

Public consultation on EMA Regulatory Science to 2025

Fields marked with * are mandatory.

* Name

* Email



EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

Introduction

The purpose of this public consultation is to seek views from EMA's stakeholders, partners and the general public on EMA's proposed strategy on Regulatory Science to 2025 and whether it meets stakeholders' needs. By highlighting where stakeholders see the need as greatest, you have the opportunity to jointly shape a vision for regulatory science that will in turn feed into the wider EU network strategy in the period 2020-25.

The views being sought on the proposed strategy refer both to the extent and nature of the broader strategic goals and core recommendations. We also seek your views on whether the specific underlying actions proposed are the most appropriate to achieve these goals.

The questionnaire will remain open until June 30, 2019. In case of any queries, please contact: RegulatoryScience2025@ema.europa.eu.

Completing the questionnaire

This questionnaire should be completed once you have read the draft strategy document. The survey is divided into two areas: proposals for human regulatory science and proposals for veterinary regulatory science. You are invited to complete the section which is most relevant to your area of interest or both areas as you prefer.

We thank you for taking the time to provide your input; your responses will help to shape and prioritise our future actions in the field of regulatory science.

Data Protection

By participating in this survey, your submission will be assessed by EMA. EMA collects and stores your personal data for the purpose of this survey and, in the interest of transparency, your submission will be made publicly available.

For more information about the processing of personal data by EMA, please read the [privacy statement](#).

Questionnaire

Question 1: What stakeholder, partner or group do you represent:

- ☐ Individual member of the public
- ☐ Patient or Consumer Organisation
- ☐ Healthcare professional organisation
- ☐ Learned society
- ☐ Farming and animal owner organisation
- ☐ Academic researcher
- ☐ Healthcare professional
- ☐ Veterinarian
- ☐ European research infrastructure
- ☐ Research funder
- ☐ Other scientific organisation
- ☐ EU Regulatory partner / EU Institution
- ☐ Health technology assessment body
- ☐ Payer
- ☐ Pharmaceutical industry
- ☐ Non-EU regulator / Non-EU regulatory body
- ☒ Other

Please specify: Press/media/NGO/Not-for profit organisation/other scientific organisations/policy maker, etc.

Not for profit organisation registered in the US as a social welfare org. described in Internal Revenue Code (IRC) section 501(c)(4), with a center of operations in Brussels (Belgium)

Name of organisation (if applicable):

Alliance for Regenerative Medicine (ARM)

Question 2: Which part of the proposed strategy document are you commenting upon:

- ☒ Human
- ☐ Veterinary
- ☐ Both

Question 3 (human): What are your overall views about the strategy proposed in EMA's Regulatory Science to 2025?

Please note you will be asked to comment on the core recommendations and underlying actions in the subsequent questions.

The Alliance for Regenerative Medicine (ARM) is an international community of small and large companies, non-profit research institutions, patient organizations, and other sector stakeholders dedicated to realizing the promise of advanced therapies for patients around the world. Advanced therapies have the potential to deliver unprecedented benefits to societies and patients with severe diseases. There are indications that the growth in this sector is significantly lower in Europe compared to the USA or other regions in the world. ARM therefore calls for a comprehensive strategy, with a structured and coordinated approach at European and national levels to ensure that Europe can sustain a global leadership role in the research, development, and commercialisation of Advanced Therapies Medicinal Products (ATMPs). In this context, ARM welcomes the initiative of the EMA strategic reflection which includes several goals and recommendations specifically addressing advanced therapies. The responses to this questionnaire reflect ARM priorities and, beyond the core recommendations outlined in EMA strategic reflection which we generally support, we have identified some additional recommendations and actions that are instrumental to ensure European competitiveness in this field, such as addressing divergent regulatory requirements at national level. ARM believes that the EMA can play an important role in fostering increased convergence between Member States and other global regulatory agencies and in strengthening its dialogue and partnership with other stakeholders such as HTA bodies.

Question 4 (human): Do you consider the strategic goals appropriate?

