EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

EMA’s new 3RsWP

3Rs Working Party Annual Stakeholders Meeting – Public session

Presented by Sonja Beken on 28 February 2023
3Rs Working Party (EMA)

Outline

- Drivers for 3Rs
- EMA's commitment to 3Rs – historical perspective
- Introducing the new 3RsWP
- … and its ambitious 3Rs Workplan
- Take home messages
- Time for your thoughts - SLIDO

Outline

- **Drivers for 3Rs**
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Animal experimentation in Europe – regulatory use

EUROPEAN MEDICINES AGENCY

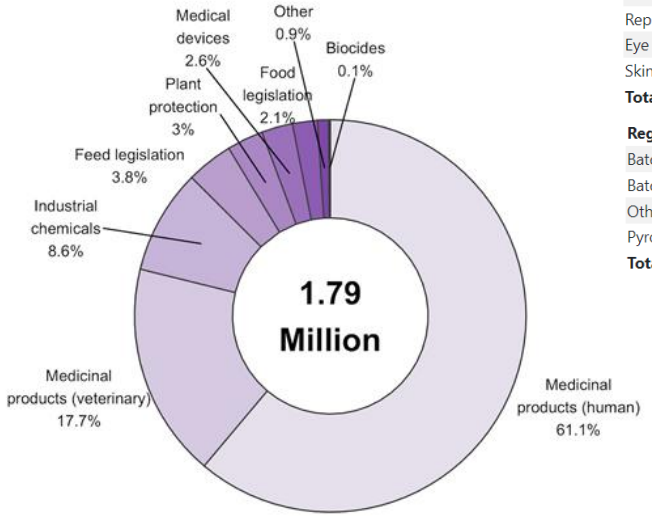
HMPs

Regulatory uses: Toxicity	Number of uses	Percentage
Repeated dose toxicity	83960	26.74%
Kinetics	53884	17.16%
Neurotoxicity	401	0.13%
Target animal safety	56	0.02%
Developmental toxicity	26498	8.44%
Pharmaco-dynamics (incl safety pharmacology)	75163	23.94%
Other toxicity/safety testing	4737	1.51%
Reproductive toxicity	20925	6.66%
Genotoxicity	6341	2.02%
Acute and sub-acute	16151	5.14%
Ecotoxicity	15383	4.90%
Carcinogenicity	4991	1.59%
Skin sensitisation	4637	1.48%
Phototoxicity	414	0.13%
Skin irritation/corrosion	203	0.06%
Safety testing in food and feed area	148	0.05%
Eye irritation/corrosion	91	0.03%
Total	**313983**	**100,00%**

Regulatory uses: Quality control	Number of uses	Percentage
Pyrogenicity testing	28763	4.02%
Batch safety testing	97318	13.60%
Batch potency testing	563989	78.81%
Other quality controls	25582	3.57%
Total	**715652**	**100,00%**

* 10,4 million animals in 28 Member States incl Norway (2019)

Publicly accessible ALURES Statistical EU Database on animal use https://ec.europa.eu/environment/chemicals/lab_animals/alures_en.htm



VMPs

Regulatory uses: Toxicity	Number of uses	Percentage
Target animal safety	3454	7.93%
Acute and sub-acute	25813	59.27%
Ecotoxicity	885	2.03%
Kinetics	3219	7.39%
Safety testing in food and feed area	544	1.25%
Developmental toxicity	455	1.04%
Other toxicity/safety testing	3991	9.16%
Pharmaco-dynamics (incl safety pharmacology)	884	2.03%
Repeated dose toxicity	708	1.63%
Genotoxicity	126	0.29%
Skin sensitisation	659	1.51%
Reproductive toxicity	2808	6.45%
Eye irritation/corrosion	3	0.01%
Skin irritation/corrosion	3	0.01%
Total	**43552**	**100,00%**

Regulatory uses: Quality control	Number of uses	Percentage
Batch potency testing	180657	75.01%
Batch safety testing	53371	22.16%
Other quality controls	6684	2.78%
Pyrogenicity testing	141	0.06%
Total	**240853**	**100,00%**

Directive 2010/63/EU of the EP and of the Council

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of 22 September 2010 on the protection of animals used for scientific purposes

Article 4 clearly states that:

Member States shall ensure that, wherever possible, a scientifically satisfactory method or testing strategy, not entailing the use of live animals, shall be used instead of a procedure.

Member States shall ensure that the number of animals used in projects is reduced to a minimum without compromising the objectives of the project.

Member States shall ensure refinement of breeding, accommodation and care, and of methods used in procedures, eliminating or reducing to the minimum any possible pain, suffering, distress or lasting harm to the animals.

Article 13 states that:

1. *Without prejudice to national legislation prohibiting certain types of methods, Member States shall ensure that a procedure is not carried out if another method or testing strategy for obtaining the result sought, not entailing the use of a live animal, is recognised under the legislation of the Union.*
2. *In choosing between procedures, those which to the greatest extent meet the following requirements shall be selected:*
   (a) use the minimum number of animals;
   (b) involve animals with the lowest capacity to experience pain, suffering, distress or lasting harm;
   (c) cause the least pain, suffering, distress or lasting harm;
   and are most likely to provide satisfactory results.

