Session three: Revising CLP and REACH so European chemicals regulation becomes animal-free – can we do it and how?

Alternatives to Laboratory Animals
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Comments

Upholding the EU's Commitment to 'Animal Testing as a Last Resort' Under REACH Requires a Paradigm Shift in How We Assess Chemical Safety to Close the Gap Between Regulatory Testing and Modern Safety Science

Julia Fentem, Ian Malcomber, Gavin Maxwell, and Carl Westmoreland

Transforming the EU Chemicals Regulations to embed use of modern animal-free safety science

more-scientific chemical assessments = better protection of human health & the environment

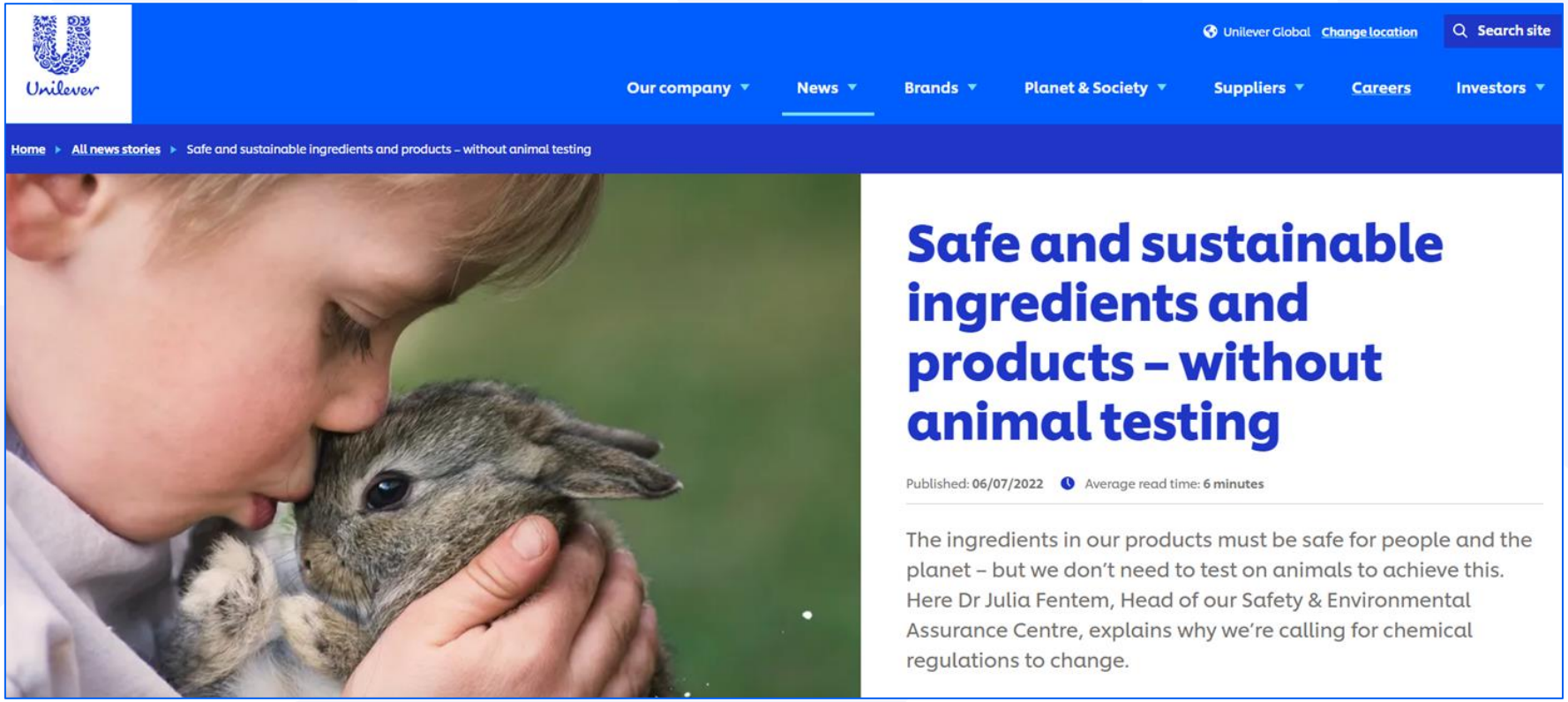
Dr Julia Fentem *FBTS*

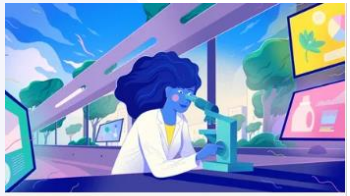
Head of Unilever Safety & Environmental Assurance Centre (SEAC)

Unilever

We say use science.
Not animals.