Strategic goal 1: Catalysing the integration of science and technology in medicines development (h)

- ☒ Yes
- ☐ No

Strategic goal 2: Driving collaborative evidence generation – improving the scientific quality of evaluations (h)

- ☒ Yes
- ☐ No

Strategic goal 3: Advancing patient-centred access to medicines in partnership with healthcare systems (h)

- ☒ Yes
☐ No

Strategic goal 4: Addressing emerging health threats and availability/therapeutic challenges (h)

- ☒ Yes
☐ No

Strategic goal 5: Enabling and leveraging research and innovation in regulatory science (h)

- ☒ Yes
☐ No

Question 5 (human): Please identify the top three core recommendations (in order of importance) that you believe will deliver the most significant change in the regulatory system over the next five years and why.

First choice(h)

2. Support translation of Advanced Therapy Medicinal Products cell, genes and tissue-based products into patient treatments

1st choice (h): please comment on your choice, the underlying actions proposed and identify any additional actions you think might be needed to effect these changes.

With the adoption of EU Regulation (EC) 1394/2007 in 2007, the European regulatory authorities paved the way to set standards for the review and marketing authorisations of this new class of therapies. The European Medicines Agency have been the first in the world to evaluate and approve ATMPs according to regulatory standards specifically adapted to ATMPs. By establishing the continued support to translation of Advanced Therapy Medicinal Products into patient treatments as a top priority, the EMA will help realise the extraordinary potential to offer life-changing solutions for patients with few or no alternatives and will contribute to maintain a strong innovation-base and important R&D investments in Europe.

ARM agrees with the actions that the EMA proposes to promote ATMP development in Europe and foster patient access to treatment, as detailed under this core recommendations, i.e.

- Identify therapies that address unmet medical need
- Provide assistance with early planning, method development and clinical evaluation
- Address the challenges of decentralised ATMP manufacturing and delivery locations
- Raise global awareness of ATMPs to maximise knowledge sharing, promote data collection

However, we believe that the above actions will be insufficient to effect this change.

Several aspects of the regulatory requirements remain under the responsibility of national authorities and are often subject to different assessments and decisions in different Member States: clinical trials authorisation, cells & tissues requirements, GMO assessment, etc. ARM believes that the EMA can play an important role in fostering increased convergence between Member States and internationally, such as, for instance, ensuring a closer collaboration on these topics with the Heads of Medicines Agencies (HMA) and the EU-Innovation Network (EU-IN).

Additional actions to promote ATMP development in Europe include:

- to leverage existing or provide a new platform for building further continuity between national and EU-level aspects of ATMP development and facilitating increased alignment/convergence between Member States.
- to engage with other international regulatory agencies to foster global convergence of requirements for ATMP (including their starting/raw materials, methods and classification) and/or to define new common approaches to assess and approve them.

Leveraging the best international expertise to achieve such convergence is important to achieve common, science-based evaluation methods and criteria.

Therefore, several other aspects and recommendations identified in the strategic reflection, not necessarily specific but highly relevant to ATMPs, will support their development and foster patient access to treatment. Among the other recommendations proposed in the strategic reflection, ARM believe the following are core:

- Contribute to HTAs' preparedness and downstream decision-making for innovative medicines
- Facilitate the implementation of novel manufacturing technologies
- Promote and invest in the Priority Medicines scheme (PRIME)
- Diversify and integrate the provision of regulatory advice along the development continuum
- Leverage collaborations between academia and network scientists to address rapidly emerging regulatory science research questions
- Promote use of high-quality real-world data (RWD) in decision-making
- Identify and enable access to the best expertise across Europe and internationally
- Disseminate and share knowledge, expertise and innovation across the regulatory network and to its stakeholders.
- Reinforce patient relevance in evidence generation

Second choice (h)

15. Contribute to HTAs' preparedness and downstream decision-making for innovative medicines

2nd choice (h): please comment on your choice, the underlying actions proposed and identify any additional actions you think might be needed to effect these changes.

This core recommendation should be associated with core recommendation 18. "Promote use of high-quality real world data (RWD) in decision-making".