Directive 2010/63/EU of the EP and of the Council

European Parliament
2019-2024

TEXTS ADOPTED

P9_TA(2021)0387

Plans and actions to accelerate a transition to innovation without the use of animals in research, regulatory testing and education

European Parliament resolution of 16 September 2021 on plans and actions to accelerate the transition to innovation without the use of animals in research, regulatory testing and education (2021/2784(RSP))

mals used for scientific purposes

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10/02/2022

Follow-up to the European Parliament non-legislative resolution on plans and actions to accelerate a transition to innovation without the use of animals in research, regulatory testing and education

1. → **Resolution tabled pursuant to Rules 132(2) and (4) of the European Parliament's Rules of procedure**
2. → **Reference number:** 2021/2784 (RSP) / RC9-0425/2021 / P9_TA-PROV(2021)0387
3. → **Date of adoption of the resolution:** 16 September 2021
4. → **Competent Parliamentary Committee:** N.A.

https://oeil.secure.europarl.europa.eu/oeil/popups/ficheprocedure.do?reference=2021/2784(RSP)&l=en&mc_cid=687873d92e&mc_eid=dba5dcb0dc

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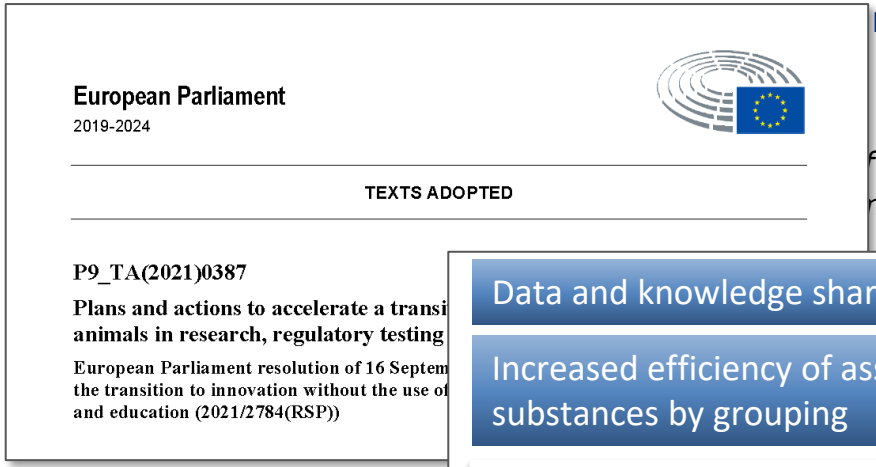

European Parliament
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Data and knowledge sharing: PARERE and other mechanisms

10/02/2022

Increased efficiency of assessing substances by grouping

One substance – One assessment, see 'ONE – Health, Environment, Society - Conference', June 2022 Brussels

3Rs in R&D of medicines EMA and 3Rs

ALURES statistical database and open-access database on non-technical summaries of authorised projects

IMI and H2020/Horizon Europe and European Research Council

EURL-ECVAM reviews on NAMs in biomedical research

Training programmes on 3Rs

EPAA as means for collaboration

https://oeil.secure.europarl.europa.eu/oeil/popups/ficheprocedure.do?reference=2021/2784(RSP)&l=en&mc_cid=687873d92e&mc_eid=dba5dcb0dc

Reducing drug attrition through better prediction

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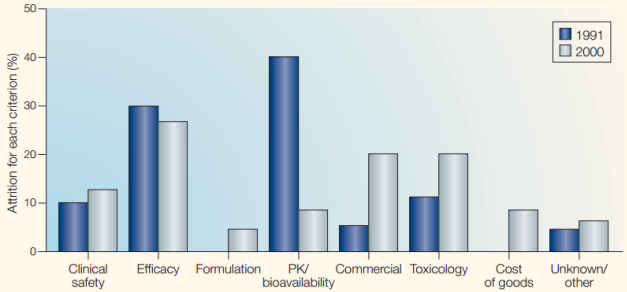
Kola and Landis 2004

Nature Reviews Drug Discovery 3, 711-715



Hornberg et al 2014

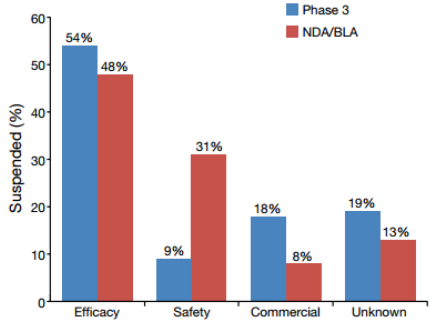
Drug Discovery Today 19; 1131-1136

Most noted safety reasons for withdrawal of marketed drugs:

- *Liver toxicity*
- *Cardiovascular toxicity*
- *CNS effects*

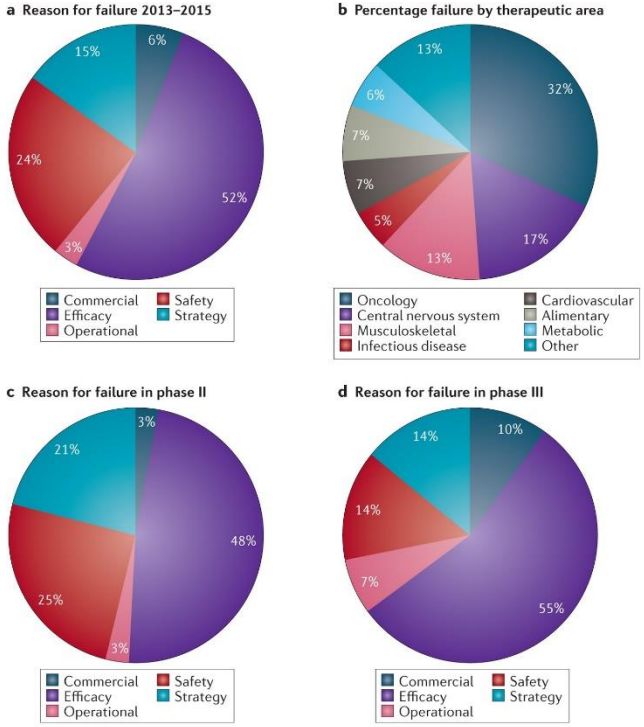
Hay et al, 2014,

Nature Biotechnology 21; 40-51



Harrison, 2016,

Nature Reviews Drug Discovery 15; 817-818



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EMA's commitments to the 3Rs (1/2)

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Medicines | Human regulatory | Veterinary regulatory | Committees | News & events | Partners & networks | About us

Human regulatory

Overview | Research and development | Marketing authorisation

Post-authorisation | Herbal products

- Adaptive pathways
- Advanced therapies
- Clinical trials
- Compassionate use
- Compliance
- Data on medicines (ISO IDMP standards)
- Ethical use of animals
- Innovation in medicines
- Medicines for older people
- Orphan designation
- Paediatric medicines
- Pharmacovigilance
- PRIME: priority medicines

