



Summary Record

Meeting of European 3Rs Centres

31st May – 1st June 2016, Ispra, Italy

The meeting of European 3Rs centres was organised and hosted by EURL ECVAM at the Joint Research Centre (Ispra, Italy). The outcome of the discussions are summarised below and structured by the topics covered.

Discussion Topics

1. Updates on activities since the last meeting	2
2. Directorate-General for Environment (DG-ENV): How to make supply meet the demand for 3Rs information to support the implementation of Directive 2010/63/EU	2
3. Communication and Dissemination	3
Norecopa – new 3Rs website.....	3
Danish 3R-Center – survey headlines and conclusions.....	4
Proposal to establish a formal network of 3Rs Centres under Horizon 2020.....	4
Education and Training	4
CAAT Academy	4
The Education and Training Platform for Laboratory Animal Science (ETPLAS).....	6
Decisions and Actions	6
Annex I - Agenda	8

Participants list:

FICAM - Finnish Centre for Alternative Methods (Finland): Tuula HEINONEN

NC3Rs - The National Centre for the Replacement, Refinement and Reduction of Animals in Research (UK):
Natalie BURDEN

Danish 3R-Centre: Tom BENGSTEN, Axel Kornerup HANSEN

Norecopa - (Norway): Adrian SMITH

CAAT-Europe - Center for Alternatives to Animal Testing: Costanza ROVIDA

IZSLER - Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna (Italy): Silvia DOTTI, Maura FERRARI

SWETOX - Swedish Toxicology Sciences Research Center (Sweden): Ian COTGREAVE, Elin TORNQVIST

ROCAM - Romanian Center for Alternative Test Methods (Romania): Lucian FARCAL, Orsolya SARPATAKI

Bf3R - German Centre for the Protection of Laboratory Animals at Federal Institute for Risk Assessment (Germany): Gilbert SCHÖNFELDER

RIVM - National Institute for Public Health and the Environment (The Netherlands): Anne KIENHUIS

3Rs-Centre Utrecht Life Sciences (The Netherlands): Jan VAN DER VALK

Federal Food Safety and Veterinary Office FSVO (Switzerland – participating as observer): Ingrid KOHLER

JRC / EURL ECVAM: Maurice WHELAN, Valérie ZUANG, Elisabet BERGGREN, Tracey HOLLEY, Annett JANUSCH ROI, Karin ASCHBERGER, Susanne BELZ, Ann-Charlotte BOSTROEM, Federica MADIA, Laura GRIBALDO, João BARROSO, Pilar PRIETO, Raffaella CORVI, Marlies HALDER, Brigitte LANDESMANN, Clemens WITTWEHR as well as **DG ENV**, represented by Susanna LOUHIMIES

1. Updates on activities since the last meeting

Each of the 3Rs Centres presented updates on their activities with the main focus being on priorities which were identified during the last meeting. These priorities are:

- #1. Efforts to reduce animal use in biomedical research
- #2. Communication and dissemination
- #3. Promoting the use of alternative methods/models as biotechnological resources
- #4. Education and training
- #5. Validation towards regulatory acceptance
- #6. Research initiatives supported by 3Rs Centres

The presentations from each of the centres may be accessed on the EURL ECVAM website and these provide details on the priorities listed above.

In brief, each of the centres provides publically available information about the 3Rs, but each with a different focus and perhaps also a different target audience. The presentations highlighted some of the main commonalities and differences between the centres and helped to identify potential topics of future cooperation between centres. This opportunity to explore the key features of the centres as a way of enhancing their engagement with the international scientific, educational and regulatory communities was explored in detail during the meeting and will be followed up by the participants.

2. Directorate-General for Environment (DG-ENV): How to make supply meet the demand for 3Rs information to support the implementation of Directive 2010/63/EU

The National Committees (NC) established in each member state under Directive 2010/63/EU¹ are responsible for advising the competent authorities (CA) on project evaluations and the animal welfare bodies (AWB) on matters relating to the use of animals for scientific purposes. Therefore, not only do the NCs need to be very well informed, but there needs to be a well-established flow of information. The proposal put forward was for the 3Rs centres to become hubs of information to assist in this knowledge chain. Each of the 3Rs Centres specialise in different elements and could

¹ [Directive 2010/63/EU Of The European Parliament And Of The Council of 22 September 2010](#)

formulate a network of 3Rs centres of excellence to progress knowledge flow. By mapping the expertise and competences of these centres, a strategic plan could be devised with an emphasis on the 3Rs in basic/applied research, and education and training use areas.

The participants were also reminded about the Commission conference which will take place in Brussels during 6-7th December 2016: "Non-Animal Approaches - The Way Forward". This will be a platform for scientific debate including moderated panel discussions to debate animal/non-animal tools in basic, applied and regulatory use areas. Information and registration may be found at: <http://www.euconf.eu/non-animal-approaches-the-way-forward/en/registration/index.html>

3. Communication and Dissemination

EURL ECVAM presented the preliminary analysis of the survey "Accelerating progress in the Replacement, Reduction and Refinement of animal testing through better knowledge sharing", which is in the context of the European Commission's [Communication \(Action 1\)](#) published in response to the European Citizens' Initiative "Stop Vivisection". The process of how the responses received are being analysed was outlined and the output will be shared publically at the Commission's conference in December and in a report to be published by the end of 2016.