Meeting consumers' expectations by applying advanced science





Keeping people and the environment safe

The science-based approaches we use to keep our consumers, workers and the environment safe.

Safe and sustainable by design

How we build safety and sustainability into every product innovation.

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Unilever's Approach: No Animal Testing

We say use science.
Not animals.

What we believe

- **Every Unilever product must be safe for people and our environment**
- **Animal testing is not needed to assess ingredient & product safety** – there are a wide range of non-animal alternatives grounded in modern science and new technology

How we do it

40+ years of developing non-animal safety science

70+ collaborations

700+ publications






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Advocating for regulatory use of innovative animal-free science for improving decisions on chemical safety (ingredients in consumer products)

Unilever: EU needs 'paradigm shift' in chemical safety assessment methods

By Kacey Culliney
23-Sep-2021 - Last updated on 23-Sep-2021 at 14:59 GMT

RELATED TAGS: Animal testing, Animal testin
generation safety assessments, Unilever, saf

A complete shift in the safety assessment of chemicals will be necessary if the EU is to uphold its 'animal testing as a last resort' policy under the European Chemicals Agency's REACH regulation – a critical aspect to maintaining the wider cosmetics animal testing ban, say Unilever execs.

The Drum
Digital Summit

NEWS

Leading legislation: how major brands are taking on the EU over animal testing

By Ellen Ormesher
October 18, 2021

unilever

unilever The ingredients in our products must be safe for people and the planet.

But we don't need to test on animals to achieve this when science has the solution.

That's why we're calling for EU chemicals regulations to change.

Tap the link in our bio to help urge policymakers to take action.

And follow the link in our bio to learn how we #UseScienceNotAnimals to create safe, sustainable products.

Cosmetics
design-europe.com

THE LONG READ: IN CONVERSATION WITH UNILEVER SAFETY & ENVIRONMENTAL ASSURANCE CENTRE (SEAC) EXECUTIVES

The future of animal-free chemical testing? There's a 'big frustration' in the scientific community, say Unilever execs

By Kacey Culliney
20-Oct-2021 - Last updated on 20-Oct-2021 at 09:54 GMT

European Union
EUROPEAN CITIZENS' INITIATIVE
Save Cruelty Free Cosmetics

European Union
EN

EUROPEAN CITIZENS' INITIATIVE -
Central online collection system

SAVE CRUELTY FREE COSMETICS - COMMIT TO A EUROPE WITHOUT ANIMAL TESTING

The collection of statements of support for this initiative has been disabled
We are currently not collecting statements of support for this initiative

Signatures collected online
1,413,383 / 1,000,000
End of the collection period: 31/08/2022

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Despite a strong EU policy for the **protection of animals used for scientific purposes**, adopted 10 years ago, which makes full replacement of animal testing its ultimate goal, animals are still required to be used systematically for testing in the field of chemicals[101]. **Safety testing and chemical risk assessment** need to innovate in order to reduce dependency on animal testing but also to improve the quality, efficiency and speed of chemical hazard and risk assessments.

EUROPEAN COMMISSION

Brussels, 14.10.2020
COM(2020) 667 final

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

Chemicals Strategy for Sustainability
Towards a Toxic-Free Environment

Chemicals Strategy for Sustainability

The European Commission adopted its Chemicals Strategy for Sustainability on 14 October 2020. The strategy is part of the EU's zero pollution ambition – a key commitment of the European Green Deal – and aims to better protect citizens and the environment from harmful chemicals, and boost innovation by promoting the use of safer and more sustainable chemicals.