Most payers and Health Technology Assessment (HTA) bodies do not have mechanisms to adequately capture the full benefits of ATMPs. This means systematic barriers may stop ATMPs from reaching patients in need in a timely manner. These therapies often carry relatively high up-front price tags, in part due to complex manufacturing and administration, but mostly because of the long-term value to patients and society and one-off treatment. ATMPs are highly novel, with often small patient populations and with benefits potentially lasting for many years if not for patient's lifetime. In a context where several HTA bodies demand comparative evidence vs. standard of care, at time of launch, many ATMPs may not have developed the evidence traditionally required by payers.

Better-adapted frameworks and evidence requirements from HTAs, including through greater use of real-world evidence are required, with further development of the infrastructure required to collect and use high-quality real-world evidence, and expanded opportunities for early dialogue between pharma and payers, supported by increased EU funding.

Through EUnetHTA collaboration, the EMA could reinforce its role in exchanging its experience with HTA bodies, explaining its scientific rationale for granting approval of ATMPs, particularly in the case of conditional approval or approval under exceptional circumstances. Biomarker qualification, the use and significance of surrogate endpoints in clinical development and during long-term follow-up should be better explained and agreed upon between developers, regulators, HTA experts and payers. An EMA/EUnetHTA workshop dedicated to ATMPs could be helpful to address these points and evaluate what could be done to improve access to ATMPs after marketing authorization approval.

Working together with HTA bodies and payers to agree on the approach to manage uncertainties and on common standards and requirements for long-term and real-world evidence will be essential for ATMPs. In this respect, the other core recommendation "Promote use of high-quality real-world data (RWD) in decision-making" should be viewed as a priority required to achieve the goal on preparedness and downstream decision-making for innovative medicines. The EMA could be instrumental in engaging with Member States and, in collaboration with several stakeholders, in designing new, European-wide infrastructure to collect real-world evidence that would be helpful pre- and post-approval.

Science-based decisions and increased cooperation and collaboration among key stakeholders on this aspect are needed. Both aspects should be addressed in conjunction to make sure that the benefit of granting early regulatory approvals to provide early access to patients is not vain due to unsuitable HTA processes and unrealistic expectations on long-term real-world evidence.

Finally, commenting EMA strategic goal 3, ARM wants to point out that the introduction of ATMPs may be disruptive to healthcare systems: the way some diseases are managed can be radically different in the future, a limited number of centres of excellence qualified to administer ATMP may be needed, hospital pharmacists may have to carry out some of the final manufacturing steps, etc. In order to facilitate some of the required changes in healthcare practice, the EMA could play a role in interacting with national health authorities to assess and guide the changes required, and provide assistance when new infrastructure may need to be implemented in a coordinated way.

The EMA could also ensure coordination between the various horizon scanning activities such as the International Coalition of Medicines Regulatory Authorities (ICMRA) strategic initiative on innovation and the International Horizon Scanning Initiative (IHSI) initiated by Beneluxa (grouping together HTA and payers from some EU countries) to help HTA and payers identify what and when disruptive technologies could be made available.

Third choice (h)

3. Promote and invest in the Priority Medicines scheme (PRIME)

3rd choice (h): please comment on your choice, the underlying actions proposed and identify any additional actions you think might be needed to effect these changes.

This core recommendation should be associated with core recommendation 7. "Diversify and integrate the provision of regulatory advice along the development continuum".

Even though PRIME scheme is open to all products, irrespective of their nature, there is an overrepresentation of ATMPs in the list of products that have become eligible to PRIME. This is not unexpected due to their potential to address important unmet medical needs. The enhanced regulatory support and interactions between regulators and ATMP developers under PRIME is highly beneficial to make sure that these products translate into patient treatment in an effective and timely manner. Therefore, promotion and investment in this scheme should continue and be reinforced.

While PRIME is open to all companies on the basis of preliminary clinical evidence, applicants from the academic sector and micro-, small- and medium-sized enterprises (SMEs) can apply earlier on the basis of compelling non-clinical data and tolerability data from initial clinical trials. ARM members believe that such early application to PRIME scheme should be data driven and not be limited to academics and SMEs. New trial designs become increasingly used with ATMPs, moving away from the traditional phase 1-3 development stages, justifying that all types of applicants should be able to apply to PRIME at an early stage.

The rapid pace of scientific knowledge and process of innovation would merit an efficient and flexible continuum of dialogue with stakeholders to allow a more efficient and ethical way to learn and develop products in Europe. ARM therefore supports the diversification and integration of the provision of regulatory advice along the development continuum, so that all ATMP developers, including those not under PRIME scheme can benefit from enhanced regulatory support.

