

## Workshop

**Safe implementation of nanotechnologies:**

**Common challenges**

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**NanoSafety Cluster meeting – The US-EU Dialogue, bridging nano EHS research**



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## About the project

The BILAT-USA project aims to increase awareness towards EU-U.S. Science and Technology cooperation through setting up a sustainable, knowledge-based and bi-regional dialogue platform between S&T key players as well as stakeholders from the EU-Member States, Associated Countries and from the U.S. The project is funded by the European Union's Capacities Programme on International Cooperation under the 7<sup>th</sup> Framework Programme for Research and Technological Cooperation.

More detailed information can be found on the project website:

<http://www.eusscienceandtechnology.eu/bilat-usa>

## Executive Summary

Work package 3 'Increase Collaboration and Support for Participation in the FP' is dedicated to increase the participation of researchers and research institutions from the U.S. through targeted actions addressing main activities of FP7. Its main objectives are to bring U.S. and EU researchers and technology transfer firms together in order to support exchange of ideas, to facilitate formation of new partnerships and to advance the frontier research in thematic area of nanotechnology, which is explicitly mentioned in the S&T agreement between the EU and U.S. and also in the Work Programme as strategic areas of mutual interest. BILAT-USA therefore participated in the 'Safe implementation of nanotechnologies' workshop, between 29 and 31 May 2012 in Grenoble, France. This three-day workshop was jointly organized by EU FP7, the NanoSafety cluster and SIINN. The SIINN ERA-NET promotes the safe and rapid transfer of European research results in nanoscience and nanotechnology into industrial applications. The workshop was open to FP7 EU project coordinators and gave a complete overview of the entire portfolio of projects on the safe implementation of nanotechnologies in the FP7. The participants set up a roadmap to foster the transnational development of nanotechnologies in Europe.

## Discussions and Outcomes

'Safe implementation of nanotechnologies: Common challenges' took place on 29-31 May 2012 in Grenoble, France. The event consisted of the NanoSafety Cluster meeting – The U.S.-EU Dialogue, bridging nano EHS research.

The European Commission and the US-NNCO are working close together to engage researchers, regulators, and granting entities in an active discussion on EHS research needs and identify research that would benefit from joint efforts to this aim. Annual workshops are being organized and Communities of Research (CoR) are being established. Communities of Research are formed by groups of people, sharing a significant interest in the field of nanosafety and interacting regularly to advance that interest.

3 new EU-U.S. Communities of Research were formed during the NanoSafety Cluster meeting in Grenoble. Following the EC's instructions the BILAT-USA project allowed 2 U.S. researchers to participate in the event: Nathan Baker from Washington, U.S. chair of the 'Predictive Modelling for Human Health' CoR and Lawrence Gibbs, U.S. chair of the 'Risk management and control' CoR.

The main conclusion of the BILAT-USA participation at the NORDP conference was that the approximately 50 participating researchers from all over Europe and the U.S. got information on the project.

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The participants were really inquisitive for the activities of the BILAT-USA project. After the presentation on BILAT-USA project given by Annamária Csányi several questions raised and also during the face-to face meeting participants expressed their interests. The 2 U.S. researchers appreciated very much the support of BILAT-USA.

## Conference Documentation

### Appendix A: Complete Conference Program



#### Safe implementation of nanotechnologies: common challenges, Grenoble, 29, 30, 31 May 2012

Day	Session	Title/Animator	Topic
<b>29 May</b>			
12:30	<i>Welcome buffet</i>		
13:30	<b>Welcome session</b>	Objectives of the workshop	
13:45	<b>Characterisation and measurement</b>		
	MARINA	Managing Risks of Nanoparticles	
	NANODEVICE	Novel concepts, methods, and technologies for the production of portable, easy-to-use devices for the measurement and analysis of airborne engineered nanoparticles in workplace air	
	Nanolyse	Nanoparticles in Food: Analytical methods for detection and characterisation	
	NanoPolyTox	Toxicological impact of nanomaterials derived from processing, weathering and recycling of polymer nanocomposites used in various industrial applications	
	NanoValid	Development of reference methods for hazard identification, risk assessment and LCA of engineered nanomaterials	
	INSTANT	Innovative Sensor for the fast Analysis of Nanoparticles in Selected Target Products	
15:15	15:45	Questions and discussion	
15:45	<i>Coffee break</i>		
16:15	<b>Interaction with living (session 1)</b>		
	ENPRA	Risk assessment of engineered nanoparticles	
	EuroNanoTox	European Center for Nanotoxicology	
	HINAMOX	Health impact of engineered metal and metal oxide nanoparticles: Response, bioimaging and distribution at cellular and body level	
	InLiveTox	Intestinal, Liver and Endothelial Nanoparticle Toxicity Development and evaluation of a novel tool for high-throughput data generation	
	NANOMEGA	Novel approach to toxicity testing of nanoparticles mimicking lung exposure. Possible protective effect of omega-3 acids	
17:30	18:00	Questions and discussion	
19:00	<i>Joint Dinner</i>		