INTERNATIONAL LEADERSHIP

The EU will:

- step up its **international advocacy** to meet the 2030 Agenda's goals and targets for the sound management of chemicals, in particular by having a leading role and promoting the implementation of **existing international instruments**[116] as well as EU standards globally;
- strive for the adoption of **global strategic objectives and targets** for the sound management of chemicals and waste beyond 2020 to reflect life cycle approaches for chemicals, in line with the post-2020 global biodiversity targets;
- promote, together with industry, the implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (UN GHS) as the means for **identifying chemical hazards** and communicating them to operators, workers and consumers;
- propose to introduce, adapt or clarify **criteria/hazard classes** in UN GHS[117];
- promote the development of **common standards** and **innovative risk assessment tools** internationally, notably with the OECD, and promote their use under international frameworks, inter alia to shift further away from animal testing.

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EU Chemicals Strategy for Sustainability
Embed animal-free science as part of Safe & Sustainable by Design

Chemicals Strategy for Sustainability

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- High-level Roundtable on the chemicals strategy
- Promoting safe and sustainable by design chemicals
- Chemicals and the circular economy: towards non-toxic material cycles
- Strengthening the EU's open strategic autonomy
- Tackling the most harmful substances
- Essential uses
- Endocrine disruptors
- PFAS
- Chemical mixtures
- One substance, one assessment
- Zero-tolerance approach to non-compliance
- Research, innovation and funding
- Indicators

Legal revisions

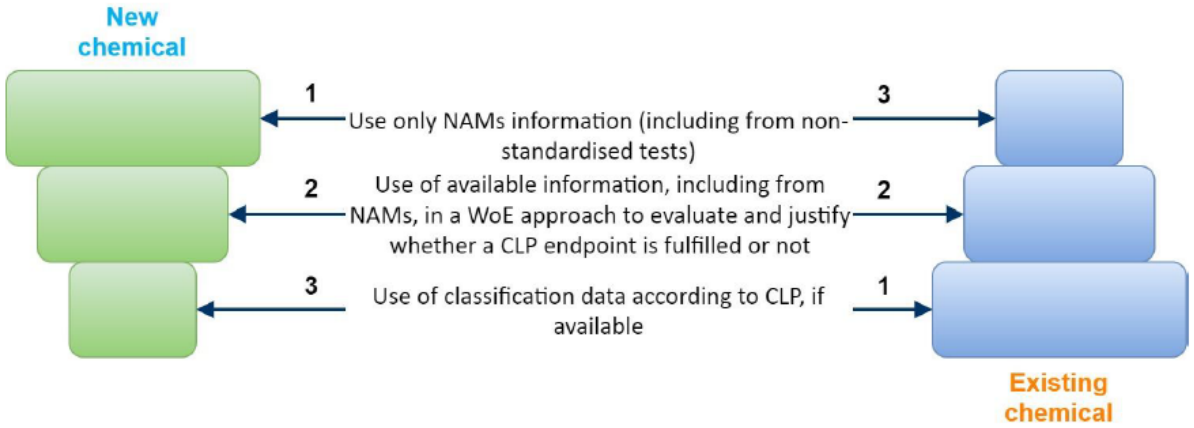
- Revision of the Regulation on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- Revision of EU legislation on hazard classification, labelling and packaging of chemicals (CLP)

European Commission

JRC TECHNICAL REPORT

Safe and Sustainable by Design chemicals and materials

Figure 24. Tiered approach regarding the information requirements and use of NAMs data for new or existing chemicals



In general, NAMs provide an opportunity for rapid and reliable toxicological profiling of chemicals and materials, including in the design phase. Further consideration should be given to the use of NAM-derived data within the SSbD framework, including the many cases where NAMs provide mechanistic information which is not directly comparable to endpoints from traditional *in vivo* studies.

