Minutes of NanoSafety Cluster Meeting

Time: October 7, 2014; 09:00-17:00
Venue: Palazzo Vermexio (City Hall), Piazza Duomo 4, Siracusa, Italy

1. Welcome and introduction to the day
   The Coordinator of the Cluster, Dr Kai Savolainen (FIOH) opened the meeting at 09:05.
   Dr Antonio Pietroiusti welcomed the participants to the meeting on behalf of the Local Organizing Committee and presented the structure of the day.

2. NSC Review
   Dr Nicolas Segebarth (EC) gave a presentation on the upcoming Cluster Review. NanoSafety has been funded with 180M€ EU funding (about 50 projects) in FP7. The review will critically assess the FP7 contribution to the state-of-the-art, including on-going road-mapping efforts, as well as newly identified issues and future activities. The review meeting will be held in Brussels, 10 -11 December 2014, and it is open to all projects' coordinators (or representatives), CoRs and NSC WGs chairs. All running projects should be represented and each will be assigned a task. The task leaders (see the division of work in ppt-slides) will draft a set of questions and deliver a presentation at the Cluster Review Meeting in Brussels. The task leaders group (group of 6) will coordinate the work to avoid overlaps and align the work, and the PTAs will provide feedback to task leaders. It was discussed that the level of information cannot be detailed, only key points and messages will be presented at the review. Dr Segebarth concluded that the achievements of the Cluster need to be made visible outside the nanosafety community and this review will contribute to that aim.

3. Working group reports and activities
   Chair of the Session: Dr Kai Savolainen

   WG1 Materials
   Dr Sergio Moya summarized the Materials WG discussions. As next steps, the working group will focus on discussing e.g. characterization, dispersion, analyzing the concept of metrics, and availability of SOPs. Dr Begt Fadeel reminded about the Cluster commentary on *Nature Nanotechnology* regarding the need to define minimum set of physical and chemical data for characterization of nanomaterials. Dr Segebarth noted that if that can't be reached yet, then perhaps the Cluster should agree at least on the key driving principles.

   WG2 Hazard
   Dr Flemming Cassee gave presentation on the WG's recent activities and future work.
   The WG promotes information exchange on methods, aims for harmonized methods and creates summaries of key results. The Hazard wiki lacks new input for the moment. The WG has eco-immunosafety, reprotoxicology and genotoxicity focus groups, and the WG aims to produce a check list or best practices to guide study design.

   WG3 Exposure
   Dr Derk Brouwer noted they have explicitly differentiated between human and environmental exposure and included the LCA perspective. The WG has promoted between-project collaboration and it has worked on exposure assessment to provide recommendations for industry concerning strategy, metrics, data integration and relevance of exposure libraries for benchmarking.

WG4 Database

Dr Egon Willighagen presented the WG's work and recent activities. He noted that the WG has done substantial community building. The WG has regular teleconferences and 91 people are registered to the mailing list at the moment. The WG organized a survey to summarize the current state of databases. The survey aimed to collect, organize and share up-to-date information about NanoSafety related databases worldwide. The summary of the survey will be available at the Cluster website. Furthermore, the WG discussed interoperability of databases, ISA-TAB (-Nano) templates and data rights.

WG5 Risk

Dr Janeck Scott-Fordsmand presented both the European activities and the EU-U.S. activities in which the Risk WG has been active. European activities include the overview of tools and methods that are available for risk assessment and probing the concepts that are useful for risk assessment, leading to next generation of risk assessment tools. The EU-U.S. activities focus on CoRs, teleconference and web meetings and the coordination of the work.

WG6 Modelling

Drs Rafi Korestein and Lang Tran provided an overview of the aims and recent activities of the working group. The goal is to harmonize the modelling activity and be able to compare methodologies while using the same data. With modelling, quantitative risk assessment can be performed. Dr Tran highlighted that currently 5-6- projects are working together on this and the WG is a great forum for discussing, bringing different aspects together and coordinating the work so that data can be fitted in modelling and thus contribute to regulation work. In addition, Dr Tran introduced the main ideas of the MODENA COST action.

WG7 Dissemination

Dr Lesley Tobin provided information on the Cluster mailing list, newsletter, news and events calendar and encouraged all the WGs to be in contact with the dissemination working group to improve their outreach and communication aspects. The WG descriptions, aims and objectives as well as contact details of the chairs and co-chairs of the WGs need to be updated to the website. It was agreed that all WG chairs send an update of the WG progress for the Cluster Newsletter by 17 October. The WG will also look into the opportunities in creating Cluster identification, Researcher ID, in publications and promoting the publishing of public deliverables. Furthermore, a sub group on training will be established and a training section will be added to the Cluster website.

