

## 2<sup>nd</sup> QNano Integrating Conference

### "Quality in nanosafety assessment – driving best practice and innovation"

27<sup>th</sup> February – 1<sup>st</sup> March 2013, IMG conference centre, Prague, Czech Republic

<b>Wednesday 27<sup>th</sup> February 2013</b>	
<b>08.00 – 09.00</b>	<b>Registration and networking</b>
<b>09.00 – 11.00</b>	<b>Opening session: Nanomaterials – the possibilities and challenges</b> Chairs: Michael Riediker and Jan Topinka
<b>09.00 -09.10</b>	Horizon 2020 and Nanosafety – Georgios Katalagarianakis (European Commission)
<b>09.10 - 09.20</b>	Welcome note from QNano Coordinator Kenneth Dawson
<b>09.20 – 09.30</b>	Welcome from the Director of the Institute of Experimental Medicine AS CR: Eva Syková
<b>09.30 – 10.10</b>	<b>Keynote 1:</b> Nanomaterials – the possibilities and challenges - Phil Reeves (Australian Pesticides and Veterinary Medicines Authority)
<b>10.10 - 10.50</b>	<b>Keynote 2:</b> Quality underpinning safety: QualityNano positive and negative control nanoparticles – Kenneth Dawson (Centre for BioNano Interactions, University College Dublin)
<b>10.50 – 11.00</b>	<b>Q &amp; A and Discussion</b>
<b>11.00 - 11.30</b>	<b>Coffee</b>
<b>11.30 – 15.45</b>	<b>Session 3: Mechanisms of interaction – direct, indirect and chronic impacts</b> Chairs: Albert Duschl and Bengt Fadeel
<b>11.30 – 12.10</b>	<b>Keynote 3:</b> Signalling of DNA damage and cytokines across cell barriers exposed to nanoparticles - Patrick Case (Southmead Hospital, Bristol)
<b>12.10 – 12.30</b>	Talk 1. Pulmonary inflammation induced after exposure to silica nanoparticles: role of alveolar epithelial cells and macrophages - Sonja Boland (University Paris Diderot)
<b>12.30 – 12.50</b>	Talk 2. Human primary monocytes as reference cells for assessing interference of nanoparticles with the inflammatory defence reaction - Yang Li (Institute for Biomedical Technologies-National Research Council Italy)
<b>12.50 – 13.10</b>	Talk 3. Copper(II) oxide nanoparticles penetrate into HepG2 cells, exert cytotoxicity via oxidative stress and induce proinflammatory response - Jean-Pascal Piret (University of Namur)
<b>13.10 – 14.30</b>	<b>Lunch</b>
<b>14.30 – 14.50</b>	Talk 4. The impact of route of exposure on the systemic effects of nanomaterials - Vicki Stone (Heriot-Watt University)
<b>14.50 – 15.10</b>	Talk 5. An Improved 3D Tetraculture System Mimicking the Cellular Organization at the Alveolar Barrier to Study the Effects of Particles on the Lung – Arno Gutleb (Centre de Recherche Public - Gabriel Lippmann)
<b>15.10 – 15.30</b>	<b>Q &amp; A and Discussion</b>
<b>15.30 – 16.00</b>	<b>Coffee</b>
<b>16.00 – 18.25</b>	<b>Session 2: Methodological advances – towards a more realistic assessment scenarios and improved nanoparticle presentation, detection &amp; quantification <i>in situ</i></b> Chairs: Matthias Voetz and Stefan Weigel
<b>16.00 – 16.40</b>	<b>Keynote 4:</b> Development of ICP-MS based methods to study the uptake of nanoparticles by single cells - Norbert Jakubowski (BAM Federal Institute for Materials Research & Development)
<b>16.40 – 17.00</b>	Talk 6. Studying the Nanofibre-Cell Interaction <i>In vitro</i> : Consideration of the Methodological Approaches Used - Martin Clift (University of Fribourg)
<b>17.00 – 17.20</b>	Talk 7. <i>In situ</i> characterization of nanoparticles: surface properties affecting agglomeration and particle's corona - Andrea Haase (German Federal Institute for Risk Assessment, BfR)