To better protect citizens and the environment we must use the best & most-relevant scientific data for decision-making

Data are needed for decisions on:

1. safety of **consumers** exposed to chemicals in **products**
2. safety of **workers** exposed to chemicals during product **manufacture**
3. safety of **people & non-human species** if exposed to chemicals in the **environment**

Safety Science: over past 20+ years **new tools & models** have been used to generate & integrate safety data on chemicals – anchored in understanding of **biological mechanisms**

Chemicals Regulations: we are still relying on **outdated & unreliable animal data** (rats, rabbits, mice, fish)

→ **change the scientific data inputs for regulatory decision-making**

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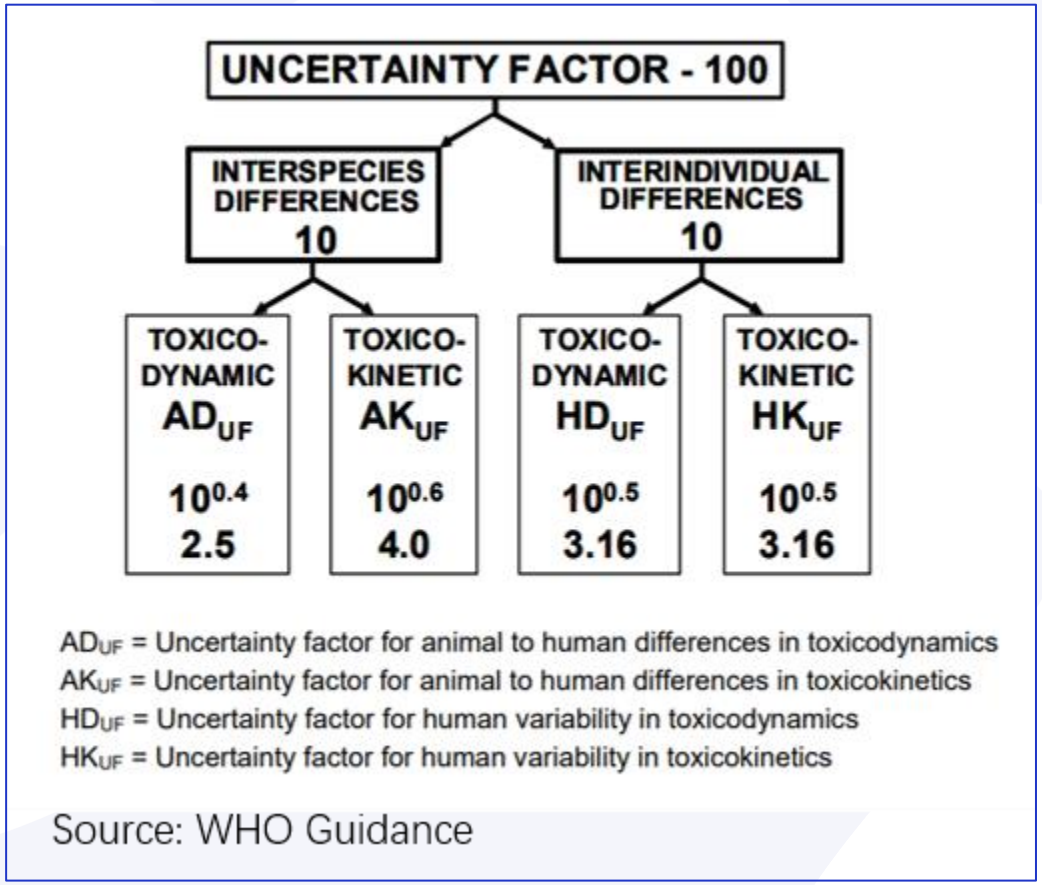
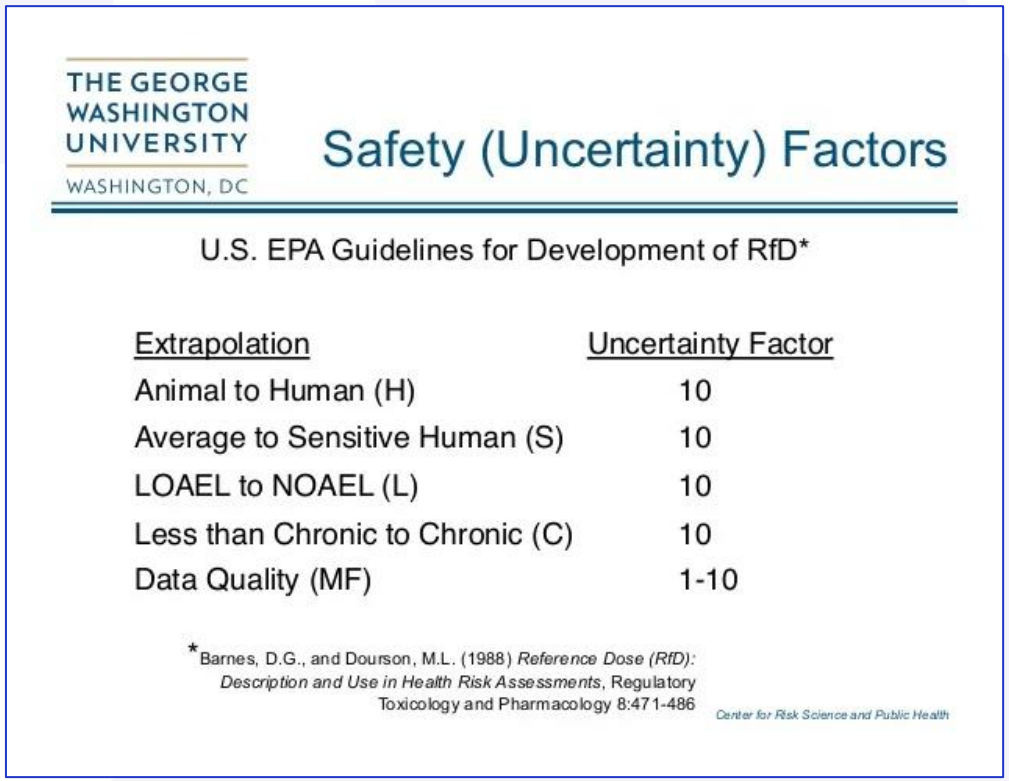
For assessing chemical safety we must be critical & objective in choosing the best models & methods

