



REGULATORY DEVELOPMENTS

European Commission Joint Research Center Conducts Risk Assessments on Nanomaterials

Scientists from the Institute for Health and Consumer Protection (IHCP) of the Joint Research Centre (JRC) of the European Commission conducted risk assessments on the following nanomaterials: fullerenes, carbon nanotubes, nano-silver and metal-oxides (nano-titanium dioxide and nano-zinc oxide). They executed the risk assessment following the methodology issued in the guidance from REACH, the EU legislative framework on chemicals. The assessment demonstrated that the main risk for human health may come from chronic occupational inhalation exposure. Using the findings from this assessment and the ENRHES project (Engineered Nanoparticles – Review of Health and Environmental Safety), the scientists have published papers on human health and environmental safety regarding nanomaterials. They can be found here: http://ihcp.jrc.ec.europa.eu/our_activities/nanotechnology/jrc-ihcp-health-safety-results-nanomaterials

Japan, South Korea, and Germany Lead in Nanotech Patenting for non-USA Countries

10 years after the formation of the National Nanotechnology Initiative, there have been 977 U.S. patents on nanotechnology granted to 10 key players in this field, Japan, South Korea, Germany, Taiwan, France, Canada, Great Britain, China, Italy, and Australia. Currently, Japan, South Korea, and Germany have the most number of nanotechnology U.S. patents, in that order.

Germany's Federal Institute for Risk Assessment (BfR) Questions Safety of Nano Silver in Consumer Products

BfR had originally recommended against the broad use of nano silver in consumer products until there was an adequate amount of data to assess safety and health risks. Due to industry objections and opinions that enough data already exists to evaluate the health risks of nano silver, BfR invited experts from academia and industry to discuss these issues. The discussion demonstrated that there is little toxicological data available for nano silver, and BfR continues to recommend against the widespread use of nano silver in consumer products until there is enough data to conduct a safety assessment for human health and the environment.

BfR's full opinion can be found here:

http://www.bfr.bund.de/en/press_information/2011/10/safety_of_nano_silver_in_consumer_products_many_questions_remain_open-70234.html

REVIEWS AND OTHER PUBLICATIONS OF INTEREST

1. **Gold Revolution—Gold nanoparticles for modern medicine and surgery (Review)**.. Journal of Nanoscience and Nanotechnology, May 2011, Vol. 11, No. 5, pp.3740-3748. Radoslaw A. Rippel and Alexander M. Seifalian. doi: 10.1166/jnn.2011.4170
<http://www.ingentaconnect.com/content/asp/jnn/2011/00000011/00000005/art00002?token=004117a63fba81f573d257025707023762f537338593147797c4e724725416a51>
2. **Silica and titanium dioxide nanoparticles cause pregnancy complications in mice**.. Nature Nanotechnology, May 2011, Vol. 6, No. 5, pp. 321-328. Kohei Yamashita, Yasuo Yoshioka, Kazuma Higashisaka, Kazuya Mimura, Yuki Morishita, Masatoshi Nozaki, Tokuyuki Yoshida, Toshinobu Ogura, Hiromi Nabeshi, Kazuya Nagano, Yasuhiro Abe, Haruhiko Kamada, Youko Monobe, Takayoshi Imazawa, Hisae Aoshima, Kiyoshi Shishido, Yuichi Kawai, Tadanori Mayumi, Shin-ichi Tsunoda, Norio Itoh, Tomoaki Yoshikawa, Itaru Yanagihara, Shigeru Saito & Yasuo Tsutsumi. doi: 10.1038/nnano.2011.41
<http://www.nature.com/nnano/journal/v6/n5/abs/nnano.2011.41.html>
3. **Frequency selective rotation of two-particle nanoactuators for rapid and sensitive detection of biomolecules**. Nano Letters. March 2011, Andrea Ranzoni, Jean J. H. B. Schleipent, Leo J. van Ijzendoorn, and Menno W. J. Prins. doi: 10.1021/nl200384p <http://pubs.acs.org/doi/abs/10.1021/nl200384p>
4. **2010 Nanotechnology Research Review**. BCC Research Report, January 2011, Chris Spivey. <http://www.bccresearch.com/report/2010-nanotechnology-review-nan047b.html>

CONFERENCES AND WORKSHOPS**4th Annual Meeting of the Scandinavian Society for Biomaterials (ScSB)**

May 4-6, 2011, Fiskebäckskil, Sweden

- Focus on nanoscience and technology in biomaterials R&D
- Sessions on nanomaterials for tissue replacement & regeneration, nanomaterials in drug/gene delivery and nanomedicine, nanoscale cell-surface & tissue-material interactions, biomaterials-related infections and novel antimicrobial approaches

<http://www.scsb.eu/Annual-meetings/scsb-2011>

Nanotechnology for Cancer Medicine

May 12-13, 2011, Baltimore, MD

- Fifth annual symposium of Johns Hopkins Institute for NanoBio Technology
- Talks on nanotechnology, oncology, engineering, medicine

<http://inbt.jhu.edu/outreach/symposium/twentyeleven/>

2011 National Biotechnology Conference – sponsored by AAPS

May 16 – 18, 2011; San Francisco, CA

Symposium on Targeted Nanotheragnostics: Scientific Achievements and Commercialization Challenges, May 16, 2011: 1:30 – 4:00 pm.

