



Nanomedicines ALLIANCE

NanoMed Digest

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Join the Nanomedicines Alliance. Contact us at info@nanomedicines-alliance.org.

- Meet with industry colleagues, government partners, and other stakeholders
- Help define the issues of science, regulation, and policy
- Participate in our ongoing advocacy, regulatory, and scientific efforts
- Join as a trial member for six months at half the annual fee

Highlights

NIH Highlights Nanomedicine

Dr. Francis Collins, NIH Director, recently [featured the work of scientists](#) at the Houston Methodist Research Institute in oncology-related nanomedicine on the NIH Director's Blog. The blog post also recognizes the NIH National Cancer Institute Alliance for Nanotechnology in Cancer.

Reviews and Other Publications of Interest

Cubical Shape Enhances the Interaction of Layer-by-Layer Polymeric Particles with Breast Cancer Cells.

Advanced Healthcare Materials, December 2015. Alexander JF, Kozlovskaya V, Chen J, Kuncewicz T, Kharlampieva E, Godin B. Adv Healthc Mater.

Spectral triangulation: a 3D method for locating single-walled carbon nanotubes in vivo.

Nanoscale, Vol. 8, pp. 10348 – 10357, April 2016. Ching-Wei Lin, Sergei M. Bachilo, Michael Vu, Kathleen M. Beckingham, R. Bruce Weisman.

Delivery of a drug cache to glioma cells overexpressing platelet-derived growth factor receptor using lipid nanocarriers.

Nanomedicine, Vol. 11, No. 6, pp. 581 – 595, March 2016. Kayla Miller, Suraj Dixit, Amy-Lee Bredlau, Alfred Moore, Emilie McKinnon, Ann-Marie Broome.

Two-stage nanoparticle delivery of piperlongumine and tumor necrosis factor-related apoptosis-inducing ligand (TRAIL) anti-cancer therapy.

Technology, Vol 4. Issue 1, March 2016. Charles C. Sharkey, Jiahe Li, Sweta Roy, Qianhui Wu, Michael R. King.

Laser-synthesized oxide-passivated bright Si quantum dots for bioimaging.

Scientific Reports, Vol. 6, Article No. 24732, April 2016. M. B. Gongalsky, L. A. Osminkina, A. Pereira, A. A. Manankov, A. A.

Fedorenko, A. N. Vasiliev, V. V. Solovyev, A. A. Kudryavtsev, M. Sentis, A. V. Kabashin, V. Yu. Timoshenko.

Chiral quantum supercrystals with total dissymmetry of optical response.

Scientific Reports, Vol. 6, Article No. 23321, March 2016. Anvar S. Baimuratov, Yurii K. Gun'ko, Alexander V. Baranov, Anatoly V. Fedorov, Ivan D. Rukhlenko.

Biomimetic proteolipid vesicles for targeting inflamed tissues.

Nature Materials, May 2016. R. Molinaro, C. Corbo, J. O. Martinez, F. Taraballi, M. Evangelopoulos, S. Minardi, I. K. Yazdi, P. Zhao, E. De Rosa, M. B. Sherman, A. De Vita, N. E. Toledano Furman, X. Wang, A. Parodi, E. Tasciotti.

Tracking solvent and protein movement during CO₂ release in carbonic anhydrase II crystals.

Proceedings of the National Academy of Sciences, Vol. 113, No. 19, May 2016. Chae Un Kim, HyoJin Song, Balendu Sankara Avvaru, Sol M. Gruner, SangYoun Park, Robert McKenna.

Encapsulation-free controlled release: Electrostatic adsorption eliminates the need for protein encapsulation in PLGA nanoparticles.

Science Advances, Vol. 2, No. 5, May 2016. Malgosia M. Pakulska, Irja Elliott Donaghue, Jaclyn M. Obermeyer, Anup Tuladhar, Christopher K. McLaughlin, Tyler N. Shendruk, Molly S. Shoichet.

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

Predicting pulmonary fibrosis in humans after exposure to multi-walled carbon nanotubes (MWCNTs). Archives of Toxicology, Vol. 90, Issue 7, pp. 1605 – 1622, May 2016. Monita Sharma, Jake Nikota, Sabina Halappanavar, Vincent Castranova, Barbara Rothen-Rutishauser, Amy J. Clippinger.