Relevance of animal tests? Uncertainty Factors of 100 - >10,000 applied when extrapolating animal data on chemicals for protecting human health



Source: WHO Guidance



Reproducibility of animal tests? animal data are not a 'gold standard'

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Variability and Relevance of Current Laboratory Mammalian Toxicity Tests and Expectations for New Approach Methods (NAMs) for use in Human Health Risk Assessment

SHARE

ASCCT

American Society for Cellular and Comp

Archived Webinar

Using NAMs in Risk Assessment

Presenters:
Katie Paul Friedman, PhD, Center for Computational Toxicology and Expos
George E. N. Kass, PhD, European Food Safety Authority (EFSA)

STATE OF THE SCIENCE ON DEVELOPMENT AND USE OF NAMS FOR CHEMICAL SAFETY TESTING

Location: U.S. Environmental Protection Agency
William Jefferson Clinton East Building
William D. Ruckelshaus Conference Center

Date: October 12-13, 2022

EPA

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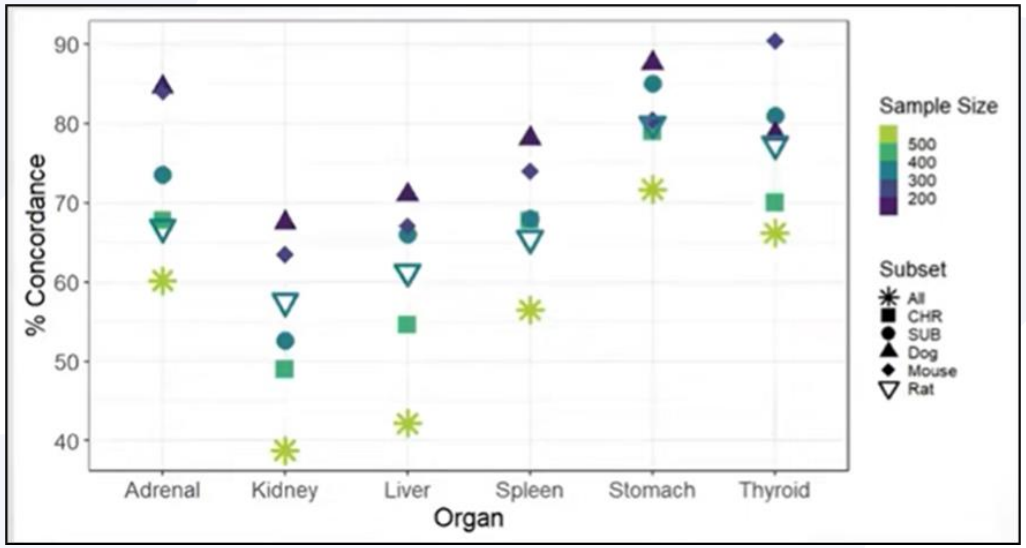
50th Anniversary Article

A History of Regulatory Animal Testing: What Can We Learn?

