



BOARD MEETING HIGHLIGHTS

The Nanomedicines Alliance Board of Directors recently met in Washington, DC to discuss strategies and specific activities for the Alliance in 2014 and beyond, continued engagement of regulatory authorities, and growing the Alliance to achieve a broader reach. The Board also held a lively panel discussion to discuss challenges and opportunities of nanomedicine development, and strategies to realize the full potential of nanomedicines for the benefit of patients. The five participating panelists were Dr. Vahe Bedian of AstraZeneca, Dr. Neal Fowler of Liquidia, Dr. Christopher Guiffre of Cerulean, Dr. Robert Hayes of Johnson & Johnson, and Dr. Scott Jenkins of Teva. Consider joining the Nanomedicines Alliance to take advantage of these member-only discussions and benefits in the future.

REGULATORY AND LEGISLATIVE DEVELOPMENTS

European Commission Launches EuroNanoMed II

The European Commission has decided to fund the EuroNanoMed II initiative to continue its support to the European nanomedicine research community. The project has been granted seven million euros in funding, which continues through October 2016. The project has 20 partners from 17 different European countries. The initiative aims to promote transnational collaboration and research with participants from academia, industry, and health communities.

EuroNanoMed II also hopes to foster dialogue with regulatory agencies.

<http://www.euronanomed.net/>

Report on Dermal Absorption of Nanomaterials

Denmark's Environmental Protection Agency (EPA) has released a comprehensive report entitled "Dermal absorption of nanomaterials." The report is part of a 2012-2015 initiative by the Danish EPA called "Better Control of Nano," aimed at determining the possible risks of nanomaterials. The report considers the role of physicochemical properties on dermal absorption of nanomaterials, as well as test methods used in the evaluation of absorption. The report considers size and surface chemistry to have the most significant role in dermal penetration.

<http://www2.mst.dk/Udgiv/publications/2013/09/978-87-93026-50-6.pdf>

FDA Continues to Review Comments on Nanotechnology Guidance

According to a statement published by *Bloomberg BNA*, US Food and Drug Administration (FDA) officials are still considering public comments submitted on a draft guidance document for nanotechnology policy from June 2011. The draft guidance is entitled "Considering Whether an FDA-Regulated Product Involves the Application of Nanotechnology" and is intended to assist industry in determining potential implications for regulatory status, safety, and efficacy resulting from nanotechnology in medicines. The FDA did not indicate when the final guidance document might be released.

http://news.bna.com/meln/MELNWB/split_display.adp?fedfid=38362795&vname=melnotalissues&fcn=11&wsn=495803000&fn=38362795&split=0

EU Open Access Nanotechnology Database

A project funded by the European Union, "Nano health-environment commented database" (NHECD), has completed an open-access database for nanotechnology. The database also allows for automatic updating based on published research data and scientific papers. The "intelligent search" currently contains ten thousand open source articles.

<http://nhecd.jrc.ec.europa.eu/content/discover-our-intelligent-search>

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

Nanoparticle Mucosal Vaccines Receive Funding

Professors at the Sahlgrenska Academy at the University of Gothenburg in Sweden have received funding from the Knut and Alice Wallenberg Foundation to develop mucosal vaccines based on nanoparticle technology. The team will work with vaccine adjuvants and lipid nanoparticles. The team at Sahlgrenska Academy will work in cooperation with researchers at Lund University and Chalmers. http://www.sahlgrenska.gu.se/english/news_and_events/news/News_Detail/new-funding-for-development-of-mucosal-vaccines-based-on-nanoparticle-technology.cid1185636

REVIEWS AND OTHER PUBLICATIONS OF INTEREST

Injectable Hydrogels from Triblock Copolymers of Vitamin E-Functionalized Polycarbonate and Poly(ethylene glycol) for Subcutaneous Delivery of Antibodies for Cancer Therapy. Advanced Functional Materials, October 2013. Ashlynn L. Z. Lee, Victor W. L. Ng, Shujun Gao, James L. Hedrick, Yi Yan Yang. <http://onlinelibrary.wiley.com/doi/10.1002/adfm.201301307/abstract;jsessionid=3B0E3C7011E39304BDD878294CEBE825.f04102>

Using Fluorescence Lifetime Imaging Microscopy to Monitor Theranostic Nanoparticle Uptake and Intracellular Doxorubicin Release. ACS Nano, October 2013. Johan S. Basuki, Hien T.T. Duong, Alexander Macmillan, Rafael B. Erlich, Lars Esser, Mia C. Akerfeldt, Renee Megan Whan, Maria Kavallaris, Cyrille Boyer, Thomas P. Davis. <http://pubs.acs.org/doi/abs/10.1021/nn404407g>