- Promising advances in scientific strategies and approaches that combine disease diagnosis with therapy (Nanotheragnostics);
- Nanodevices;
- Safety concerns on the interaction of nanomaterials and nanoparticles with the human body;
- Pharmacokinetics and biodistribution of nanoparticles;
- Formulation, processing and manufacturing of nanoparticles;
- Opportunities for future growth and commercialization of nanomedicinal products

http://www.nxtbook.com/nxtbooks/aaps/nbc2011_preprogram/#

Nanomedicines and the Regulatory Path

May 17, 2011, Research Triangle Park, NC

- Hosted by Center of Innovation for Nanotechnology (COIN)
- Dialogue with CDER, PPD Global Regulatory Consulting

<http://nanomedicinemay.eventbrite.com/>

4th European Conference for Clinical Nanomedicine

May 23-25, 2011, Basel, Switzerland

- Organized by the European Foundation for Clinical Nanomedicine, European Technology Platform on Nanomedicine, European Science Foundation, European Society for Nanomedicine, EMA
- Addresses medical issues with potential for nanotechnology solutions, specific nanomedicine technology for different medical issues, ongoing trials in nanomedicine, regulatory challenges associated to nanomedicine, issues of inflammation and infection, the future of nanomedicine, the ethics of nanomedicine

<http://www.clinam.org/images/stories/pdf/conference.pdf>

Nanotech Conference & Expo 2011

June 13-16, 2011, Boston, MA

- Tracks on fabrication, characterization and tools, advanced materials, electronics and microsystems, medicine and biotech, and energy and environment
- Over 5,000 attendees and 300 exhibitors expected

<http://www.techconnectworld.com/Nanotech2011/>

7th NanoBioEurope 2011

June 21-23, 2011, Cork, Ireland

- Sessions on integrated systems, biophotonics, biomaterials, nanobioanalytics, nanobio in Ireland, in vitro diagnostics, nanoenabled drug delivery technologies, nanoenabled innovations in surgical devices and systems.

<http://www.tyndall.ie/conferences/nanobio-europe//index.php>

Pharmaceutical Nanotechnology: Applications & Commercialization

June 29-30, 2011; London, UK

- Engineering, formulation and drug delivery
- Nano-enabled nucleic acid therapeutic delivery
- Translating discoveries into commercial successes
- Regulatory considerations, IP issues and partnering opportunities

<http://smi-online.co.uk/events/overview.asp?is=4&ref=3484>

NanoFormulation2011

June 26 – July 1, 2011 ; Singapore

- Formulation of Nano-Biomaterials
- Handling and processing of Nanopowders
- Processing and Stabilization of Nanoparticle Suspensions
- Smart and Functional Materials in Formulations: Coating, Films and Tapes
- Safety and Health Effects and Nanoscale Materials – Towards Sustainable and Safety

<http://www.nanoformulation2011.com/>

Nanoscale Bioceramics in Healthcare and High Performance Ceramics

October 12-13, 2011, Stoke-on-Trent, Staffordshire, UK

- Hosted by Institute of Nanotechnology and CERAM
- Focus on application of bioactive glass and ceramics to orthopaedics, regenerative medicine, dentistry, biosensing, controlled drug release, high performance coatings, and functionalized biomaterials.

<http://www.nano.org.uk/events/ion-events>

NanoMedicine – 2011

November 3 – 5, 2011, Shenzhen, China

- Breaking Research of Nanomedicines
- Versatile Nanotech and Nanomaterials in Biomedicine
- Nanodevices and Diagnostic
- Nanomedicine Targeting Major Diseases
- Regenerative Nanomedicine
- Culturing Public Environment for Healthy Growth

<http://www.bitconferences.com/NanoMedicine2011/>

BioNanoTox and Applications International Research Conference

November 10-14, 2011, Mobile, AL

- Multidisciplinary focus on biology, nanotechnology, and toxicology
- Joint research between nanomaterials and biological systems

<http://sites.google.com/site/bntconference/>

Nano Health

January 15-16, 2012, Egypt, Cairo

- To address the future of nanotechnology, as well as potential risks and regulatory issues
- New frontiers in drug delivery and therapeutics
- New frontiers in imaging and diagnosis
- Nanotechnology and the developing world
- Roadmapping new technologies
- Novel medical materials and products

<http://www.clocate.com/conference/Nano-Health-2012/13170>

REFERENCE SECTION**Nano Organizations**

- National Center for Toxicological Research (NCTR): <http://www.fda.gov/AboutFDA/CentersOffices/NCTR/default.htm>
- National Nanotechnology Initiative (NNI): <http://www.nano.gov/>
- Nano Science and Technology Consortium (NSTC): <http://www.nstc.in/>
- Nano Science and Technology Institute (NSTI): <http://www.nsti.org/>
- The Nanotechnology Institute (NTI): <http://nanotechinstitute.org/>

Nano Journals

- American Chemical Society -- Nano Letters: <http://pubs.acs.org/journal/nalefd>
- Institute of Physics – Nanotechnology: <http://iopscience.iop.org/0957-4484/>
- Journal of Nanoscience and Nanotechnology: <http://www.aspbs.com/jnn/>
- NanoTrends - A Journal of Nanotechnology and its Applications: <http://www.nstc.in/journal/default.aspx>
- BCC Research -- Nanotechnology Reports: <http://www.bccresearch.com/index/category/code/nanotechnology>

CONTACT

For further information, or if you have any questions about the Nanomedicines Alliance, please contact the Nanomedicines Alliance Secretariat at 1-202-230-5607 or info@nanomedicines-alliance.org

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