Doortje Swaters[1], Anne van Veen[2,†], Wim van Meurs[1], Janette Ellen Turner[3], and Merel Ritskes-Hoitinga[4,5]

The underlying idea that animal testing is the gold standard thus gives a false sense of safety. This not only leads to human health risks, but also to the use and killing of many animals without a sound scientific basis, as was highlighted in the Vanda case study. Therefore, the development and implementation of NAMs in safety testing is expected to be of great benefit to both humans and animals. The increased attention paid to NAMs by scientists and regulatory bodies is a hopeful



Paul Friedman et al. (unpublished). Reproducibility of o effects in repeat dose animal studies.

Primary Research Question	Statistical
How concordant are organ-level effects for multiple repeat dose study observations?	Calculate between grouped b chemical, chemical,

If attempting to use a NAM-based predictive model for prediction of a reference systemic effect level value of 10 mg/kg/day, it is likely that given the variability in reference data of this kind, that a model prediction of somewhere between 1 and 100 mg/kg/day would be the greatest amount of accuracy achievable.

- Qualitative reproducibility of organ-level effect observations in repeat dose studies of adult animals was 33-88%, depending on grouping

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REACH – compliance with "Animal Testing as a Last Resort"

L 396/2 EN Official Journal of the European Union 30.12.2006

Whereas:

(1) This Regulation should ensure a high level of protection of human health and the environment as well as the free movement of substances, on their own, in preparations and in articles, while enhancing competitiveness and innovation. This Regulation should also promote the development of alternative methods for the assessment of hazards of substances.

Chemicals are a big part of our everyday life.
Companies need to make sure that they are safe to use.

Companies must understand the hazards of the chemicals they produce and give this information to ECHA.

If there is not enough information available to understand how a chemical impacts our health or the environment, new studies are needed. Only after these, will companies be able to ensure the safe use of their chemicals and manage their potential risks.

Under EU law, companies must use non-animal testing to generate information, whenever possible. For example, companies can use computer models or information from existing studies on similar chemicals to predict the properties of their chemical. They can also run tests that use cells or tissues instead of animals.

The law requires companies registering the same chemical to work together. They need to share information and test results on their chemical to avoid repeating animal studies. Once they have gone through all other available data sources, they need to agree on whether additional tests are needed.

Science developing

Alternative methods

More on ECHA's website

Upholding "animal testing as a last resort" is challenging

European Court of Justice C-471/18 P - 21 January 2021

Federal Republic of Germany v Esso Raffinage and Others (advocates-for-animals.com)

Facts

Esso Raffinage (Esso) registered its chemical with the European Chemicals Agency (ECHA), an EU agency, as it was required to do before it could sell it in the EU. This was under Regulation (EC) No 1907/2006, known as REACH.

Decision

Commentary

This is an important decision because it underlines the importance of the REACH principle that animal tests should only be carried out as a last resort. Companies and ECHA itself had to apply that principle at all stages, even after ECHA had decided that an animal test was needed. The last resort principle is no panacea for animals because in many cases companies are unable to show that there is an alternative approach. Millions of animal tests have taken place under REACH. Animal protection organisations complain that the principle is honoured more in its breach than the observance.

But the CJEU's decision puts the principle firmly at the centre of decision-making. The Advocate-General, who advises the Court, said that it would be a 'devastating result' if animal tests were carried out in these circumstances when there was an available adaptation. In fact, ECHA did eventually accept Esso's weight of evidence approach, underlining just how important the company's persistence was.