<b>17.20 – 17.40</b>	Talk 8. Measurement Methods for Nanoparticles Size Distribution - Luigi Calzolari (European Commission, DG Joint Research Centre)
<b>17.40 – 18.00</b>	Talk 9. Cloud point extraction as a promising method for in situ separation of nanoparticles in real-world aqueous samples: Case study of CuO nanoparticles - Seyed Mohammad Majedi (National University of Singapore)
<b>18.00 – 18.30</b>	<b>Q &amp; A and Discussion</b>
<b>18.30 – 20.30</b>	<b>Poster session &amp; Aperitif</b>

<b>Thursday 28<sup>th</sup> February 2013</b>	
<b>08.00 – 09.00</b>	<b>Registration and networking</b>
<b>09.00 – 11.15</b>	<b>Session 1: Nanomaterials of the future – 2<sup>nd</sup> - 4<sup>th</sup> generations and emerging applications</b> <b>Chairs:</b> Wolfgang Parak and Eva Valsami-Jones
<b>09.00 – 09.40</b>	<b>Keynote 5:</b> Nanostructured Photosystems for the Generation of Electricity and Fuels from Sunlight - Michael Graetzel (Ecole Polytechnique Fédérale de Lausanne, EPFL)
<b>09.40 – 10.20</b>	<b>Keynote 6:</b> Where do innovation needs and safety requirements meet? - Gernot Klotz (CEFIC European Chemical Industry Council)
<b>10.20 – 10.45</b>	Talk 10. Application of zero-valent iron nanoparticles in environmental remediation - Miroslav Cernik (Technical University of Liberec)
<b>10.45 – 11.15</b>	<b>Q &amp; A and Discussion</b>
<b>11.15 – 11.45</b>	<b>Coffee</b>
<b>11.45 – 13.45</b>	<b>Transnational Access Session</b> <b>Chairs:</b> Sikha Ray and Susan Anson
<b>11.45 – 12.05</b>	<b>Keynote 7:</b> Requirements for European infrastructures in nanometrology - Kai Dirscherl - (Danish National Metrology Institute, partner in Co-Nanomet consortium)
<b>12.05 – 12.20</b>	Talk 11. Lessons learned from EUMINAFab- establishing impact at a European level - Susan Anson (Karlsruhe Institute of Technology, coordinator of EUMINAFab)
<b>12.20 – 12.35</b>	Talk 12. The CALIPSO Project - European Synchrotrons United - Dr. Michael Hagelstein, (Karlsruhe Institute of Technology, ANKA representative in European Research Infrastructures)
<b>12.35 – 12.50</b>	Talk 13. Transnational Access at QualityNano: fully funded access to top characterisation facilities for safety assessment of nanomaterials - Sergio Anguissola (University College Dublin)
<b>12.50 – 13.45</b>	<b>QNano User presentations</b> <ul style="list-style-type: none"> <li>• <b>Talk 14. JRC User:</b> Radiolabelling of engineered nanoparticles – different strategies for Ag<sub>0</sub>-NP, TiO<sub>2</sub>-NP and MWCNTs - Stefan Schymura (Helmholtz-Zentrum Dresden-Rossendorf)</li> <li>• <b>Talk 15. FUNDP User:</b> Nanopaints: physicochemical characterization at the University of Namur - Omar Lozano Garcia (FUNDP) on behalf of Nina Berdarsek (University Nova Gorica)</li> <li>• <b>Talk 16. UU User:</b> TEM studies of TiO<sub>2</sub> materials functionalized with propylthiol groups - Stefano Rubino (UU) on behalf of Raquel Pascual Juez (Universidad Rey Juan Carlos, Spain)</li> <li>• <b>Talk 17. UCD User:</b> Synthetic quartz nano-crystals with tuneable properties for toxicological studies - Francesco Turci (University of Torino)</li> <li>• <b>Talk 18. KIT User:</b> Exposure of A549 cells to SiO<sub>2</sub>-NPs under submerged conditions and at the air-liquid interface using the Karlsruhe exposure system (KIT-TAF) - Linda Corinna Stöehr (Universität Salzburg, Austria &amp; Grimm GmbH)</li> </ul>
<b>13.45 – 15.00</b>	<b>Lunch &amp; TA Clinic</b>