Ethical use of animals in medicine testing

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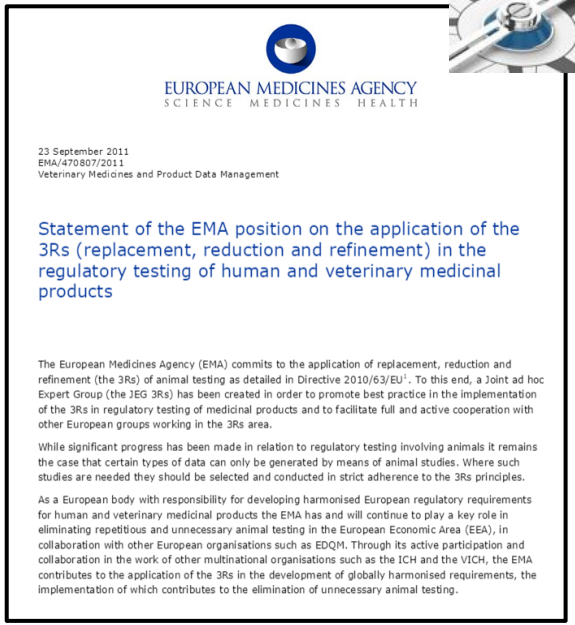
Table of contents

This content applies to human and veterinary medicines

The European Medicines Agency (EMA) supports the implementation of the so-called 3Rs principles - replace, reduce and refine - for the ethical use of animals in medicine testing across the European Union (EU). These principles encourage alternatives to the use of animals in the testing of medicines while safeguarding scientific quality and improving animal welfare where the use of animals cannot be avoided.

Directive 2010/63/EU requires marketing authorisation holders to integrate the 3Rs and welfare standards for the treatment of animals in all aspects of the development, manufacture and testing of medicines.

The Directive aims to **protect animals** in scientific research, with the final aim of replacing all animal research with non-animal methods.



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23 September 2011
EMA/470807/2011
Veterinary Medicines and Product Data Management

Statement of the EMA position on the application of the 3Rs (replacement, reduction and refinement) in the regulatory testing of human and veterinary medicinal products

The European Medicines Agency (EMA) commits to the application of replacement, reduction and refinement (the 3Rs) of animal testing as detailed in Directive 2010/63/EU[1]. To this end, a Joint ad hoc Expert Group (the JEG 3Rs) has been created in order to promote best practice in the implementation of the 3Rs in regulatory testing of medicinal products and to facilitate full and active cooperation with other European groups working in the 3Rs area.

While significant progress has been made in relation to regulatory testing involving animals it remains the case that certain types of data can only be generated by means of animal studies. Where such studies are needed they should be selected and conducted in strict adherence to the 3Rs principles.

As a European body with responsibility for developing harmonised European regulatory requirements for human and veterinary medicinal products the EMA has and will continue to play a key role in eliminating repetitious and unnecessary animal testing in the European Economic Area (EEA), in collaboration with other European organisations such as EDQM. Through its active participation and collaboration in the work of other multinational organisations such as the ICH and the VICH, the EMA contributes to the application of the 3Rs in the development of globally harmonised requirements, the implementation of which contributes to the elimination of unnecessary animal testing.

https://www.ema.europa.eu/en/human-regulatory/research-development/ethical-use-animals-medicine-testing

EMA's commitments to the 3Rs (2/2)

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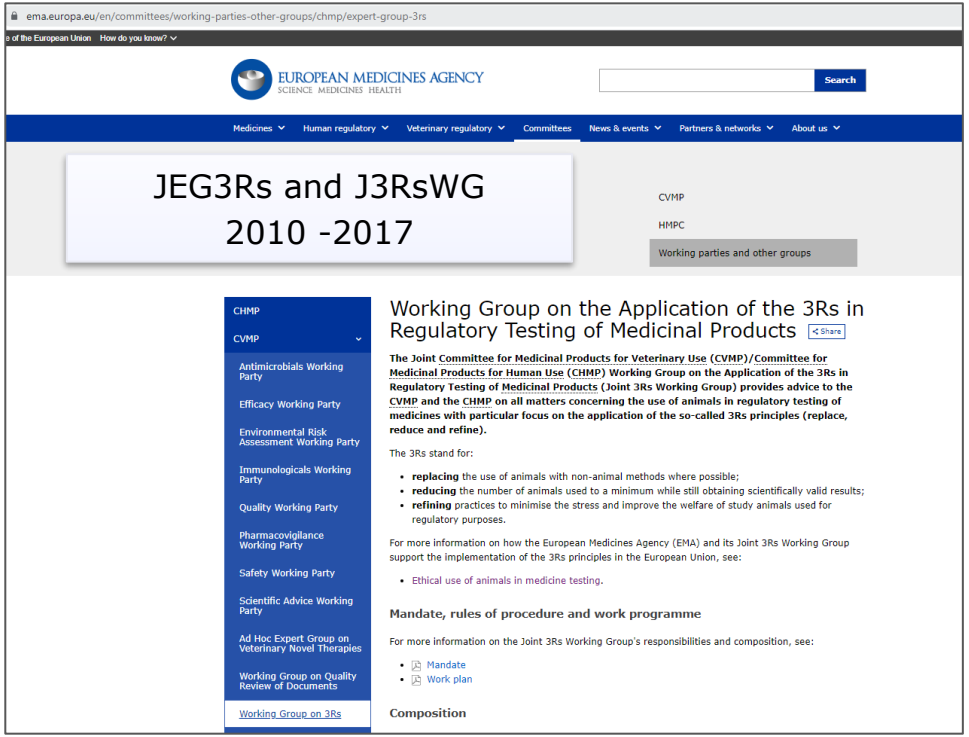
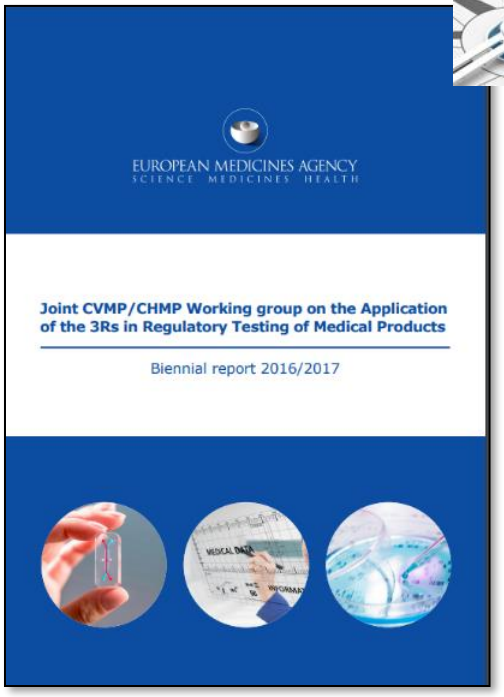
First joint CVMP/CHMP working group on the 3Rs in 2010