European Court of Justice - 11 September 2015

Decision in case 1606/2013/AN on how the European Chemicals Agency applies rules concerning animal testing

Decision
Case 1606/2013/AN · **Opened on** 20/11/2013 · **Decision on** 11/09/2015 · **Institution concerned** European Chemicals Agency (Friendly solution) |

The Ombudsman's inquiry concluded that ECHA's interpretation of its role was too strict and did not take into account the fact that the avoidance of animal testing was, together with the protection of human health and the environment, one of the guiding principles of the Regulation. The Ombudsman thus proposed to ECHA (i) that it require all registrants to show that they have tried to avoid animal testing and (ii) that it provide registrants with all the information at its disposal which could allow them to avoid animal testing.

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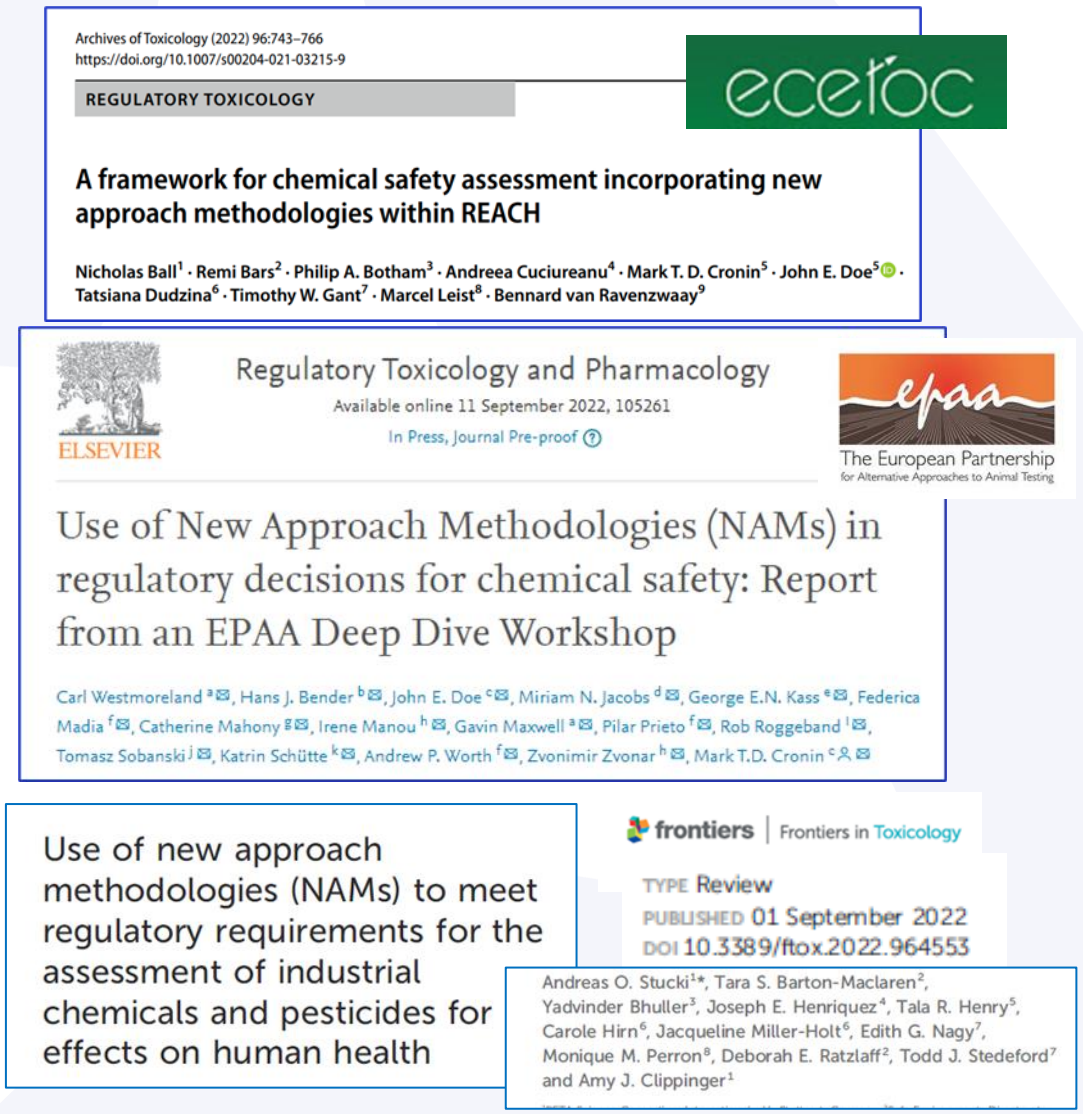
We need to be consistent & progressive in safety approaches used for ingredients in consumer products and for other chemicals