WG8 Systems biology

Dr Bengt Fadeel summarized the key points of the recent discussions in the WG. The main aims of the WG include developing and promoting best practices for systems biology approaches in nanosafety research and development of computational tools for the identification of activated pathways from transcriptomics, proteomics or metabolomics assays. Dr Fadeel also gave an overview of the recent activities of the WG and upcoming events, such as the Systems Biology Conference in Stockholm 9-10 November 2015.

4. Open access in H2020

Dr Segebarth gave presentation on Open access in Horizon2020. The main goal of the open access is to optimise the impact of publicly-funded scientific research. In short, open access means online access at no charge to the user. This means open access to peer-reviewed scientific publications or to research data. It applies to research that is published, and it undergoes same kind of peer review process than that of any publication. In Horizon2020, there is also pilot on Open Research Data from which projects may opt-out on specific terms.

Providing supplementary data was discussed as it is nowadays quite common feature in high impact journals. Access to raw underlying data allows to checking, reproducing and challenging studies.

5. Research roadmap actions
Chair of the Session: Dr Nicolas Segebarth

Regulatory Research Roadmap
Dr Vicki Stone presented the roadmap and emphasized that the purpose of the roadmap is to identify and structure the research that is needed to deliver effective regulation of nanomaterial safety (excluding nanomedicine). Dr Stone showed that there are currently 48 research priorities, and the yellow hexagon is a point to assess whether nanospecific regulation is needed. Active input has been given from the U.S. and Brazil which shows global importance of the issue. Dr Stone added that the next step is to share the hexagons with Dr Savolainen's group (on Closer to the Market Roadmap) to discuss core priorities that are relevant to both roadmaps.

Dr Segebarth noted that this roadmap should not be limited to the definition on nanomaterials, but be independent of that, and interrelations of the priorities should be made more visible. This means that people should not receive such impression that to be able to do the final risk assessment you would need to do all the hexagons. As a concrete suggestion it was also noted that ITS (intelligent testing strategies) is currently at the very end of the list, so its position could be changed. Dr Janeck Scott-Fordsmand noted that there is lack of environmental aspects and this should be balanced out in the final document. Dr Stone summarized that she will take these suggestions into account and send the roadmap for comments. She also encouraged the Cluster members to identify relevant stakeholders to whom the roadmap should be circulated.

Closer to the Market Research Roadmap
Dr Kai Savolainen gave an overview and framework of the Closer to the Market roadmap. He noted that the development of new rules and practices should be based on solid scientific knowledge. Technology, skills, and processes need to be provided based on best practices in nanosafety in order to support the go-to-market aspects. Several actions with expected outcomes were suggested as well as a proposal for an EU-funded CSA topic to better fund the activities. Dr Savolainen added that information collection on the competence centres in nanosafety in EU have been started and the work is still in progress.

It was discussed that the next steps will be to align these two roadmaps and use a similar approach as in the regulatory research roadmap and identify the key hexagons. Dr Cassee noted that it would be good to enlarge the perspective to present also the advantages brought by nanotechnology to balance the view. Dr Segebarth added that the main idea is the safety aiming at benefits. Furthermore, it was noted that market demand is the key, meaning that the views of service-providers and users should be covered.

6. SIINN ERA-NET
Dr Rainer Hagenbeck gave a presentation about the SIINN ERA-NET that promotes safe and rapid transfer of European research results in nanoscience and nanotechnology into industrial applications. The third SIINN Call for proposals has been opened on 1st of October 2014. For this call, seven European funding agencies (from Austria, Belgium, Germany, Region Nord-Pas de Calais (France), Portugal, Romania and Spain) and three US funding agencies have together allocated over 6.1 million Euros to fund joint transnational research projects. Project partners will be funded by their national or regional funding organizations according to standard national or regional procedures. More information about the call is available on the website: www.siinn.eu

7. Next Cluster events
   - The Cluster review meeting will be organized in Brussels 10-11 December 2014.
   - EU-U.S.: Bridging NanoEHS Research Efforts Joint Workshop in Venice 12-13 March 2015
   - The next NanoSafety Cluster meeting will be held in Helsinki, in the context of the SENN2015 Congress on Wednesday 15 April 2015.

8. Closing
   Dr Kai Savolainen closed the meeting at 17:00 and thanked all the participants for a productive meeting.

The presentations of the meeting are available on the Cluster website.