This would be particularly necessary for rare diseases where companies currently face the challenge to interact with various EMA committees (PDCO, CHMP, SAWP, CAT) at the same time and alignment needs to be found if there is one lean confirmatory study planned. This may lead to significant delays to start studies and hence receive approvals, which is particularly challenging in the rare diseases space where usually, no appropriate treatment is available.

For example, ARM believes that the Innovation Task Force (ITF) that establishes a platform for early dialogue with applicants to identify scientific, legal and regulatory issues relating to emerging therapies and technologies, could enhance its role and be available for products later in development.

ATMP developers need an agile, nimble, rapid approach to scientific advice which could be achieved under PRIME, through the ITF or other mechanisms. Pulling resources from other regulatory agencies to enable rapid advice may also be considered to facilitate global development.

It would be helpful to get more information about EMA perspectives and plans on ensuring the diversification and integration of regulatory advice along the development continuum and how the various existing processes and committees/TF can be integrated to deliver such advice.

Question 6 (human): Are there any significant elements missing in this strategy. Please elaborate which ones (h)

One of the most important difficulty for ATMP developers in Europe is to comply with the different regulatory requirements in different EU Member States.

- The different requirements in the different member states, resulting from different transpositions and implementations of EU directives, are a source of complexity and many difficulties to ATMP developers. Despite the existence of European regulations and regulatory standards, important aspects are still regulated at national level, with important variations of requirements from country to country. This includes requirements for clinical trials, GMO requirements for gene therapies, requirements for access and control of cells and tissues used as starting materials for the manufacturing of ATMPs, national implementation of post-approval requirements, etc. Streamlining of requirements and more convergent decisions across European countries are urgently required to ensure that Europe can maintain a leadership role in the clinical development and manufacturing of these innovative therapies.
- Thanks to the plan of actions on ATMPs sponsored by the EC and the EMA with the participation of national authorities, significant efforts are being carried out to coordinate and implement actions to improve the regulatory environment for ATMPs. ARM supports the different initiatives taken so far and encourages the European Commission, the European Medicines Agency (EMA), Member States, and other countries in Europe to accelerate the implementation of some of the actions already considered (e.g. GMO requirements for gene therapies and hospital exemption) and expand the plan of actions to include new initiatives. Such new initiative could include the development of infrastructure for real-world evidence generation and post-approval data collection.

More clarity on how the various existing processes and committees/TF can be integrated to deliver regulatory advice in a more flexible and rapid way would be helpful (see comments in above question). In particular, additional guidance and recommendations on the EMA and the FDA approach on expedited CMC requirements, including guidance on comparability, in early access processes such as PRIME and Breakthrough Therapies, as discussed during the stakeholder workshop last November, would also be helpful.

In addition, ARM advocates for more convergent requirements around the globe. ATMP developers strive to design global development plans, avoiding duplication of non-clinical and clinical studies, and common manufacturing methods and controls irrespective of the location where the product is made. This is only possible if requirements from regulatory agencies such as the EMA, FDA, PMDA and others converge to adopt similar or compatible standards.

ARM supports initiatives by regulatory agencies to build a new platform to leverage and access the best international expertise for these specialized innovative products and to agree on common approaches to assess and approve them. Such platform could be used to agree on biomarker qualification, gene transfer methods, off-target prediction for gene-editing, donor testing methods, comparability assessment approaches, etc. The strategic initiative on innovation adopted by the International Coalition of Medicines Regulatory Authorities (ICMRA) could be instrumental in building these new platform and solutions.

ARM therefore encourages the EMA to enhance its dialogue with the national competent authorities, FDA and other major regulatory agencies to adopt global standards and/or develop new platform and ways to agree on common assessment methods so that ATMPs can be translated into patient treatments across the globe. ARM is willing to contribute by providing its expertise, analysis and recommendations on the most impactful divergences.

Question 7 (human): The following is to allow more detailed feedback on prioritisation, which will also help shape the future application of resources. Your further input is therefore highly appreciated. Please choose for each row the option which most closely reflects your opinion. For areas outside your interest or experience, please

leave blank.

