www.jpiamr.eu/activities/evaluation-framework)

During 2017, all the JPIs are together developing a set of joint impact indicators that will be included in our evaluation exercises.

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This document is focused on the key content of the report on the JPIAMR Strategy 2020-2025.

*Please contact the JPIAMR secretariat for more information and to request the full document:*  
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***“Turning the tide of AMR in Europe and beyond”***