

International symposium

NANOTECHNOLOGY IN THE FOOD CHAIN OPPORTUNITIES & RISKS

Brussels, Belgium
Wednesday, 24th November 2010

8:30	REGISTRATION AND COFFEE
9:30	General introduction S. LARUELLE (Federal Minister of Agriculture) A. HUYGHEBAERT (Chair Scientific Committee Belgian Food Safety Agency)
	Session 1 Chairs: J. Mast, K. Dewettinck
9:50	Theme 1: Definitions of nanotechnology - Terminology & classification
	<i>Items to be addressed:</i> <ul style="list-style-type: none">- Introduction to nanotechnology- Classification, terminology & nomenclature- Physico-chemical characteristics- Analysis & detection (issues regarding reference material, matrix interference, size, novel laboratory practices, ...) <i>Main questions to be answered:</i> <ul style="list-style-type: none">▪ What are the characteristics of nanoparticles, nanofibres, nanostructures, etc.?▪ What is a good 'working' definition for a transparent discussion between stakeholders?▪ How to analyse/detect engineered nanoparticles in food ? What are the hurdles? J. BRIDGES (Chair SCENHIR) <i>Introduction to nanotechnologies</i>
10:20	Theme 2: Applications of nanotechnology in the food chain (part 1)
	<i>Items to be addressed:</i> <ul style="list-style-type: none">- General information regarding R&D, the market situation- Applications and latest developments (smart packages, precision farming, interactive foods, nanodelivery systems, biofortification, etc.)- Nanoparticles naturally occurring in food- Industry's point of view (cases) <i>Main questions to be answered:</i> <ul style="list-style-type: none">▪ What are the (potential) applications of nanotechnology in the food chain?▪ What are the potential/commercial available and future applications?▪ What is the impact?
10:20	Q. CHAUDHRY (Fera, UK) <i>Food applications of nanotechnologies – An overview of potential benefits and risks</i>
10:45	J. LAMMERTYN (K.U.Leuven, Belgium) <i>Case 1: Nanotechnology in food diagnostics</i>

11:05	COFFEE BREAK
11:25	Theme 2: Applications of nanotechnology in the food chain (part 2)
11:25	J. LAGARON (CSIC, Spain) <i>Case 2: Nanotechnology trends to enhance biopackaged food, food quality and safety</i>
11:45	M. KNOWLES (Chair CIAA Nanotechnology expert group) <i>Case 3: Nanotechnology: a challenge for the food and drink manufacturing industry</i>
12:05	Questions and answers about themes 1 & 2
12:20	LUNCH AND POSTER EXHIBITION
	Session 2 Chairs: G. Maghuin-Rogister, L. Pussemier
14:00	Theme 3: Toxicological aspects of nanotechnology in the food chain
	<i>Items to be addressed:</i> <ul style="list-style-type: none"> - Toxicological properties (acute/chronic toxicity, genotoxicity, ...) - Toxicokinetics & -dynamics - Toxicity at the level of cells, animal tissue, etc. (<i>in silico</i> - <i>in vitro</i> – <i>in vivo</i>) <i>Main questions to be answered:</i> <ul style="list-style-type: none"> ▪ How to determine the toxicity of nanoparticles? ▪ What are the uncertainties regarding the toxicity of nanoparticles (e.g. metric dose)? ▪ What is known about the oral toxicity of nanoparticles (absorption, bio-availability, intestinal toxicity, ...)? ▪ What are the health & safety issues of nanoparticles in food?
14:00	Y.-J. SCHNEIDER (UCL, Belgium) <i>Toxicodynamic aspects of nanoparticles in food: interactions with the intestinal barrier</i>
14:20	H. BOUWMEESTER (WUR, The Netherlands) <i>Microarray analysis of effects of silver nanoparticles on an in vitro translocation model of the human intestinal epithelium</i>
14:40	Theme 4: Risk assessment - EFSA's point of view
	<i>Item to be addressed:</i> Risk assessment of the use of nanotechnology in the food chain. <i>Main questions to be answered:</i> <ul style="list-style-type: none"> ▪ What are the health & safety issues of nanoparticles in food? ▪ Which risk assessment issues need to be addressed for nanotechnology in food? ▪ Is there a prioritisation with respect to research needs? C. L. GALLI (Chair EFSA Nanotechnology WG) <i>The potential risks arising from nanoscience and nanotechnologies on food and feed safety</i>
15:05	Questions and answers about themes 3 & 4

15:20	COFFEE BREAK
	Session 3 Chairs : B. De Meulenaer, J.D. Piñeros-Garcet
15:40	Theme 5: Communication, perception & participation of the consumer
	<p><i>Items to be addressed:</i></p> <ul style="list-style-type: none"> - Consumer's perception & participation regarding nanotechnology and food - Communication regarding nanotechnology and food - Consumer's expectations (on product information, etc.) - Ethical considerations, social aspects <p><i>Main questions to be answered:</i></p> <ul style="list-style-type: none"> ▪ What is the consumers' viewpoint on the promises, potential problems, and wider implications of nanofood for the individual and for society? ▪ Where are the ethical borderlines? <p>G. GASKELL (London School of Economics, UK)</p>
16:05	Theme 6: Regulatory aspects
	<p><i>Items to be addressed:</i></p> <ul style="list-style-type: none"> - International – European – national level - Legislation regarding the food chain (REACH, labelling, etc.) - Regulatory challenges of nanotechnologies - International standards (?) - Official controls (?) <p><i>Main questions to be answered:</i></p> <ul style="list-style-type: none"> ▪ Are nano-applications in the food chain covered by the current legislation? ▪ What are the lacunas in legislation? ▪ Is there a need for a specific "nano-legislation"? ▪ Are there any barriers in legislation? ▪ How to control nano-applications in the food chain? ▪ <i>Quid</i> labelling? <p>E. POUDELET (Director Directorate Safety of the Food Chain, EC DG Health & Consumer Protection) <i>Regulatory aspects of EU food legislation</i></p>
16:30	Questions and answers about themes 5 & 6
	General discussion & Conclusions Chairs: A. Huyghebaert, L. Pussemier
16:45	Round-table discussion
	industry – risk assessor – risk manager – consumer