Should you wish to comment on any of the core recommendations (and their underlying actions) there is an option to do so.




















Strategic goal 1: Catalysing the integration of science and technology in medicines development (h)

	Very important	Important	Moderately important	Less important	Not important
1. Support developments in precision medicine, biomarkers and 'omics'	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Support translation of Advanced Therapy Medicinal Products cell, genes and tissue-based products into patient treatments	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Promote and invest in the Priority Medicines scheme (PRIME)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Facilitate the implementation of novel manufacturing technologies	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Create an integrated evaluation pathway for the assessment of medical devices, in vitro diagnostics and borderline products	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Develop understanding of and regulatory response to nanotechnology and new materials' utilisation in pharmaceuticals	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Diversify and integrate the provision of regulatory advice along the development continuum	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please feel free to comment on any of the above core recommendations or their underlying actions. **Kindly indicate the number of the recommendation** you are commenting on:

Strategic goal 2: Driving collaborative evidence generation – improving the scientific quality of evaluations (h)

	Very important	Important	Moderately important	Less important	Not important
8. Leverage novel non-clinical models and 3Rs	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Foster innovation in clinical trials	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Develop the regulatory framework for emerging digital clinical data generation	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. Expand benefit-risk assessment and communication					
12. Invest in special populations initiatives					
13. Optimise capabilities in modelling and simulation and extrapolation					
14. Exploit digital technology and artificial intelligence in decision-making					

Please feel free to comment on any of the above core recommendations or their underlying actions. **Kindly indicate the number of the recommendation you are commenting on:**

Strategic goal 3: Advancing patient-centred access to medicines in partnership with healthcare systems (h)














	Very important	Important	Moderately important	Less important	Not important
15. Contribute to HTAs' preparedness and downstream decision-making for innovative medicines	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Bridge from evaluation to access through collaboration with Payers	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Reinforce patient relevance in evidence generation	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Promote use of high-quality real world data (RWD) in decision-making	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. Develop network competence and specialist collaborations to engage with big data	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Deliver real-time electronic Product Information (ePI)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. Promote the availability and uptake of biosimilars in healthcare systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. Further develop external communications to promote trust and confidence in the EU regulatory system	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please feel free to comment on any of the above core recommendations or their underlying actions. **Kindly indicate the number of the recommendation you are commenting on:**

16. Collaboration with payers: the difference in ratings between goals 15 and 16 is due to the clear distinction being made in roles and responsibilities between HTA bodies and payers. Payers need to consider the HTA evaluation, economic and other public policy considerations (e.g. health priorities) to forge their decision. ARM believes that EMA expertise and added value is clearly in data assessment, hence the critical importance for the EMA to interact and coordinate with HTA bodies. The benefit of a collaboration with payers will be more limited and confined to some specific aspects such as horizon scanning.

Strategic goal 4: Addressing emerging health threats and availability/therapeutic challenges (h)

	Very important	Important	Moderately important	Less important	Not important
23. Implement EMA's health threats plan, ring-fence resources and refine preparedness approaches	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Continue to support development of new antimicrobials and their alternatives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