Norecopa – new 3Rs website

Norecopa has built a brand-new [website](#) containing an intelligent search engine, with the specific aim to "create a one-stop-shop for those looking for resources to Replace, Reduce or Refine the use of animals in research". The website combines material which has previously been available on different domains, making it now possible to perform searches in all resources simultaneously. This includes:

- Information on global databases, guidelines, information centres, journals and email lists
- Resources within all major disciplines of laboratory animal science and welfare
- Links to organisations and stakeholders
- Information on textbooks and other literature within laboratory animal science and related topics
- Audiovisual products, including films of procedures, which can be used as alternatives or supplements to the use of animals or animal material in education and training

The website also has a newsfeed from European media with English- and Scandinavian-language items about laboratory animal science and alternatives. Norecopa's newsletters, which are published 8-9 times a year (so far only in Norwegian) are also available on the website.

The website has shortcuts to resources for specific groups of animals (e.g. laboratory animals, farm animals or fish) and for people seeking specific information, such as students looking for courses or resources on animal ethics.

The content of the site is curated, and so users can execute more targeted searches which are also relevant to their user profile and purpose. The potential consequences of centres recommending certain sources of information were discussed during the meeting, with the concerns that this risks being accused of subjectivity. However, the preliminary analysis of the EU Survey indicates that

many respondents feel that they could benefit from expert guidance through the wealth of information which is currently available. Distillation of the information and translation into guidance with experts working together to systematically review what is available can accelerate progress in the 3Rs. Bringing experts together from different regions, sectors and institutions is also fundamental to the development of a clearer framework to improve animal welfare without limiting scientific progress².

Danish 3R-Center – survey headlines and conclusions

The Danish 3R-Center recently conducted a survey on knowledge, attitudes and experiences with the 3Rs among researchers involved in animal experiments in Denmark. This was sent to all licence holders and animal welfare bodies (AWBs) to disseminate. The [report is now available online](#), but a brief summary of the main points was provided during the meeting:

- most welcome the 3Rs and see no obstacles
- Differences were noted between public and private sector employees:
 - Public sector employees are more sceptical and see more obstacles than the private sector, who have a better understanding of refinement
 - Private sector researchers primarily consider 3R during their daily work; public sector researchers when designing or seeking approvals
- Obstacles are mainly technical/ innovational
- The principle of refinement is least well understood
- Refinement and reduction play a role when designing and doing experiments

The survey highlights the main differences in attitudes between researchers from the public and private sectors.

Proposal to establish a formal network of 3Rs Centres under Horizon 2020

FICAM and **SWETOX** presented their proposals for broadening the scope of the network. This coordinated approach would include the development of an infrastructure to facilitate a comprehensive reference network which would cover all 3Rs. The benefits of a close and coordinated collaboration were outlined, as well as proposals for management, infrastructure and financing of this platform. It was suggested that the first step could be a mapping exercise to see where the strengths and competences of each centre lies and how this could then be organised into a larger structure.

A questionnaire will be circulated for all centres to profile themselves (see **Action 1** below).

Education and Training

CAAT Academy

CAAT Academy (www.caat-academy.org) is an extension of a joint venture of Johns Hopkins University Center for Alternatives to Animal Testing (CAAT) and CAAT-Europe (University of Konstanz). CAAT Academy is not-for profit and connects experts from Europe and the U.S. to provide

² [The animal experimentation quandary: stuck between legislation and scientific freedom. Bert et al. EMBO reports \(2016\) 17, 790-792](#)

hands-on-training in human-relevant alternative methods and technologies for toxicologists of all levels of experience, from entry level technician (BSc) to laboratory or department manager (MS/PhD).

The need for dissemination of the new technologies is self-evident. The validation process has already approved dozens of protocols and many more are at a very advanced stage of development. The challenge remains to select the most suitable method to solve a specific scientific question and to train staff to apply and implement the new technologies. The education on this topic at University level is just starting and the knowledge gap among the operators in both the public and private sector is still large. The capacity to run the new tests is mainly scattered among universities and private labs, but the communication with potential final users is not optimized. In summary, there is a lack of connection between test developers, future end-users and non-identified potential customers. Both CAAT and CAAT Europe have been involved in training for many years, but now there is the awareness that a dedicated branch is necessary. The aim of CAAT Academy is the dissemination of the new techniques among the operators while fostering the generation of a network of experts in the field.

CAAT Academy's principle is to explain the new toxicological models to the participants through lectures and practical sessions side-by-side with the experts in order to integrate these tools within the working environment with a focus on the needs of European regulatory context, such as REACH (Regulation 1907/2006), Cosmetics ban (Regulation 1223/2009), etc. This field is in continuous evolution and the training may also represent the opportunity for discovering new aspects and developing skills for continuous education.

The training sessions are spread across many sites, in order to reach as many new students as possible. They are provided by highly qualified personnel who have typically been involved in the development and production of the assay being taught. The training language is generally English, but future development may include lectures in the local languages.