Achievements of the JEG3Rs & J3RsWG (1/2)

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Setting up a regulatory framework to foster uptake of 3R testing approaches

- **Guideline on basic principles of regulatory acceptance** of NAMs/3Rs for testing of HMPs and VMPs
- **Guidance for individual laboratories** for transfer of 3R quality control methods validated in collaborative trials
- **Review and update of EMA and (V)ICH guidelines** to implement 3Rs best practices
- **Position statement on the ethical use of animals** in the development, manufacture and testing of VMPs

Batch Release testing

- **Review of final product batch testing requirements** with specific recommendations to MAHs
- **Recommendation to MAHs** to ensure **compliance with 3Rs methods described in the European Pharmacopoeia**
- **Recommendation to MAHs** highlighting recent 3Rs methods described in the European Pharmacopoeia
- **Training** for assessors

Collaboration with EC, EDQM, EURL-ECVAM, other EU agencies and international organisations (e.g. Vac2Vac)

Achievements of the JEG3Rs & J3RsWG (2/2)

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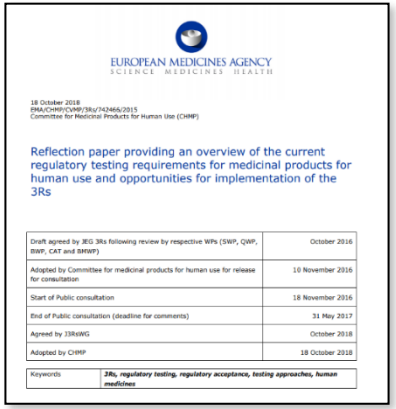
Review of regulatory testing requirements / 3Rs



EUROPEAN MEDICINES AGENCY
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18 October 2018
EMA/CHMP/CVMP/3Rs/742466/2015
Committee for Medicinal Products for Human Use (CHMP)

Reflection paper providing an overview of the current regulatory testing requirements for medicinal products for human use and opportunities for implementation of the 3Rs

Draft agreed by JEG 3Rs following review by respective WPs (SWP, QWP, BWP, CAT and BMWP)	October 2016
Adopted by Committee for medicinal products for human use for release for consultation	10 November 2016
Start of Public consultation	18 November 2016
End of Public consultation (deadline for comments)	31 May 2017
Agreed by 3RsWG	October 2018
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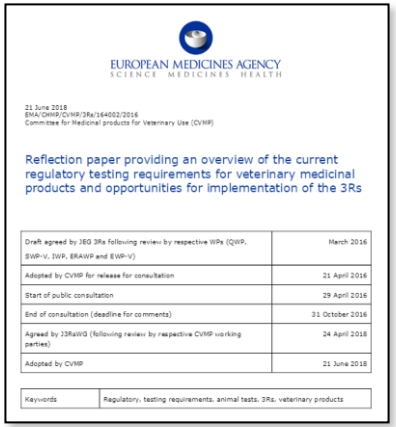
Keywords	***3Rs, regulatory testing, regulatory acceptance, testing approaches, human medicines***



EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

21 June 2018
EMA/CHMP/CVMP/3Rs/164002/2016
Committee for Medicinal products for Veterinary Use (CVMP)

Reflection paper providing an overview of the current regulatory testing requirements for veterinary medicinal products and opportunities for implementation of the 3Rs

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Adopted by CVMP	21 June 2018

Keywords	Regulatory, testing requirements, animal tests, 3Rs, veterinary products

Topic	Regulatory provision	Animal testing requirements	Implemented 3Rs opportunities	Newly identified opportunities for 3Rs implementation
Carcinogenicity	Note for Guidance on Carcinogenicity: Testing for Carcinogenicity of Pharmaceuticals (CPMP/ICH/299/95; ICH S1B)	rat 2 year carcinogenicity testing and ; mouse 1.5 year carcinogenicity testing or mouse 26 weeks TG bioassay (p53+/-, Tg ras H2, Tg.AC).		ICH Guideline S1 - Regulatory notice on changes to core guideline on rodent carcinogenicity testing of pharmaceuticals (EMA/CHMP/51230/2013): new testing paradigm under evaluation based on a more comprehensive and integrated weight-of-evidence approach to address the risk of human carcinogenicity of small molecule pharmaceuticals, and to define conditions under which 2-year rat carcinogenicity studies could be omitted.
Reproductive toxicity	Note for Guidance on the Detection of Toxicity to reproduction for Medicinal products & Toxicity to Male Fertility (CPMP/ICH/386/95; ICH S5(R2))	Study of fertility and early embryonic development to implantation: rat (or mouse) Study for effects on embryo-foetal development: rat and rabbit. Study for effects on pre- and postnatal development, including maternal function: rat (or mouse).		ICH S5(R2) is currently under revision. Aspects under consideration include evaluation of novel ***in vitro*** methodologies for embryo-foetal development testing within an integrated testing strategy and potential to replace one ***in vivo*** species.
Safety pharmacology	Note for Guidance on the Non-clinical Evaluation of the Potential for Delayed Ventricular Repolarisation (QT Interval Prolongation) by Human Pharmaceuticals (CPMP/ICH/423/02; ICH S7B)	***In vivo*** and ***in vitro*** tests as complementary approaches to assess the potential for QT interval prolongation.	Integrated test strategy including ***in vitro*** tests (e.g. hERG assay) for assessment of QT-prolongation (ICH S7B).	ICH S7B guideline is currently scheduled for revision. Aspects under consideration will be advances in the science and methods as currently discussed in the Comprehensive ***In vitro*** Pro-arrhythmia Assessment (CIPA) initiative.
	Note for Guidance on Safety Pharmacology Studies for Human Pharmaceuticals (CPMP/ICH/539/00; ICHS7A)	"Core battery tests" of CNS and cardiovascular/respiratory function .	Integration of safety pharmacology parameters in repeated dose toxicity studies (see ICH S9).	Inclusion of safety pharmacology endpoints: need for retrospective data analysis to expand concept beyond ICH S9.