Layer-by-Layer Nanoparticles for Systemic Codelivery of an Anticancer Drug and siRNA for Potential Triple-Negative Breast Cancer Treatment. ACS Nano, October 2013. Zhou J. Deng, Stephen W. Morton, Elana Ben-Akiva, Erik C. Dreaden, Kevin E. Shopsowitz, Paula T. Hammond. <http://pubs.acs.org/doi/abs/10.1021/nn4047925>

A nanopore machine promotes the vectorial transport of DNA across membranes. Nature Communications, Vol. 4, Article No. 2415, September 2013. Lorenzo Franceschini, Misha Soskine, Annemie Biesemans, Giovanni Maglia. <http://www.nature.com/ncomms/2013/130912/ncomms3415/full/ncomms3415.html>

High-efficiency liposomal encapsulation of a tyrosine kinase inhibitor leads to improved in vivo toxicity and tumor response profile. International Journal of Nanomedicine, Vol. 8, No. 1, pp. 3991 – 4006, October 2013. Rajesh Mukthavaram, Pengfei Jiang, Rohit Saklecha, Dmitri Simberg, Ila Sri Bharati, Natsuko Nomura, Ying Chao, Sandra Pastorino, Sandeep C Pingle, Valentina Fogal, Wolf Wrasidlo, Milan Makale, Santosh Kesari. <http://www.dovepress.com/high-efficiency-liposomal-encapsulation-of-a-tyrosine-kinase-inhibitor-peer-reviewed-article-IJN>

Tracking Viral Genomes in Host Cells at Single-Molecule Resolution. Cell Host & Microbe, Vol. 14, Issue 4, pp. 468 – 480, October 2013. I-Hsuan Wang, Maarit Suomalainen, Vardan Andriasyan, Samuel Kilcher, Jason Mercer, Anne Neef, Nathan W. Luedtke, Urs F. Greber. <http://www.cell.com/cell-host-microbe/retrieve/pii/S1931312813003247>

CONFERENCES AND WORKSHOPS

NanoBIG: Nanotechnology in Healthcare, December 5-6, 2013, San Diego, CA, USA
Nanocomposites
Medical devices
Preventive healthcare applications
<http://www.tcbi.org/files/brochures/nanoBIGSanDiegoInformation.pdf>

ICON-NANO 2013, December 10-12, 2013, Gujarat, India
Nanodevices
Drug nanoparticles
Nanocatalyst
Pharmaceutical applications
<http://icon-nano2013.in/>

MicroNano Conference 2013, December 11-12, 2013, Ede, The Netherlands

Disease biomarker detection
Pharmaconutrient carriers
Biological applications
Nanotechnology in medicine

<http://www.micronanoconference.nl/home.html>

IEEE Workshop on Nanoinformatics for Biomedicine, December 18-21, 2013, Shanghai, China

Computational toxicology
Nanomaterial-biological interactions
Translational research
Risk assessment and regulation

<http://workshops.i-a-i.com/nanoinfo2013>

Euro-Mediterranean Conference on Natural Products: From Biotechnology to Nanomedicine, January 4-6, 2014, Cairo, Egypt

Biotechnology
Pharmacogenomics
Pharmacokinetics
Pharmacodynamics
Nano formulations
Nano particle delivery
Toxicology

<http://www.bionats.org/>

Nanotechnology PQRI Workshop – Nanomaterial Drug Products: Current Experience and Management of Potential Risks, January 14-15, 2014, Rockville, MD, USA

Regulatory approaches

Risk assessment
Impact of nanomaterials
Characterization
Manufacturing considerations

http://www.pqri.org/pdfs/Nano_Preliminary%20Program%20Brochure.pdf

ASME 2014 3rd Global Congress on Nanoengineering for Medicine and Biology, February 2-5, 2014, San Francisco, CA, USA

Therapeutics and Drug Delivery
Regenerative Medicine and Tissue Engineering
Modeling and Materials in Physiology, Disease, and Treatment
Nanotoxicology

<http://www.asmeconferences.org/NEMB2014/>

BioNanoMed 2014, March 26-28, 2014, Krems, Austria

Nanomedicines Innovation
Diagnostics and Therapy
Regenerative Medicine
Imaging Technology
Nano Safety

<http://www.bionanomed.at/index.php?id=26>

Nanotechnology for Health Care Conference, April 2-4, 2014, Petit Jean Mountain, Arkansas, USA

Disease Diagnostics
Therapeutics
Prevention

<http://arkansasnanohealth.com/>

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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