Expert consensus on an in vitro approach to assess pulmonary fibrogenic potential of aerosolized nanomaterials. Archives of Toxicology, Vol. 90, Issue 7, pp. 1769 – 1783, April 2016. Amy J. Clippinger, Arti Ahluwalia, David Allen, James C. Bonner, Warren Casey, Vincent Castranova, Raymond M. David, Sabina Halappanavar, Jon A. Hotchkiss, Annie M. Jarabek, Monika Maier, William Polk, Barbara Rothen-Rutishauser, Christie M. Sayes, Phil Sayre, Monita Sharma, Vicki Stone.

Tumor-homing peptides as tools for targeted delivery of payloads to the placenta. Science Advances, Vol. 2, No. 5, May 2016. Anna King, Cornelia Ndifon, Sylvia Lui, Kate Widdows, Venkata R. Kotamraju, Lilach Agemy, Tambet Teesalu, Jocelyn D. Glazier, Francesco Cellési, Nicola Tirelli, John D. Aplin, Erkki Ruoslahti, Lynda K. Harris.

Molecularly Regulated Reversible DNA Polymerization. Angewandte Chemie, April 2016. Niancao, Xuechen Shi, Yong Wang.

Therapeutic surfactant-stripped frozen micelles. Nature Communications, Vol. 7, Article No. 11649, May 2016. Yumiao Zhang, Wentao Song, Jumin Geng, Upendra Chitgupi, Hande Unsal, Jasmin Federizon, Javid Rzayev, Dinesh K. Sukumaran, Paschalis Alexandridis, Jonathan F. Lovell.

Conferences and Workshops

Nanotechnology in Medicine: From Molecules to Humans, 3 – 8 July 2016, Herrnstein, Austria

- Nano/microparticles for diagnostics and therapeutics
- Nano/microtechnology for study of cellular and molecular dynamics
- Nanotechnology and translational medicine
- Nanotechnology and biopolymer for regenerative medicine
- Nanostructures for cell adhesion, growth, motility, and differentiation
- Nanoscale interactions for cell, tissue and organ

International Conference on Nanosciences & Nanotechnologies,

5-8 July 2016, Thessaloniki, Greece

- Biological systems
- Self-assembly and self-organization
- Cell/nanomaterial interactions

Novel Approaches to Fight Bacteria Workshop,

10 – 14 July 2016, Bremen, Germany

- Assays and mechanism of action
- Nanoencapsulation
- Mass-spectrometry & fluorescence
- In vitro, ex vivo and in vivo animal models
- Translation to clinical development
- Impact of porin structure on antibiotic permeability
- Efflux pumps

FDA Global Summit on Regulatory Science: Nanotechnology Standards and Applications, 7 – 9 September 2016, Bethesda, MD

Bioelectronic Medicine – Technology Targeting Molecular Mechanisms, 21 – 23 September 2016, New York, NY

- Defining circuits
- Cell biology and cancer
- Molecular sensing
- Clinical updates
- Brain interfaces

International Conference on Nanomedicine and Nanobiotechnology, 28 – 30 September 2016, Paris, France

- Targeted drug delivery and nanocarriers
- Nanomedicine for cancer diagnosis & therapy
- Biological & medical nanodevices and biosensors
- Tissue engineering and regenerative medicine
- Bionanocatalysis and nanobiosystems
- Microfluidics in nanomedicine and nanobiology

Applied Pharmaceutical Nanotechnology, 19 October 2016, Cambridge, MA

- Nanotechnology and Diagnostics
- Theranostics and Personalized Medicine
- Nanotechnology and Immunotherapy
- FDA / Regulatory Guidance
- Nanotechnology in Preclinical and Clinical Development

International Conference for Nanotechnology in Medicine, 7 – 9 November 2016, Warsaw, Poland

- Tissue engineering and biomaterial science
- Nanoscale tissue scaffolds
- Nanoscale biomaterial surface modification
- Enzyme responsive tissue scaffolds
- Guiding stem cell differentiation
- Biosensors

Reference Section

Nano Organizations

[National Center for Toxicological Research \(NCTR\)](#)

[National Nanotechnology Initiative \(NNI\)](#)

[Nano Science and Technology Consortium \(NSTC\)](#)

[Nano Science and Technology Institute \(NSTI\)](#)

[The Nanotechnology Institute \(NTI\)](#)

[Journal of Nanoscience and Nanotechnology](#)

[NanoTrends - A Journal of Nanotechnology and its Applications](#)

[BCC Research -- Nanotechnology Reports](#)

[Nanomedicine: Nanotechnology, Biology, and Medicine](#)

[Future Medicine](#)

[Nature Nanotechnology](#)

Nano Journals

[American Chemical Society -- Nano Letters](#)

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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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