Achievements of the JEG3Rs & J3RsWG (2/2)

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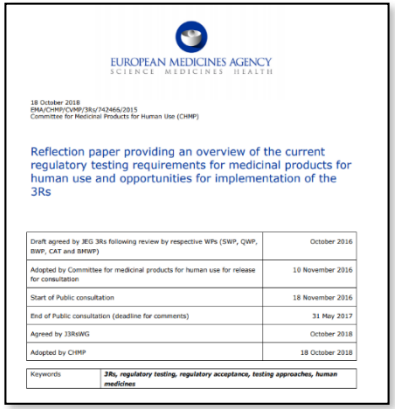
Review of regulatory testing requirements / 3Rs



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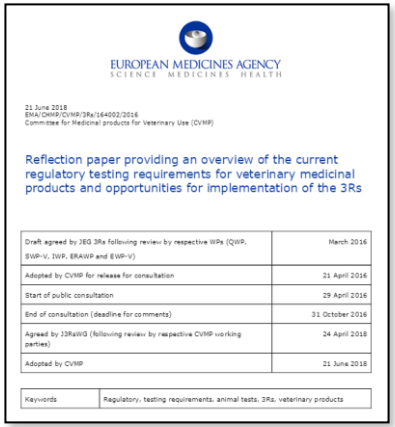

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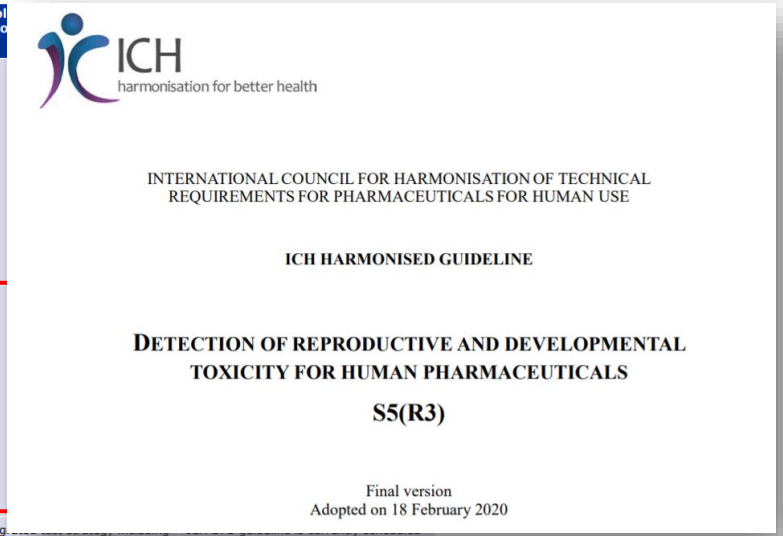

ICH
harmonisation for better health

INTERNATIONAL COUNCIL FOR HARMONISATION OF TECHNICAL REQUIREMENTS FOR PHARMACEUTICALS FOR HUMAN USE

ICH HARMONISED GUIDELINE

DETECTION OF REPRODUCTIVE AND DEVELOPMENTAL TOXICITY FOR HUMAN PHARMACEUTICALS

S5(R3)

Final version
Adopted on 18 February 2020

Achievements of the JEG3Rs & J3RsWG (2/2)

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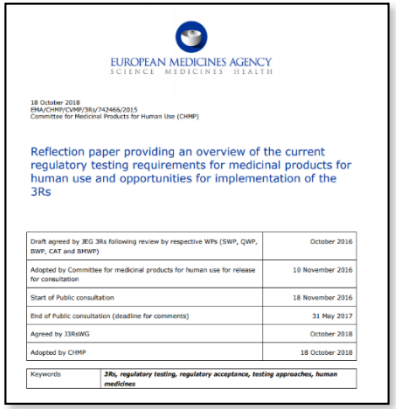
Review of regulatory testing requirements / 3Rs



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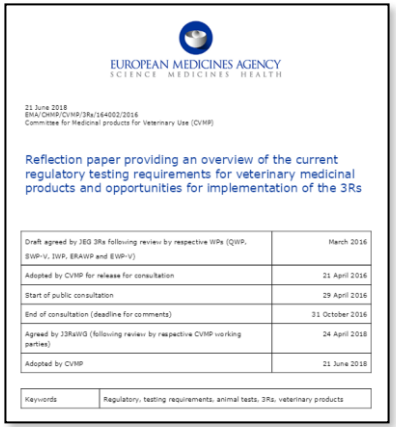

