NanoMed Digest

Nanomedicines Alliance Newsletter
December 2014

Regulatory and Legislative Developments

European Commission Nanomaterial Final Opinion

The European Commission's Scientific Committee on Emerging and Newly Identified Health Risks has issued a Final Opinion on the Guidance on the Determination of Potential Health Effects of Nanomaterials Used in Medical Devices. The opinion is intended to clarify nanomaterial risk in medical devices. The Committee emphasizes the need to minimize risks related to size and properties of particles used in devices.
http://ec.europa.eu/health/scientific_committees/emerging/docs/scenihr_o_045.pdf

EU Guidance on Nanomaterial Safety for Workers

The European Commission has published guidance on protecting worker health and safety from potential risks related to nanomaterials in the workplace. Two separate guidances, one for workers and another for employers and health practitioners, have been released to cover appropriate preventive measures and knowledge for both parties.
http://ec.europa.eu/social/BlobServlet?docId=13087&langId=en
http://ec.europa.eu/social/BlobServlet?docId=13088&langId=en

FDA Announces Nanomedicine Guidance

The United States Food and Drug Administration has announced plans to issue guidance in 2015 on "Drug Products Containing Nanomaterials" and "Liposome Drug Products: CMC, Human Pharmacokinetic and Bioavailability; and Labeling Documentation".
http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM417290.pdf

Reviews and Other Publications of Interest

Summary Report of PQRI Workshop on Nanomaterial in Drug Products: Current Experience and Management of Potential Risks. AAPS Journal, Volume 17, Issue 1, pp 44-64. Jeremy A. Bartlett, Marcus Brewster, Paul Brown, Donna Cabral-Lilly, Celia N. Cruz, Raymond David, W. Mark Eickhoff, Sabine Haubenreisser, Abigail Jacobs, Frank Malinoski, Elaine Morefield, Ritu Nalubola, Robert K. Prud'homme, Nakissa Sadrieh, Christie M. Sayes, Hripsime Shahbazian, Nanda Subbarao, Lawrence Tamarkin, Katherine Tyner, Rajendra Uppoor, Margaret Whittaker-Caulk, William Zamboni.
http://link.springer.com/article/10.1208/s12248-014-9701-9?wt_mc=alerts.TOCjournals

Inhibiting EGFR Clustering and Cell Proliferation with Gold Nanoparticles. Small, December 2014. Chiara Paviolo, James W. M. Chon, Andrew H. A. Clayton.
http://onlinelibrary.wiley.com/doi/10.1002/smll.201402701/abstract;jsessionid=8BF617330FB03F77008C7B4A00D1BE68.f04t01

Gelatin nanoparticles enhance the neuroprotective effects of intranasally administered osteopontin in rat ischemic stroke model. Drug Delivery and Translational Research, Vol. 4, Issue 5 – 6, pp. 395 – 399, December 2014. Elizabeth Joachim, Il-Doo Kim, Yinchuan Jin, Kyekyoon (Kevin) Kim, Ja-Kyeong Lee, Hyungsoo Choi.
http://link.springer.com/article/10.1007%2Fs13346-014-0208-9

Towards non-invasive diagnostic imaging of early-stage Alzheimer's disease. Nature Nanotechnology, Vol. 10, pp. 91 – 98, December 2014. Kirsten L. Viola, James Sbarboro, Ruchi Sureka, Mrinmoy De, Maíra A. Bicca, Jane Wang, Shaleen Vasavada, Sreyesh Satpathy, Summer Wu, Hrushikesh Joshi, Pauline T. Velasco, Keith MacRenaris, E. Alex Waters, Chang Lu, Joseph Phan, Pascale Lacor, Pottumarthi Prasad, Vinayak P. Dravid, William L. Klein.
http://www.nature.com/nnano/journal/v10/n1/full/nnano.2014.254.html

For further information, or if you have any questions about the Nanomedicines Alliance, please contact the Nanomedicines Alliance Secretariat at 1-202-230-5653.

Expansion of CTCs from early stage lung cancer patients using a microfluidic co-culture model. Impact Journals, December 2014. Zhuo Zhang, Hiroe Shiratsuchi, Jules Lin, Guoan Chen, Rishindra M. Reddy, Ebrahim Azizi, Shamileh Fouladdel, Andrew C. Chang, Lin Lin, Hui Jiang, Meghna Waghray, Gary Luker, Diane M. Simeone, Max S. Wicha, David G. Beer, Nithya Ramnath, Sunitha Nagrath.
http://www.impactjournals.com/oncotarget/index.php?journal=oncotarget&page=article&op=view&path%5B%5D=2592

Wide-field computational imaging of pathology slides using lens-free on-chip microscopy. Science Translational Medicine, Vol. 6, Issue 267, p. 267, December 2014. Alon Greenbaum, Yibo Zhang, Alborz Feizi, Ping-Luen Chung, Wei Luo, Shivani R. Kandukuri, Aydogan Ozcan.
http://stm.sciencemag.org/content/6/267/267ra175

A multichannel nanosensor for instantaneous readout of cancer drug mechanisms. Nature Nanotechnology, Vol. 10, pp. 65 – 69, December 2014. Subinoy Rana, Ngoc D. B. Le, Rubul Mout, Krishnendu Saha, Gulen Yesilbag Tonga, Robert E. S. Bain, Oscar R. Miranda, Caren M. Rotello, Vincent M. Rotello.
http://www.nature.com/nnano/journal/v10/n1/full/nnano.2014.285.html#close

