

General Information	
Preliminary title of the European Partnerships	European Partnership on One Health AMR
Short description of the partnership	At the highest political levels antimicrobial resistance (AMR) is recognised as a major threat to the health of our citizens and our society. The EU One health action plan against AMR provides the framework within which action should be taken against this threat. However, the AMR research landscape is currently fragmented addressing human health, animal health, food safety and environment in silos. It is also fragmented across Member States. The proposed research partnership aims to bring together the many aspects of AMR to overcome this fragmentation, and integrate the various different research fields.
Services directly involved	DG RTD, DG SANTE, DG AGRI, DG ENV, JRC, DG MOVE
Context and problem definition	<p>Antimicrobial resistance is the ability of microorganisms to resist antimicrobial treatments, especially antibiotics. Antimicrobials are used to treat infections and improve the health of humans as well as pets and livestock.</p> <p>AMR has a direct impact on human and animal health and carries a heavy economic burden due to higher costs of treatments and reduced productivity caused by sickness. AMR is responsible for an estimated 33,000 deaths per year in the EU, and costs the EU EUR 1.5 billion per year in healthcare expenditure and productivity losses. It is also estimated that without solutions the annual human deaths due to AMR are projected to be 10 million worldwide by 2050, surpassing the number of deaths resulting from diabetes and cancer combined. While the effects of AMR on livestock production and the related costs are hardly known, it has direct implications for animal health and welfare, and for the safety of foodstuffs of animal origin.</p> <p>Combating AMR requires a One Health approach, recognizing that human and animal health are interconnected, that diseases affected by AMR are transmitted from animals to humans and vice versa. This approach encompasses the environment as a link between humans and animals and a reservoir of resistant microorganisms, It also takes into account socio-economic drivers that affect the use of antimicrobials in human and animal healthcare to inform best practices for implementing schemes on prudent use.</p> <p>Research, development and innovation can deliver scientific advice for policymaking, provide novel solutions and tools to prevent and treat infectious diseases affected by AMR, improve diagnosis, and control the spread of resistant microorganisms, as infectious diseases know no borders. Therefore, a comprehensive research approach agreed on and developed with the MS in a true partnership using a One Health approach will be important to address this problem.</p> <p>The European One Health Action plan provides the framework within which this partnership can be developed since its actions focus on areas with the highest added value for Member States including boosting research development and innovation. These aspects of the plan are currently implemented via traditional framework programme calls as well as via calls of the Innovative Medicine Initiative (with a focus on the development of treatments) and the Joint Programming initiative on AMR (JPIAMR) (with a focus on One Health). These current partnerships have clearly shown a strong added value. A partnership under Horizon Europe will further strengthen synergy and enable linking the various research fields that are relevant to combat AMR via a holistic One Health approach on European</p>

	and national levels.
Objectives and expected impacts	<p><u>Objectives</u></p> <ul style="list-style-type: none"> ▪ Contribute to achieving the objectives of the European One Health Action Plan against AMR and the WHO Global Action Plan on AMR ▪ Reduce the threat of AMR ▪ Recognize and strengthen the holistic One Health approach ▪ Reinforce Europe's leading role in the fight against AMR by adding value to, and leveraging Member State actions ▪ Decrease fragmentation by boosting alignment of national research, and funding research projects and initiatives and improving EU and global coordination of research activities as well as collaboration between international research initiatives ▪ Provide economic incentives for the development of new therapies, diagnostics and interventions <p><u>Expected impacts</u></p> <ul style="list-style-type: none"> ▪ Novel solutions to prevent and treat infectious diseases affected by AMR, improved diagnosis and control of the spread of resistant microorganisms, testing and validation of such solutions and facilitating their uptake or implementation ▪ Decreased burden of infectious diseases, notably due antimicrobial resistant pathogens and progress towards Sustainable Development Goal No. 3 'Ensure healthy lives and promote well-being for all at all ages' ▪ Closed knowledge gaps on AMR (including those identified in the European One Health Action Plan against AMR and the EU Strategic Approach to Pharmaceuticals in the Environment), support provided to regulatory science and inform policymaking.
Necessity test: rationale for a European Partnership	<p>The WHO Global Action Plan on AMR and the UN Interagency coordination group have stressed that AMR is a global challenge that requires countries to work together and coordinate their activities to combat it. G7 and G20 statements also endorse this.</p> <p>Via the European One Health Action Plan against AMR the Commission commits itself to actions in areas with the highest added value for Member States, which also include research, development and innovation.</p> <p>A European partnership on One Health AMR would allow coordinating, aligning of activities and funding among countries as well as with Commission activities and funding. It will also facilitate national coherence between different services/ministries with responsibility for the various aspects of AMR (e.g. human health, agriculture, environment, industry, finances).</p> <p>It will allow leveraging investments, avoiding unnecessary duplication and can provide advantages for scaling up research efforts.</p> <p>The objectives cannot be achieved by funding research projects in isolation or via using traditional Framework Programme calls only. The broad scope of One Health AMR research area requires a level of integration and coordination that cannot be achieved without a partnership. A CSA could improve coordination of certain activities, but will not be sufficient to ensure the engagement of MS funding bodies and the commitment to co-fund integrated research. The current Joint Programming Initiative on AMR (JPIAMR), the ERA-Net Cofund EXEDRA and the One Health European Joint Programme Cofund (EJP OH) are starting points that already show the</p>