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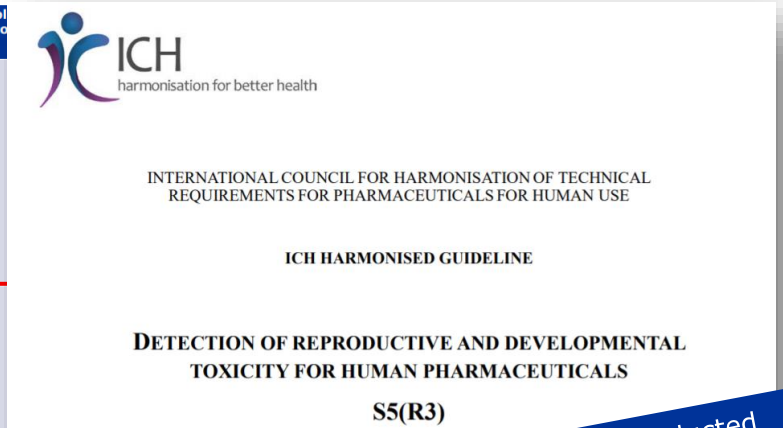
Start of public consultation	29 April 2016
End of consultation (deadline for comments)	31 October 2016
Agreed by J3RsWG (following review by respective CVMP working parties)	24 April 2018
Adopted by CVMP	21 June 2018

Keywords	Regulatory, testing requirements, animal tests, 3Rs, veterinary products

Topic	Regulatory provision	Animal testing requirements	Impl oppo
Carcinogenicity	Note for Guidance on Carcinogenicity: Testing for Carcinogenicity of Pharmaceuticals (CPMP/ICH/299/95; ICH S1B)	rat 2 year carcinogenicity testing and ; mouse 1.5 year carcinogenicity testing or mouse 26 weeks TG bioassay (p53+/-, Tg ras H2, Tg.AC).	
Reproductive toxicity	Note for Guidance on the Detection of Toxicity to reproduction for Medicinal products & Toxicity to Male Fertility (CPMP/ICH/386/95; ICH S5(R2))	Study of fertility and early embryonic development to implantation: rat (or mouse) Study for effects on embryo-foetal development: rat and rabbit. Study for effects on pre- and postnatal development, including maternal function: rat (or mouse).	
Safety pharmacology	Note for Guidance on the Non-clinical Evaluation of the Potential for Delayed Ventricular Repolarisation (QT Interval Prolongation) by Human Pharmaceuticals (CPMP/ICH/423/02; ICH S7B)	***In vivo*** and ***in vitro*** tests as complementary approa to assess the poten QT interval prolonga	Integ
	Note for Guidance on Safety Pharmacology Studies for Human Pharmaceuticals (CPMP/ICH/539/00; ICHS7A)	"Core battery tests" of and cardiovascular/respirato function .	ICH S9).



ICH
harmonisation for better health

INTERNATIONAL COUNCIL FOR HARMONISATION OF TECHNICAL REQUIREMENTS FOR PHARMACEUTICALS FOR HUMAN USE

ICH HARMONISED GUIDELINE

DETECTION OF REPRODUCTIVE AND DEVELOPMENTAL TOXICITY FOR HUMAN PHARMACEUTICALS

S5(R3)

Data generated from **qualified alternative assays** conducted **alone or in conjunction with** one or more in vivo studies can be used to support **hazard identification and risk assessment** under limited circumstances.

Outline

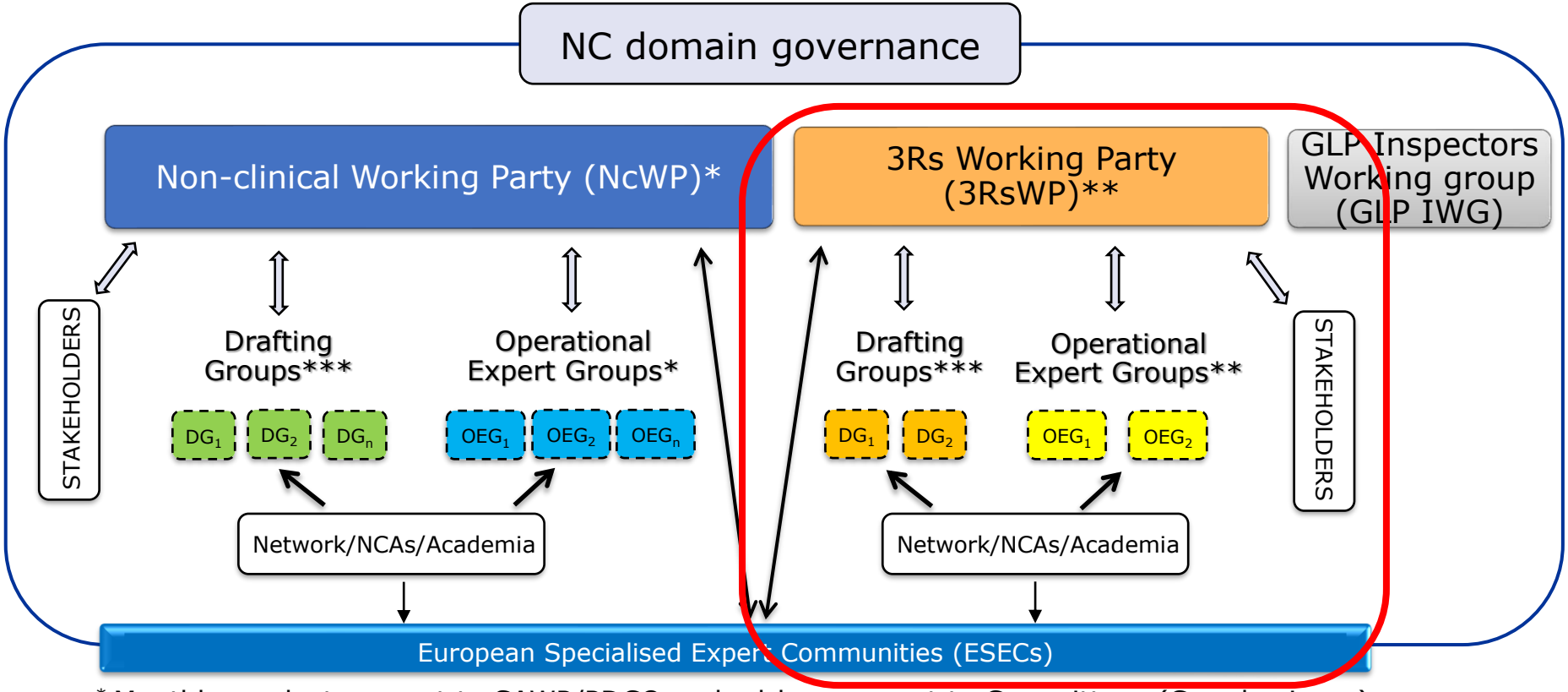
- Drivers for 3Rs
- EMA's commitment to 3Rs – historical perspective
- **Introducing the new 3RsWP**
- … and its ambitious 3Rs Workplan
- Take home messages
- Time for your thoughts - SLIDO