Dynamic Inversion Enables External Magnets To Concentrate Ferromagnetic Rods to a Central Target. Nano Letters, Vol. 15, Issue 1, pp. 359 – 364, December 2014. A. Nacev, I. N. Weinberg, P. Y. Stepanov, S. Kupfer, L. O. Mair, M. G. Urdaneta, M. Shimoji, S. T. Fricke, B. Shapiro.
http://pubs.acs.org/doi/abs/10.1021/nl503654t

Evolution-guided optimization of biosynthetic pathways. Proceedings of the National Academy of Sciences, Vol. 111, No. 50, December 2014. Srivatsan Raman, Jameson K. Rogers, Noah D. Taylor, George M. Church.
http://www.pnas.org/content/111/50/17803

Exploring the sequence space for (tri-)peptide self-assembly to design and discover new hydrogels. Nature Chemistry, Vol. 7, pp. 30 – 37, December 2014. Pim W. J. M. Frederix, Gary G. Scott, Yousef M. Abul-Haija, Daniela Kalafatovic, Charalampos G. Pappas, Nadeem Javid, Neil T. Hunt, Rein V. Ulijn, Tell Tuttle.
http://www.nature.com/nchem/journal/v7/n1/full/nchem.2122.html

Synthetic fossilization of soft biological tissues and their shape-preserving transformation into silica or electron-conductive replicas. Nature Communications, Vol. 5, No. 5665, December 2014. Jason L. Townson, Yu-Shen Lin, Stanley S. Chou, Yasmine H. Awad, Eric N. Coker, C. Jeffrey Brinker, Bryan Kaehr.
http://www.nature.com/ncomms/2014/141208/ncomms6665/full/ncomms6665.html

Cell type-specific delivery of short interfering RNAs by dye-functionalised theranostic nanoparticles. Nature Communications, Vol. 5, No. 5565, December 2014. Adrian T. Press, Anja Traeger, Christian Pietsch, Alexander Mosig, Michael Wagner, Mark G. Clemens, Nayla Jbeily, Nicole Koch, Michael Gottschaldt, Nicolas Bézière, Volodymyr Ermolayev, Vasilis Ntziachristos, Jürgen Popp, Michael M. Kessels, Britta Qualmann, Ulrich S. Schubert, Michael Bauer.
http://www.nature.com/ncomms/2014/141203/ncomms6565/full/ncomms6565.html

Fragment-Based Strategy for Investigating and Suppressing the Efflux of Bioactive Small Molecules. ACS Infectious Diseases, December 2014. Corey L. Compton, Daniel W. Carney, Patrice V. Groomes, Jason K. Sello.
http://pubs.acs.org/doi/abs/10.1021/id500009f

CONFERENCES AND WORKSHOPS

NanoPortugal 2015, 11 – 13 February 2015, Lisbon, Portugal

- Nanoinstrumentation
- Nanoscale modeling
- Graphene
- Nanomedicine

http://www.nanopt.org/15EN/topics.php?m=c&s=to

Nanotechnology, Biotechnology and Spectroscopy: tools of success in the coming Era, 27 – 29 March 2015, Giza, Egypt

- Nanotechnology in medicine
- Pharmaceutical and biomedical applications
- Polymer nanoparticles

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

Nanotechnology in Medicine and Biology, 8 – 10 April, 2015, Graz, Austria
- Biomedical applications
- Regenerative medicine
- Detection, diagnostics, therapeutics, and monitoring
- Oncology

http://www.bionanomed.at/

1st European Conference on Pharmaceutics: Drug Delivery, 13 – 15 April 2015, Reims, France
- Targeting
- Liposomes and nanoparticles

http://www.apgi.org/Reims2015.htm

5th Zing Bionanomaterials Conference, 25 – 28 April 2015, Algarve, Portugal
- Synthesis
- Characterization
- Toxicity
- Therapeutics

http://goo.gl/Y2lI1S

EuroNanoForum 2015, 10 – 12 June 2015, Riga, Latvia
- Nanomanufacturing
- Advanced Materials

http://euronanoforum2015.eu/

International Society for Biomedical Polymers and Polymeric Biomaterials, 8 – 10 July 2015, Orlando, FL
- Nanocomposites
- Drug delivery systems
- Controlled release systems
- Biomedical pharmaceutical polymers

http://isbppb.org/conferences-workshops/

International Conference on Biomedical Engineering and Systems, 13 – 14 July 2015, Barcelona, Spain.
- Biomedical devices
- Biomaterials
- Drug design
- Nanotechnology for biomedical applications

http://icbes.net/papers/

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/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

Nanomedicine: Nanotechnology, Biology, and Medicine: http://www.nanomedjournal.com/home0

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

Nature Nanotechnology:
http://www.nature.com/nnano/focus/highlights/index.html?WT.mc_id=NM1110CT01

CONTACT

For further information, or if you have any questions about the Nanomedicines Alliance, please contact the Nanomedicines Alliance Secretariat at 1-202-230-5653 or info@nanomedicines-alliance.org.

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