



REGULATORY AND LEGISLATIVE DEVELOPMENTS

FDA Assessing Industry Comments on Nano Draft Guidance

While the FDA has no expected timeline for the expected issuance of the final guideline, representatives are now evaluating industry input on their draft guidance, "Considering Whether an FDA-Regulated Product Involves the Application of Nanotechnology." This article in *Genetic Engineering & Biotechnology News* summarizes the industry comments submitted on this draft guidance, concluding that in general, biotechnology companies demonstrated support for this FDA guidance.

<http://www.genengnews.com/keywordsandtools/print/3/24829/>

European Commission Adopts "Nanomaterial" Definition

The European Commission has agreed that "nanomaterial" is "a natural, incidental, or manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50% or more of the particles in the number size distribution, one or more external dimensions is in the size range 1nm-100nm." This definition will be reassessed in 2014 for its applicability in light of expected technical and scientific progress. It focuses on the size of the material rather than hazard or risk, and is based on recommendations from the Joint Research Centre (JRC) and the Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR).

<http://www.innovationsgesellschaft.ch/index.php?section=news&cmd=details&newsid=535&teaserId=13>

Australian Literature Review on Nanomaterials Health-Effects

The National Industrial Chemicals Notification and Assessment Scheme (NICNAS), a branch of the Australian Department of Health and Ageing, has commissioned and published a literature review on toxicological effects of six nanomaterials: fullerenes, carbon nanotubes and nano forms of zinc oxide, cerium oxide, and silver. This review will be used by NICNAS to assess the risks of nanomaterials and determine

the strategic path of the government as they aim to regulate nanomaterials.

http://www.innovationsgesellschaft.ch/media/arc/hive2/20111017_News_Tox_Review.pdf

Health Canada issues "Policy Statement on Health Canada's Working Definition for Nanomaterial"

Health Canada released a policy document on their working definition for nanomaterials in October 2011. This is a final version of the interim policy document issued in March 2010. The changes in the final document reflect comments they received from 29 various stakeholders on the interim paper, as well as international norms, developments in science, and regulatory needs.

The policy document can be found

here: <http://www.hc-sc.gc.ca/sr-sr/pubs/nano/pol-eng.php>

The FAQ document can be found here:

<http://www.hc-sc.gc.ca/sr-sr/pubs/nano/faq-eng.php>

The Nanotechnology Regulatory Science Act of 2011

Senator Mark Pryor (D-AR) introduced S.B. 1662, "the Nanotechnology Regulatory Science Act of 2011," on 6 October 2011. Remarking that the FDA expects increased use of nanomaterials in all consumer products, Senator Pryor aims to establish a program within the FDA dedicated to nanomaterials. This program would research the toxicology of nanomaterials and the effects of them on biological systems. The bill would appropriate \$48 million to this program from 2013 to 2015, and has been referred to the Senate Committee on Health, Education, Labour, and Pensions.

http://www.nanolawreport.com/uploads/file/S_%201662%20Nanotechnology%20Regulatory%20Science%20Act%20of%202011.pdf

Federal Government Issues Environmental, Health, and Safety Research Strategy for Nanotechnology

The 2011 NNI Environmental, Health, and Safety (EHS) Research Strategy emphasizes studying a product through its entire life cycle to measure risk at each step of the development process. The strategy lays out six categories of research necessary for the responsible development of nanotechnology: 1) nanomaterial measurement infrastructure, 2) human exposure assessment, 3) human health,

4) environment, 5) risk assessment and risk management, and 6) informatics and modeling.
http://www.nano.gov/sites/default/files/pub_resource/nni_2011_ehs_research_strategy.pdf

Call for Papers!

BioNanoMed 2012, the 3rd international Congress for Nanotechnology in Medicine and Biology. Krems, Austria. 1-2 March 2012. Abstracts are due by 27 November 2011 to office@bionanomed.at.