EMA's Regulatory Science Strategy

https://www.ema.europa.eu/en/about-us/how-we-work/regulatory-science-strategy#regulatory-science-strategy-to-2025-section

- Core recommendations dedicated to leverage and qualification of 3Rs methods
- Raise awareness for 3Rs/NAMs and regulatory acceptance
- Need for discussion on criteria for regulatory acceptance (context of use, endpoints and reference compounds)
- Engagement with stakeholders to create communications channels and establish a good European regulatory network on NAMs
- Focal role of a 3Rs Working Party

The 3RsWP is embedded in the NC domain



* Monthly product support to SAWP/PDCO and ad-hoc support to Committees (Core business)

** Support to committees and operational tasks for 3Rs

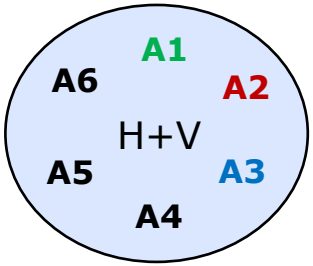
*** Guideline development

= temporary

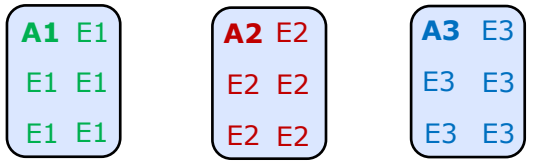
The new 3Rs working party (3RsWP) (1/2)

- **Joint** 3Rs working party of **CHMP & CVMP**
- **Strategic and visible WP** to monitor and supervise the different 3Rs activities required to achieve the strategic goals in line with the EMA Regulatory Science strategy 2025 and the 3-year workplan of the NC domain
- **Multidisciplinary** aspects of the 3Rs (H & V) into a restricted core group (WP) complemented by Operational Experts Groups (OEGs) , drafting groups (DGs) and Expert community (ESEC) with targeted expertise (E) to support the main operational activities (A).

WP core team



Operational expert groups or drafting groups

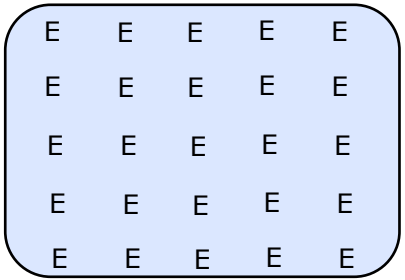


Organ-on-chips

Batch Release testing

In silico

European Specialised expert community on NAMs (NAMs ESEC) (NCAs/academia)



The new 3Rs working party (3RsWP) (2/2)

EUROPEAN MEDICINES AGENCY

- **Composition**

Sonja Beken (Chair)	BE	FAGG-AFMPS-FAMHP	Human MPs - NCWP, Non-Clinical
Sarah Adler-Flindt (Vice-Chair)	DE	Federal Office of Consumer Protection and Food Safety	Veterinary MPs - Non-Clinical
Elisabeth Balks	DE	PEI	Veterinary MPs - Batch release
Kathrine Just Andersen	DK	Danish Medicines Agency	Veterinary MPs - EWP-V, Non-Clinical and Clinical
Camilla Svensson	SE	MPA	Human MPs - Non-Clinical
Peter Theunissen	NL	MEB	Human MPs - Non-Clinical

- **EMA support to 3RsWP:** 3Rs@ema.europa.eu
  - Scientific secretariat: Stefano Ponzano and Orla Moriarty (H-Division), Michael Empl (Vet-division)
  - Administrative secretariat: Stavroula Tasiopoulou (H-division)
- **Observers:** European Commission, EURL ECVAM, EDQM
- **3RsWP Web Page:** https://www.ema.europa.eu/en/committees/working-parties-other-groups/chmp/3rs-working-party

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An ambitious 3Rs workplan with a vision to the future

EUROPEAN MEDICINES AGENCY

High level strategic goals:

- Assume a **strategic role in the field of the 3Rs** with **strengthened cooperation** between all stakeholders and international partners
- Move **non-clinical assessment from discovery toxicology towards regulatory use** and **acceptance of animal-free innovations or new approach methodologies (NAMs)** (for hazard identification, toxicity prediction, ADME modelling, disease modelling)
- Ensure **follow-up of the 3Rs in batch release testing** of human and veterinary medicinal products
- **Review and update of EMA guidelines** to implement **best practice regarding 3Rs** and **impact monitoring** of implemented changes (including identification of new actions)
- Follow up of actions **following EP resolution of 16 September 2021** on plans and actions to accelerate the transition to innovation without the use of animals (2021/2784(RSP))
- Follow-up and identification of actions related to **alternatives to the use of non-human primates**

EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

26 January 2023
EMA/CHMP/14829/2023
Human Medicines Division

Consolidated 3-year work plan for the Non-clinical domain including the priorities for 2023

Domain Chairperson:	Bruno Sepodes
Non-Clinical Working Party Chair:	Susanne Brendler-Schwaab
Non-Clinical Working Party Vice-Chair:	Karen van Malderen
3Rs Working Party Chair:	Sonja Beken
3Rs Working Party Vice-Chair:	Sarah Adler-Flindt

Work plan period: May 2022 – December 2024 (with a first review point after one year)

https://www.ema.europa.eu/documents/other/non-clinical-working-party-consolidated-three-year-work-plan-non-clinical-domain_en.pdf

3RsWP Workplan – Guideline activities for 2023

EUROPEAN MEDICINES AGENCY

NEW

- **Reflection Paper** on alternatives to the use of non-human primates (in collaboration with Non-Clinical Working Party)
- **Reflection paper** to define regulatory acceptance criteria for organ-on-chip technologies for specific contexts of use to be applied in the pharmaceutical area