<b>15.00 - 18.40</b>	<b>Session 4: Realistic ecotoxicological and Life Cycle assessment models</b> <b>Chairs:</b> Socorro Vázquez-Campos and Rudolf Reuter
<b>15.00 – 15.40</b>	<b>Keynote 8:</b> Evaluating Nanomaterial Safety in the Context of Ecological Processes - Patricia Holden (University of California)
<b>15.40 – 16.00</b>	Talk 19. Assessing the heteroaggregation of manufactured nanoparticles with naturally occurring colloids in a typical surface water – Jerome Labille (Aix-Marseille University, CNRS)
<b>16.00 – 16.20</b>	Talk 20. ZnO Nanoparticles Alter Acetylcholinesterase Activity and Fitness Fluctuation in Honey bee ( <i>Apis mellifera carnica</i> ) - Tamara Milivojević (University of Ljubljana)
<b>16.40 – 17.10</b>	<b>Coffee</b>
<b>17.10 – 17.30</b>	Talk 21. (Prospective) Life Cycle Assessment of nanotechnology-based applications - Michael Steinfeldt (University of Bremen)
<b>17.30 – 18.10</b>	<b>Keynote 9:</b> Nanoparticles released in water from commercialized sunscreen in a life cycle perspective: structures, quantities and impacts on aquatic species - Jerome Rose (CNRS-Univ. Paul Cézanne, France)
<b>18.10 – 18.30</b>	<b>Q &amp; A and Discussion</b>
<b>19.30 – 22.30</b>	<b>Conference Banquet</b>

<b>Friday 1<sup>st</sup> March 2013</b>	
<b>08.00 – 08.30</b>	<b>Registration and networking</b>
<b>08.30 – 11.50</b>	<b>Session 5: Systems biology and <i>in silico</i> approaches - towards nanomaterials grouping and read-across strategies</b> <b>Chair:</b> Lang Tran
<b>08.30 – 09.10</b>	<b>Keynote 10:</b> Time-resolved, quantal dose-response: a fundamental framework for unified approaches to nanoparticle safety assessment? - Huw Summers (Swansea University)
<b>09.10 – 09.50</b>	<b>Keynote 11:</b> Towards efficient nanosafety assessment: Building bridges between experiments and calculations - Tomasz Puzyn (Uniwersytet Gdansk)
<b>09.50 – 10.10</b>	Talk 22. Reactivity and Toxicity of Engineered Nanoparticles: Major Discoveries from Project NanoReTox - Eva Valsami-Jones (University of Birmingham)
<b>10.10 – 10.30</b>	<b>Coffee</b>
<b>10.30 – 11.50</b>	<b>Parallel Session (Session 5)</b>
<b>10.30 – 10.50</b>	Talk 23. Framework for Nanoparticle Accumulation Kinetics in Dividing Cell Populations- Christoffer Åberg (University College Dublin)
<b>10.50 – 11.10</b>	Talk 24. Gene expression profiles reveal distinct immunological impact of CoO and CeO <sub>2</sub> nanoparticles in lung epithelium - Inge Nelissen (Flemish Institute for Technological Research, VITO NV)
<b>11.10 – 11.30</b>	Talk 25. The toxicity of silver nanowires on <i>Daphnia magna</i> : A Systems Biology Approach for understanding nanomaterials MOA - Francesco Falciani (University of Liverpool)
<b>11.30 – 11.50</b>	Talk 26. The influence of different determinants on the release of MNO during dumping silica powder; A novel statistical approach - Cindy Bekker (TNO)
<b>10.30 – 11.50</b>	<b>Parallel Session (Regulatory Session)</b> <b>Chair:</b> Andrea Haase
<b>10:30 – 10:50</b>	Talk 27. Do nano pesticides and veterinary medicines need a different regulatory approach? - Phil Reeves (Australian Pesticides and Veterinary Medicines Authority)