International Cooperation on Cosmetics Regulation (2018)

Scientific Committee on Consumer Safety (2021)



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Our perspective on the REACH revision

Accelerate use of New Approach Methods (NAMs) and ensure animal tests are a last resort

1. **Enforce compliance with Article 25 and stop requesting registrants to generate animal data**
   - Introduce obligation for registrants to **document NAMs explored & rejected** before any animal testing
   - Introduce procedure for **independent scientific justification of any animal testing** by NAMs experts
   - Introduce formal process for **scientific dialogue on NAMs** and **allocate resources** needed by regulators

2. **Position Annex XI 'adaptations to technical progress' as a way to demonstrate compliance with Art. 25**
   - Support **broader use of adaptations**: weight-of-evidence, substance-tailored exposure-driven testing
   - Remove **outdated & restrictive interpretations** not in line with current status of animal-free safety science

3. **Amend Annexes VII-X to enable science-driven, substance-tailored approach to address information needs**
   - Implement 'test agnostic' approach with associated technical guidance on a tiered, weight-of-evidence, process

→ **NAMs fully established to improve scientific basis of decision-making on chemical safety**

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Our perspective on the CLP revision

Paradigm shift to ensure most relevant scientific evidence is used and we all uphold 'animal testing as a last resort'

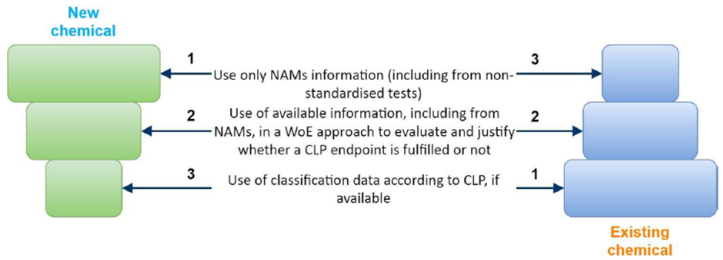
1. **Future-proof global safety management of chemicals by working via UN GHS**
   - Develop harmonised tiered weight-of-evidence decision-making frameworks which incorporate species-relevant mechanistic NAM data

2. **Incorporate evidence from non-animal approaches for classifications on Bioaccumulation (B) & Mobility (M)**
   - B / vB: greater use of in silico approaches, more consideration of metabolism within tiered modelling approach
   - M / vM: build in additional evidence for ionic or ionisable chemicals

3. **Incorporate NAMs data for assessing endocrine disruption (ED) properties**
   - Exclude specific endocrine activities, supporting decision that ED effects in vivo are unlikely

→ **NAMs established to improve scientific basis of CLP decisions**

Figure 24. Tiered approach regarding the information requirements and use of NAMs data for new or existing chemicals



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Session three: Revising CLP and REACH so European chemicals regulation becomes animal-free – can we do it and how?

We must define & execute a common shared Roadmap to phase out animal testing for chemicals regulatory purposes

- Establish open multi-stakeholder dialogue on, and **transparent scientific evaluation** of, NAM strategies for specific chemicals / chemical groups: base on **evidence & expertise *v* tradition & opinion**
- Develop a **modern, science-based, chemicals regulatory framework**, which facilitates use of NAMs data in weight-of-evidence approaches: build on ***JRC proposal - Safe & Sustainable by Design***
- Continue to develop **use cases** to demonstrate applicability & build confidence; implement via guidance
- Accelerate **knowledge transfer & training** in advanced safety science and NAM-based chemical assessments – maximise return on >1.5B€ investment in alternatives to animal testing in EU in past 20 years
- Stimulate EU **capacity building** to increase service provision of assays in NAMs toolbox

Consider **policy options to stimulate faster progress** in regulatory use of animal-free approaches: e.g.
- immediately pause all animal tests on existing **cosmetics ingredients** → must use NGRA / NAMs ***[SCCS NoG, 2021]***
- for **polymers** & other new areas in scope, mandate starting with animal-free testing strategies

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