REVISIONS

- **Revision of Reflection Papers** providing an overview of the current regulatory testing requirements for medicinal products for **human and veterinary use** and opportunities for implementation of the 3Rs'

3RsWP Workplan – Qualification of NAMs/3Rs

EUROPEAN MEDICINES AGENCY

Development of COU-based qualification criteria

Qualification of NAMs

- Follow-up **workshops on MicroPhysiological Systems/Organ-on-Chip** with a specific focus towards method **qualification** for regulatory acceptance – **2023**
- **Define regulatory acceptance criteria for organ-on-chip technologies** for **specific contexts of use** – **2023**
- Creation of a **worldwide cluster of regulators** to establish **regulatory acceptance criteria for NAMs** and to **harmonise views and regulatory acceptance criteria - 2023**
- **Collaboration** with the Methodology domain with respect to **modelling and simulation**, to support the regulatory acceptance of NAMs
- **Support qualification of 3Rs methods for embryofetal development testing** and follow up of 3Rs impact (**ICH S5R3)** – **2023**
- **Support qualification of 3Rs methods for cardiovascular safety pharmacology testing** and follow up of 3Rs impact (**Q&A ICH S7B)**
- Review of **skin sensitization testing** recommendations by OECD in the light of applicability for topically applied medicinal products (HMPs) and user risk assessment (VMPs)
- Support to **the Innovation Task Force and Scientific Advice Procedure** for **Regulatory acceptance and Qualification Advice/Opinion** for NAMs – **2023**

3RsWP Workplan – Other activities

EUROPEAN MEDICINES AGENCY

2023

- **Review** of **product batch testing requirements** with regards to the application of the 3Rs (human and veterinary)
- **Organise annual multistakeholder 3RsWP meetings** on emerging 3Rs topics
- **Mapping** of current and future cooperation with EU and International NAM/3Rs stakeholders
- **Develop training** activities on 3Rs methods and best 3Rs practices across the EU network
- Establish a **workflow for involvement** of 3RsWP **in the SA and 3Rs ITF procedures**

Beyond 2023

- Organise an EMA 3RsWP-led **multistakeholder conference** to showcase the achieved progress with regards to 3Rs in the field of human and veterinary medicinal products and to introduce the new 3RsWP and future workstreams
- Perform a **review of the most promising available 3Rs methodologies** that could be considered for qualification
- Establish an easily accessible **database for qualified/validated NAMs** together with e.g. EDQM and EURL-ECVAM

Collaboration with EMA's Innovation Task Force on 3Rs

EUROPEAN MEDICINES AGENCY

Multidisciplinary: scientific, regulatory & legal

Dedicated forum for early dialogue between regulators and stakeholders (e.g. SMEs, academics, researchers, research and public-private funded consortia (e.g. IHI), pharmaceutical industry)

Focus on emerging therapies, methodologies & technologies

NEW focus on regulatory acceptance of so-called new approach methodologies (NAMs) to replace the use of animals in the testing of medicines (3Rs)

→ e.g., *in silico* modelling & novel *in vitro* assays (e.g. MPS technology)

Objectives are to encourage the development of NAMs and accelerate their integration in the regulatory framework for the development and evaluation of medicines

Informal exchange of information and provision of guidance (non-legally binding) **early** in the development process during briefing meetings

Discussion led by multidisciplinary experts from the Agency network, and EMA working parties & committees **– best available scientific expertise**

The briefing meetings are **free of charge**

https://www.ema.europa.eu/en/human-regulatory/research-development/innovation-medicines#ema's-innovation-task-force-(itf)-section

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Take home messages

- **Historically** the **EU Regulatory Network** has been **open to 3Rs**
- **EMA** is clearly **committed** to the **3Rs**
- New **3RsWP** as the **official 3Rs hub** at the EMA
- **EMA 3Rs strategy** and ambitious **workplan** in place to support the work
- **Engagement & open dialogue** with interested 3Rs **stakeholders**
- Close collaboration with **ITF 3Rs** as essential tool for early engagement
- **Global regulatory collaboration**

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access to SLIDO: Slido - Audience Interaction Made Easy

Question 1: **POLL**

*Which of the following best describes your interest/professional activity in the area of the 3Rs (**choose one**):*

- Industry/contract research
- Academia
- Regulatory
- Animal welfare organisation
- Member of the public
- Other

Question 2: **Priorities**

Some of the workplan priorities of the 3RsWP for 2023 are listed below.

In your opinion, which of these goals is most important? ***Please rank the topics in order of importance.***

- Development of **training activities** on 3Rs methods and best 3Rs practices across the EU regulatory network
- Development and promotion of **regulatory acceptance criteria / qualification criteria** for new approach methodologies **(NAMs)** to be applied in the pharmaceutical area
- Provide support to the **Innovation Task Force (ITF)** and in **scientific advice 3Rs-related procedures**
- **Fostering 3Rs** principles in **batch release testing** for human and veterinary medicinal products
- Identification of actions related to **alternatives** to the use of **non-human primates** in line with the 3Rs and the identified shortage of non-human primates

Question 3: **Priorities NAMs work**

One of the major objectives of the 3RsWP is to support the integration of 3Rs methods such as MicroPhysiological Systems/Organ-on-Chips into the regulatory framework.

What do you think would be the first step to support the qualification these types of new approach methodologies (NAMs) at EMA? ***Please choose one****.*

- Development of a **guidance to define regulatory acceptance criteria for NAMs** for specific contexts of use to be applied in the pharmaceutical area
- Focused **workshop on MPS** with relevant stakeholders for specific contexts of use
- Creation of a global **cluster of regulators** to establish **regulatory acceptance criteria for NAMs**

Question 4: **Wordcloud**

What do you think is the most important aspect when thinking about the 3Rs in regulatory testing and drug development?

Question 5: **Open suggestions**

What topics do you think the 3RsWP should prioritise or consider in its 2024 workplan?

Any questions? Suggestions?

Further information

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