	benefits of partnerships in the area of AMR research. It is important to continue and expand these efforts and build on the Member State support in this area.
Relevant for the following parts of Horizon Europe	<p>Pillar II 'Global Challenges and European Industrial Competitiveness'</p> <p><input checked="" type="checkbox"/> Cluster Health</p> <p><input type="checkbox"/> Cluster Culture, creativity and inclusive society</p> <p><input type="checkbox"/> Cluster Civil Security for Society</p> <p><input checked="" type="checkbox"/> Cluster Digital, Industry and Space</p> <p><input type="checkbox"/> Cluster Climate, Energy and Mobility</p> <p><input checked="" type="checkbox"/> Cluster Food, Bioeconomy Natural Resources, Agriculture and Environment</p> <p><input checked="" type="checkbox"/> Cross-cluster</p> <p><input type="checkbox"/> Pillar III 'Innovative Europe'</p>
Currently identified links with other partnership candidates / Union programmes	<p>Opportunities for building links with the following Horizon Europe partnership candidates and EU programmes will be explored with:</p> <ul style="list-style-type: none"> ▪ Proposed partnership “Innovative Health Initiative” to accelerate the development and uptake of health care innovations; ▪ Proposed partnership “EU-Africa Global Health” to accelerate the clinical development of health technologies and health system interventions for infectious diseases; ▪ Proposed partnership “Personalised medicine” as it can impact all Health Cluster research topics; ▪ Proposed partnership “Safe and Sustainable Food Systems for People, Planet and Climate” as it can build synergies on food-chain related matters; ▪ Proposed partnership on “Animals and Health” as it may address additional aspects of animal healthcare. ▪ Proposed partnership “Towards more sustainable farming: agro-ecology living labs and research infrastructures”, as it may address additional aspects of the animal healthy living dimension ▪ Proposed partnership “Water4All – Water security for the planet”, as it addresses health challenges related to aquatic environments and sources ▪ Digital Europe Programme for deploying common digital solutions and reinforcing the digital infrastructure and skills; ▪ Connecting Europe Facility for supporting the connectivity between hospitals, medical centres and research centres; ▪ InvestEU to attract private investment in research, innovation and digitisation in the area; ▪ European Regional Development Fund for investments in research and innovation, human capital and innovative technologies and new care delivery models; ▪ Health strand of the European Social Fund + for investing in people in terms of education and training and improving accessibility of healthcare systems.
Does the proposed partnership build on currently active ones?	The proposal builds on the ERA-Net EXEDRA(ends in 2020) that supports the JPIAMR, and on the One Health EJP (ends in December 2022)
Expected type and composition of partners	<ul style="list-style-type: none"> ▪ The partnership should involve as many public health, animal health and environment research funders from EU member states as possible to ensure a strong EU-wide geographical coverage, commitment and cooperation on ongoing, emerging or novel opportunities for advancing AMR research and innovation at EU-level. ▪ The partnership should be open to public funders at both national and

	<p>regional level in the EU and those from countries associated to Horizon Europe, while it could also consider public funders from third countries. These type of partners have been involved in ERA-NETs since 2006 and repeatedly underlined their interest, commitment and ability in co-funding research collaborations.</p> <ul style="list-style-type: none"> ▪ Other funders that could get involved in specific co-funding activities are: private foundations and philanthropy as well as additional potential co-funders; pharmaceutical, diagnostic and ICT industry as additional potential co-funders or sponsors of AMR research projects. ▪ Universities, research institutes and research infrastructures with strong expertise and capacity in AMR research.
Contributions and commitments expected from partners	<p>Financial contribution from national/regional research funders required for joint transnational calls for proposals.</p> <p>The potential for in-kind contributions (person months, use of research infrastructures, services) could be explored.</p>
Currently envisaged implementation mode(s).	<p><input type="checkbox"/> Co-programmed European Partnership</p> <p><input checked="" type="checkbox"/> Co-funded European Partnership</p> <p><input type="checkbox"/> Institutionalised European Partnership</p> <p style="margin-left: 40px;"><input type="checkbox"/> Article 185</p> <p style="margin-left: 40px;"><input type="checkbox"/> Article 187</p> <p style="margin-left: 40px;"><input type="checkbox"/> EIT-KIC</p>
Justification of the implementation mode	<p>A co-funded European Partnership (option 2) with an annual programming provides the flexibility for identifying, addressing and co-funding the most relevant research challenges and research opportunities in priority areas when they emerge. It will allow national/regional funders to identify areas where there is broad support to commit significant budgets to.</p> <p>A co-programmed European Partnership (option 1) would allow partners to align their research agendas. However, it would not deliver the close strategic collaboration, coordination and joint implementation of co-funding activities.</p>
Proposed starting year	2022