REVIEWS AND OTHER PUBLICATIONS OF INTEREST

Review: Biochemical and Biomedical Applications of Multifunctional Magnetic Nanoparticles. Journal of Nanoparticle Research, Vol. 13, No. 10. Shih-Hung Huang and Ruey-Shin Juang.
<http://www.springerlink.com/content/g142w802vt2373r8/>

DNA-Enabled Self-Assembly of Plasmonic Nanoclusters. Nano Letters, 9 November 2011, Vol. 11, No. 11. Jonathan A. Fant, Yu He, Kui Bao, Chihhui Wu, Jiming Bao, Nicholas B. Schade, Vinodhan N. Manoharan, Gennady Shvets, Peter Nordlander, David R. Liu, and Federico Capasso.
<http://pubs.acs.org/doi/abs/10.1021/nl203194m>

Interplay Between Gold Nanoparticle Biosynthesis and Metabolic Activity of Cyanobacterium Synechocystis sp. PCC 6803. Nanotechnology, 22(48). Monica Focsan, Ioan I. Ardelean, Constantin Craciun, and Simion Astilean. <http://iopscience.iop.org/0957-4484/22/48/485101>

Review: Magnetic Targeting Strategies in Gene Delivery. Nanomedicine, Nov 2011;6(9): 1593-1604. E Delyagina, W Li, nn Ma, G Steinhoff.
<http://www.futuremedicine.com/toc/nnm/6/9>

Review: Improving Delivery and Efficacy of Nanomedicines in Solid Tumors: Role of Tumor Priming. Nanomedicine, November 2011, Vol. 6, No. 9, pp. 1605-1620. Jie Wang, Ze Lu, Yue Gao, M. Guillaume Wientjes, Jessie L-S Au.
<http://www.futuremedicine.com/toc/nnm/6/9>

Review: Design of Self-Assembling Peptides and Their Biomedical Applications. Nanomedicine, November 2011, Vol. 6, No. 9, pp. 1621-1643. Jingping Liu, Xiaojun Zhao.
<http://www.futuremedicine.com/toc/nnm/6/9>

Nanomedicine: Gold Nanowires to Mend a Heart. Nature Nanotechnology, November 2011, Vol. 6 No. 11, pp. 692-693. Marisa E. Jaconi.
<http://www.nature.com/nnano/journal/v6/n11/index.html>

Electron Microscopy of Specimens in Liquid. Nature Nanotechnology, November 2011, Vol. 6 No. 11, pp. 695-704. Niels de Jonge and Frances M. Ross.
<http://www.nature.com/nnano/journal/v6/n11/index.html>

CONFERENCES AND WORKSHOPS

International Symposium on Bioelectronics and Bioinformatics. November 3-5, 2011, Suzhou, China

Biomedical engineering
Nano and micro electronics
E-health; Bioinformatics

Bio-signal processing
<http://isbb2011.wmah.org/index.html>

NanoMedicine – 2011. November 3 – 5, 2011, Shenzhen, China
Breaking Research of Nanomedicines

Versatile Nanotech and Nanomaterials
Nanodevices and Diagnostic
Regenerative Nanomedicine
Culturing Public Environment

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

Third Annual Conference of the American Society for Nanomedicine. November 9-11, 2011, Rockville, MD

Novel Nanobiomedical Applications
Multifunctional Nanoplatfroms
Vision for Nanomedicine Advancement
Nanomedicine Safety, Characterization
Molecular Imaging in Nanomedicine
Nanotechnology-based Contrast Agents
Image-guided Targeted Delivery
Ontology, nano-TAB, caNanoLab, nanoHUB
Recent Clinical Applications of Nanomedicine

http://www.amsocnanomed.org/conference_info.php

IEEE International Conference on Nano/Molecular Medicine and Engineering. November 9-12, 2011, Jeju, South Korea

Nanotechnology in drug delivery
Biomedical imaging
Nano and molecular technologies
Nano-technology in drug delivery
Biochips and Bio-MEMS
Biomechatronics
Biological interface
Cell at the nanoscale
Frontiers in nanobiotechnology

<http://ieee-nanomed-biotronics2011.org/website/01conference01.php>

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/>

International Conference on Biomedical Engineering. December 10-12, 2011, Manipal Karnataka, India

Medical applications of nanotechnology will be one of focus areas at this event

<http://uic.manipal.edu/icbme/#contact>

International Conference on Nanotechnology & Biosensors. December 28-30, 2011, Dubai, UAE