<b>10.50 – 11.10</b>	Talk 28. Nanotechnology and Consumer Products – Strategies for Assessing Health and Safety Implications - Treye A. Thomas (US Consumer Product Safety Commission)
<b>11.10 – 11.30</b>	Talk 29. The Nanotechnology Industry and REACH – Deadlines, Tonnage Triggers and Politics - David Carlander (Nanotechnology Industries Association)
<b>11.30 – 11.50</b>	Talk 30. Nanomaterials and Regulation in the Context of Consumer Products – An European Perspective- Jutta Tentschert (German Federal Institute of Risk Assessment, BfR)
<b>11.50-13.30</b>	<b>Parallel Session (Safety at Work Session)</b> <b>Chair:</b> Enrico Bergamaschi and Anna Luisa Costa
<b>11.50-12.05</b>	Talk 31. General Framework of the Safety Assessment of Nanotechnology Workers - Kai Savolainen (Finnish Institute of Occupational Health)
<b>12.05-12.20</b>	Talk 32. Designing “safe” nanomaterials - Anna Luisa Costa (CNR-ISTEC)
<b>12.20-12.35</b>	Talk 33. Options in the biomonitoring approach for assessing exposure and health effects of engineered nanomaterials (ENM): Challenges and perspectives- Enrico Bergamaschi (University of Parma)
<b>12.35-12.50</b>	Talk 34. Urine and Exhaled Breath Condensate Markers of Oxidative Stress in Workers Exposed to Aerosol Containing TiO <sub>2</sub> Nanoparticles - Daniela Pelclova ( Charles University)
<b>12.50-13.05</b>	Talk 35. A globally harmonized approach for occupational health surveillance and epidemiology in nanomaterial workers: a roadmap - Michael Riediker (Institute for Work and Health; IOM Singapore)
<b>13.05-13.20</b>	Talk 36. Exposure Registry As A First Step Of Epidemiological Surveillance Of Nanoworkers In France - Irina Guseva (INVS, France)
<b>11.50-13.30</b>	<b>Parallel Session (Nanoparticle Quality &amp; Labelling)</b> <b>Chairs:</b> Hanns-Rudolf Paur & Simon Lawson
<b>11.50-12.10</b>	Talk 37. Batch-to-batch reproducibility - a challenge for safety assessment and regulation - Hanns-Rudolf Paur (Karlsruhe Institute of Technology)
<b>12.10-12.30</b>	Talk 38. Current state of the art and applications of stable isotope labelled engineered nanomaterials – Superb Misra (University of Birmingham)
<b>12.30-12.50</b>	Talk 39. Assessment of Batch-to-Batch-Variability in Representative Nanoparticle Syntheses with Characterisation of OECD Proposed Parameters.– Eugene Mahon (University College Dublin)
<b>12.50-13.10</b>	Talk 40. Radiolabelling of Nanoparticles using Cyclotron-Based Techniques –Neil Gibson - JRC
<b>13.10-13.30</b>	Talk 41. The toxicity of drug nanocarriers: the role of physicochemical, anatomical and physiological factors - Jaroslav Turánek (Veterinary Research Institute)
<b>13.30 – 14.00</b>	<b>Lunch</b>
<b>14.00 - 14.25</b>	<b>Closing session: Putting it all in context – towards standardisation &amp; regulation</b> <b>Chairs:</b> Rainer Hagenbeck and Kenneth Dawson
<b>14.25 – 14.50</b>	<b>Keynote 12:</b> NANoREG - A common European approach to the regulatory testing of nanomaterials - Tom van Teunenbroek (Dutch Ministry of Infrastructure and Environment)
<b>14.50 – 15.15</b>	<b>Keynote 13:</b> Science policy considerations for responsible nanotechnology decisions - Peter Kearns (Organisation for Economic Co-operation and Development, OECD)
<b>15.15 – 15.40</b>	<b>Keynote 14:</b> Validity range of centrifuges for the regulation of nanomaterials: from classification to as-tested coronas. – Wendel Wohlleben (BASF)
<b>15.40 – 16.00</b>	Awards(best poster) and Closing speeches (Kenneth Dawson & Jan Topinka)
<b>16.00</b>	<b>Close of 2<sup>nd</sup> QNano conference with Aperitif</b>