## Safe implementation of nanotechnologies: common challenges, Grenoble, 29, 30, 31 May 2012

Day	Session	Title/Animator	Topic
<b>30 May</b>			
08:30	<b>Interaction with living (session 2)</b>		
		NanoTransKinetics	Modelling basis and kinetics of nanoparticle interaction with membranes, uptake into cells, and sub-cellular and inter-compartmental transport
		NEPHH	Nanomaterials-related environmental pollution and health hazards throughout their life-cycle
		NeuroNano	Do nanoparticles induce neurodegenerative diseases? Understanding the origin of reactive oxidative species and protein aggregation and mis-folding phenomena in the presence of nanoparticles
09:15	09:45		Questions and discussion
09:45	<i>Coffee break</i>		
10:15	<b>Interaction with environment</b>		
		ENNSATOX	Engineered nanoparticle impact on aquatic environments: Structure, activity and toxicology
		NanoFate	Nanoparticle Fate Assessment and Toxicity in the Environment
		NANOHOUSE	Life Cycle of Nanoparticle-based Products used in House Coating
		NANORETOX	The reactivity and toxicity of engineered nanoparticles: risks to the environment and human health
		ModNanoTox	Modelling nanoparticle toxicity: principles, methods, novel approaches
11:30	12:00		Questions and discussion
12:00	<i>Lunch</i>		
13:45	<b>Control, handling, manufacturing, life cycle</b>		
		SANOWORK	Safe Nano Worker Exposure Scenarios
		NANOMICEX	Mitigation and control of exposure to nanoparticles
		NANOSUSTAIN	Development of sustainable solutions for nanotechnology-based products based on hazard characterization and LCA
		SUNPAP	Scale-Up Nanoparticles in Modern Papermaking
		NanosafePACK	Development of a best practices guide for the safe handling and use of nanoparticles in packaging industries
15:00	15:30		Questions and discussion
15:30	<i>Coffee break</i>		
16:00	<b>Transverse collaborations</b>		
		NANOIMPACTINI	European network on the health and environmental impact of nanomaterials
		NANOTOES	Nanotechnology: Training Of Experts in Safety
		NHECD	Nano health-environment commented database
		OBSERVATORYNANO	European observatory for science-based and economic expert analysis of nanotechnologies, cognisant of barriers and risks, to engage with relevant stakeholders regarding benefits and opportunities
		QNano	A pan-European infrastructure for quality in nanomaterials safety testing
		SIINN	Safe Implementation of Innovative Nanoscience and Nanotechnology
17:30	18:00		Questions and discussion
18:00	<b>Round table wrap-up</b>		
		Dr. Bertrand FILLON, Dr. Georgios KATALAGARIANAKIS, Dr. Nicolas SEGEBARTH Dr. Kai SAVOLAINEN	
19:00	<i>Joint Dinner</i>		



## Safe implementation of nanotechnologies: common challenges, Grenoble, 29, 30, 31 May 2012

Day	Session	Title/Animator	Topic
<b>31 May</b>	<b>NanoSafety Cluster session</b>		
08:30		Dr. Georgios KATALAGARIANAKIS, Dr. Kai SAVOLAINEN Dr. Nicolas SEGEBARTH	Shaping Nanosafety SRA for 2020
11:00	<i>Coffee break</i>		
11:30		Dr. Georgios KATALAGARIANAKIS, Dr. Nicolas SEGEBARTH, Katalin KALAI	The US-EU dialogue, bridging nanoEHS research: launch of 3 new CoRs
13:00	<i>Lunch</i>		
14:00	<b>Special afternoon session</b>	Open discussion session - brainstorming on all 6 CoRs future activities	
15:00	<i>End of workshop</i>		

## Appendix B: Agenda

The agenda of the NanoSafety Cluster meeting – The US-EU Dialogue, bridging nano EHS research is available via:

[http://www.nanosafetycluster.eu/uploads/files/pdf/NSC\\_Draft%20agenda%20\\_Grenoble\\_.pdf](http://www.nanosafetycluster.eu/uploads/files/pdf/NSC_Draft%20agenda%20_Grenoble_.pdf)

## Appendix C: List of abbreviations

Abbreviation	Full-Term
AAAS	American Association for the Advancement of Science
BILAT-USA	Bilateral Coordination for the Enhancement and Development of S&T Partnerships between the European Union and the United States of America
CoR	Communities of Research
EHS	Environment, Health and Safety
EU	European Union
FFG	Austrian Research Promotion Agency (Österreichische Forschungsförderungsgesellschaft)
FP(7)	(Seventh) Framework Programme for Research and Technological Development
NORDP	National Organization of Research Development Professionals
SIINN	Safe Implementation of Innovative Nanoscience and Nanotechnology
S&T	Science & Technology
TETALAP	Tudományos és Technológiai Alapítvány (Hungarian Science and Technology Foundation)
US-NNCO	National Nanotechnology Coordination Office
U.S.	United States of America