Aims to foster cross-pollination between nanotechnology and biosensors

<http://www.icnb.org/index.htm>

Bionanotechnology III: From Biomolecular Assembly to Applications. January 4-6, 2012, Cambridge, UK

Large natural and designed assemblies
Single-molecule studies
Nanomaterials and devices in vitro
Nanomaterials and devices in vivo
Biomolecular self-assembly

<http://www.biochemistry.org/Conferences/AllConferences/tabid/379/View/Conference/MeetingNo/SA121/Default.aspx>

Nano Health. January 15-16, 2012, Egypt, Cairo

To address the future of nanotechnology, 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>

International Conference on Nanoscience and Technology. January 20-23, 2012, Hyderabad, India

Advances in nanomaterial synthesis
Technology and commercialization
Energy applications
Biotechnology and biomedical applications
CNTs and graphene
Physics of nanomaterials
NEMS, lithography, etc.
Catalysis
Nanocomposites
Surface engineering and tribology applications
Advances in nanomaterials characterization
Nanotoxicology and nanoregulatory aspects

<http://www.iconsat2012.com/>

BioNanoMed 2012. March 1-2, 2012, Krems, Austria

Personalized medicine
Cancer
Regenerative medicine
Diagnostics and therapy
Multidisciplinary nano-technologies

<http://www.bionanomed.at/>

Nanotechnology, Biotechnology, and Spectroscopy International (ICNBS 2012) March 1-3, 2012, Cairo, Egypt

Nanotechnology
Biotechnology
Spectroscopy

<http://ises-nakaa-conf.webs.com/>

EEE International Conference on Nano/Micro Engineered and Molecular Systems**March 5-8, 2012, Kyoto, Japan**

Nanophotonics
 Nanomaterials
 Carbon nanotube based devices and systems
 Nanoscale robotics, assembly, automation
 Molecular sensors, actuators, and systems
 MEMS/NEMS and molecular sensors
 Microfluidics and nanofluidics
 Micro and nano heat transfer
 Nanobiology, bio-informatics, nanomedicine
 Micro and nano fabrication
 Micro/nano sensors and actuators
 Micro/nanoelectromechanical systems

http://www.ieee-nems.org/2012/general_info/introduction/

NANO 2012 March 12-14, 2012, Omaha, NE

Nanomaterials
 Nanoparticles
 Nanotech biomarker detection
 Applications of nanotechnology
 Drug delivery
 Antimicrobial activity of metals
 Nanotechnology
 Nano-arrays for cancer
 Nanomedicine
 Nano-sensors
 Nano-electronics
 Nano-devices

<http://www.omicsonline.org/nano2012/>

The Joint European Summit for Clinical Nanomedicine 2012 (CLINAM 2012). May 7-9, 2012, Basel, Switzerland

Clinical trials for nanomedicines
 Regulation, toxicology, ethics, sustainability
 Transition from research to industrial products
 Strategic instruments in nanomedicines

<http://www.clinam.org/conference.html>

77th Prague Meetings on Macromolecules: Polymers in Medicine. July 8-12, 2012, Prague, Czech Republic

Polymers for Nanomedicine
 Stimuli responsive polymers
 Polymers for Advanced Drug Delivery
 Polymers for Biomedical Applications
 Biomaterials for Tissue Engineering

<http://www.imc.cas.cz/sympo/pmm2012/>

European Congress of Molecular Spectroscopy**August 26-31, 2012, Cluj-Napoca, Romania**

Spectroscopic methods and techniques
 Computational and theoretical approaches
 Structure and dynamics of molecular systems

<http://www.nanowerk.com/nanotechnology-event.php?eventid=3484>

REFERENCE SECTION**Nanobio- and Nanomedicine Companies**

Listed alphabetically:

http://www.nanowerk.com/nanotechnology/nanomaterial/nanobiomedicine_a.php

Nano Organizations

National Center for Toxicological Research (NCTR):
<http://www.fda.gov/AboutFDA/CentersOfices/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>

Nanomedicine: Nanotechnology, Biology, and Medicine:
<http://www.nanomedjournal.com/home>

Nanomedicine:
<http://www.futuremedicine.com/page/about.jsp>

Nature Nanotechnology:
<http://www.nature.com/nnano/focus/high>

[lights/index.html?WT.mc_id=NM1110CT010](#)

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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