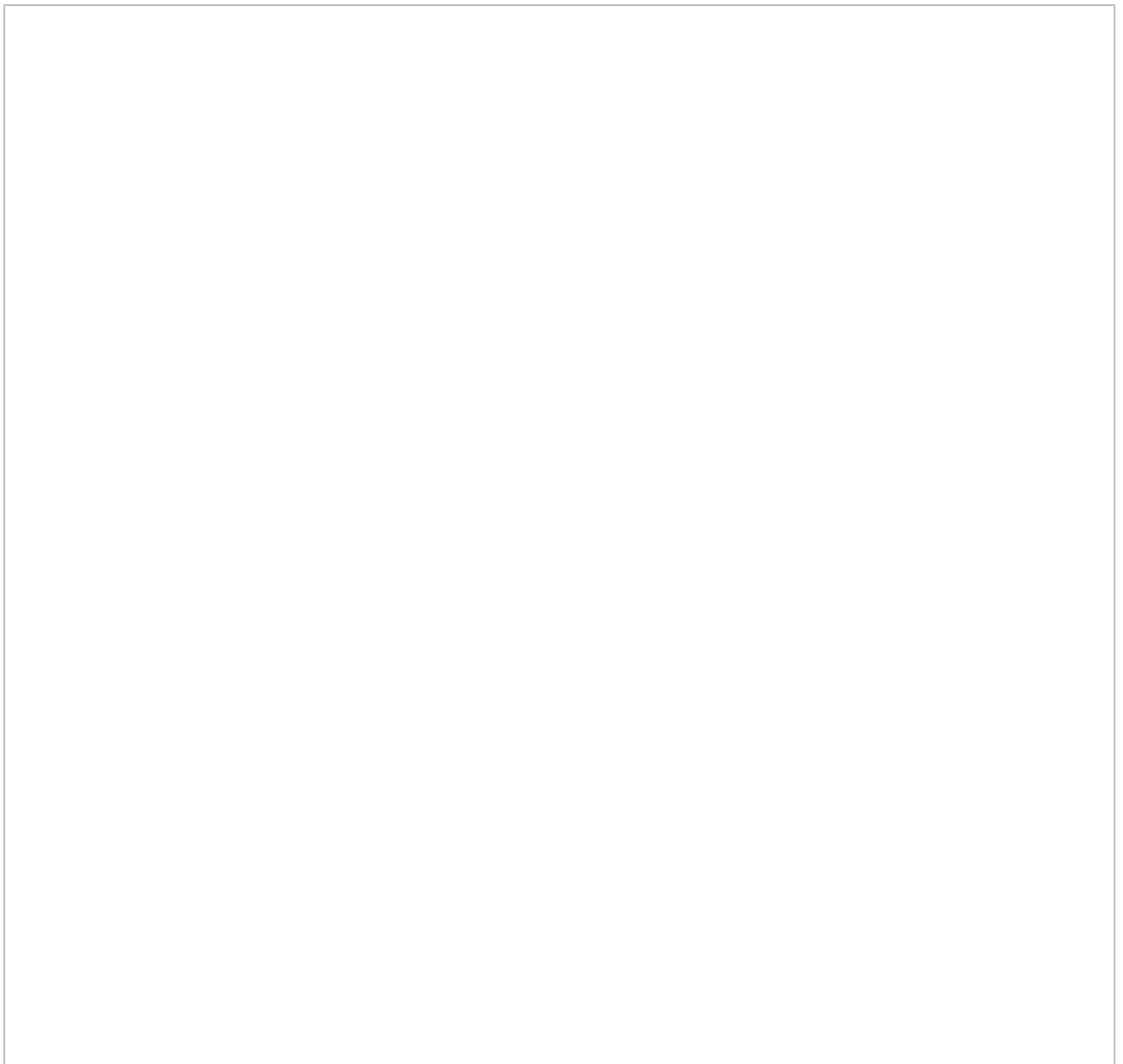
25. Promote global cooperation to anticipate and address supply challenges					
26. Support innovative approaches to the development and post-authorisation monitoring of vaccines					
27. Support the development and implementation of a repurposing framework					

Please feel free to comment on any of the above core recommendations or their underlying actions. **Kindly indicate the number of the recommendation you are commenting on:**

Strategic goal 5: Enabling and leveraging research and innovation in regulatory science (h)

	Very important	Important	Moderately important	Less important	Not important
28. Develop network-led partnerships with academia to undertake fundamental research in strategic areas of regulatory science	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29. Leverage collaborations between academia and network scientists to address rapidly emerging regulatory science research questions	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30. Identify and enable access to the best expertise across Europe and internationally	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31. Disseminate and share knowledge, expertise and innovation across the regulatory network and to its stakeholders	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please feel free to comment on any of the above core recommendations or their underlying actions. **Kindly indicate the number of the recommendation you are commenting on:**



Thank you very much for completing the survey. We value your opinion and encourage you to inform others who you know would be interested.

Useful links

EMA website: Public consultation page (<https://www.ema.europa.eu/en/regulatory-science-strategy-2025>)

Background Documents

[EMA Regulatory Science to 2025.pdf](#)

Contact

RegulatoryScience2025@ema.europa.eu