The CAAT Academy adventure has just started, but two training sessions have already been completed. The first was on "In silico tools under REACH" and was hosted by ROCAM. In France, Biopredic International helped in the coordination of the training titled "Hepatotoxicity Testing Best Practices". The lesson learnt during these first training sessions is that the need for a local reference point is fundamental for the organisation of the practical sessions, the support for all the logistical issues and above all, the dissemination of the events among as many new potential participants as possible. It is important to reach all the professionals who don't usually attend the conferences dedicated to alternative methods.

Future training sessions are planned in Vienna, Austria on "Kidney toxicity Testing Best Practices" hosted by Evercyte, which provides standardised immortalized human cell lines, and in Leiden, The Netherlands, where Mimetas, a spin-off company from the University of Leiden, will help CAAT Academy provide "Current Applications of Organs-on-a-Chip for the Pharmaceutical Industry". Other topics for 2017 include in vitro skin models and in vitro tools for assessing endocrine disrupting chemicals.

The Education and Training Platform for Laboratory Animal Science (ETPLAS)

Education and training is an important contributor to the 3Rs and is aimed at increasing the quality of both animal welfare and science. The Education and Training Platform for Laboratory Animal Science (ETPLAS) provides a forum for exchanging information on laboratory animal science education and training, helping to establish mutually recognised training courses. Successful completion of such a harmonised course offers qualification for working with laboratory animals according to Directive 2010/63/EU, stimulates the use of the 3Rs in animal experiments and promotes free movement of competent personnel in the EU.

The Education & Training Platform for Laboratory Animal Science (ETPLAS) has been established to enable information sharing and communication between EU Member States' (MS) authorities, accrediting/approval bodies and training providers involved with all aspects of education and training in laboratory animal science.

While Education and Training under Directive 2010/63/EU is the responsibility of the Member States, harmonisation and mutual recognition of training programs are important assets for pan-European scientific exchange and mobility of personnel. For this reason, ETPLAS was established as an information portal to enable information sharing and communication between training providers, approval/accrediting bodies, employers and MS authorities. The Steering committee of ETPLAS is composed of representatives from all these groups and is supported by the National Contact Points and a Reference Group representing various stakeholder and territorial interests.

The aims of ETPLAS are to provide:

- a forum for exchanging information on LAS education and training for all stakeholders,
- training providers with the necessary information to establish education and training courses,
- the user community with information on available education and trainings courses,
- authorities/employers with the necessary information to facilitate the process of mutual recognition of education and training to promote free movement of personnel involved in LAS.

Decisions and Actions

The participants agreed that the network of 3Rs Centres has strengths which could be further exploited in terms of increasing their impact as a collective. Another possibility for further exploration is that the centres could be represented as a unit at various meetings in order to raise awareness of their expertise among particular groups.

Education and training was highlighted as an area which requires better coordination and 3Rs Centres could play a very important role here. All centres consider this to be a highly important aspect of their functions. As such, there is a large range of educational and training activities offered by the centres. These include producing teaching materials for schools, hosting large events and workshops and providing practical laboratory based training for professional scientists and technicians. The 3Rs focus of the training also varies depending on the specific competences of the centre. The opportunities for sharing expertise and materials are rich and merit further exploration.

Actions:

Action 1: EURL ECVAM will coordinate the profiling of the network. A draft template for this exercise will be disseminated for all members to comment upon prior to completion.

- Communication and dissemination should remain a pillar of cooperation and this will feature in the profiling of each centre.
- Education and training initiatives will also be a priority and all should summarise their resources and activities.

Action 2: All members should complete the profile template to provide details regarding the areas of specialisation in their respective networks.

Action 3: To follow up on the proposal from SWETOX and FICAM to coordinate a platform of 3Rs Centres, members should send their input to the representatives.

Meeting of the European 3Rs Centres

Ispra, 31st May – 1st June 2016

1st day: 31st May 2016 12:30-18:30
Buffet lunch (12:00)

2nd day: 1st June 2016 09:00-13:00

12:30-13:00 **Introductions and review of the agenda**

09:00-10:30 **Session on communication and dissemination**

13:00-15:00 **Updates on activities since the last meeting**

Each 3Rs Centre to present an update on their activities. Priorities identified during the last meeting being the main focus:

1. Efforts to reduce animal use in biomedical research
2. Communication and dissemination
3. Promoting the use of alternative methods/models as biotechnological resources
4. Education and training
5. Validation towards regulatory acceptance
6. Research initiatives supported by 3Rs centres

15:00-15:30 Coffee break

12:00-12:30 **Session to cover additional topics**

15:30-17:00 **Updates on activities since the last meeting (continued)**

12:30-13:00 **Wrap-up session and next steps**

17:00-18:00 **DG ENV: How to make the supply meet the demand for 3Rs information to support the implementation of Directive 2010/63/EU**

13:00 **Close**

18:00-18:30 **Discussion**

Buffet lunch

Bus transport to hotel Conca Azzurra 18:30
Social dinner at 19:30