



Nanomedicines ALLIANCE NanoMed Digest

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- 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

NIH 2016 – 2020 Strategic Plan

The US National Institutes of Health (NIH) recently released a [2016 – 2020 fiscal year strategic plan](#) highlighting priorities and opportunities for the agency. Objectives described in the plan include the advancement of opportunities in biomedical research, fostering innovation, enhancing scientific stewardship, and excelling in the “science of science.” Nanomedicinal research stands to benefit from several outlined NIH initiatives, including the ongoing BRAIN project.

European Survey on Nanotechnology Research

According to the European Commission project NANOSOLUTIONS, the [European Commission is undertaking a project](#) “of gathering data in support of evidence-based policy-making in the field of research and innovation in nanosciences and nanotechnologies”. The European Commission hopes to use this survey to address challenges in nanotechnology, identify and address environmental, health, and safety concerns, and encourage nanotechnological research and commercialization.

Reviews and Other Publications of Interest

[Light-Activated Nuclear Translocation of Adeno-Associated Virus Nanoparticles Using Phytochrome B for Enhanced, Tunable, and Spatially Programmable Gene Delivery](#). ACS Nano, November 2015. Eric J. Gomez, Karl Gerhardt, Justin Judd, Jeffrey J. Tabor, Junghae Suh.

[Transformable liquid-metal nanomedicine](#). Nature Communications, Vol. 6, December 2015. Yue Lu, Quanyin Hu, Yiliang Lin, Dennis B. Pacardo, Chao Wang, Wujin Sun, Frances S. Ligler, Michael D. Dickey, Zhen Gu.

[Boundaries can steer active Janus spheres](#). Nature Communications, Vol. 6, December 2015. Sambheeta Das, Astha Garg, Andrew I. Campbell, Jonathan Howse, Ayusman Sen, Darrell Velegol, Ramin Golestanian, Stephen J. Ebbens.

[Blind and reference-free fluorescence lifetime estimation via consumer time-of-flight sensors](#). Optica, Vol. 2, Issue 11, pp. 965 – 973. Ayush Bhandari, Christopher Barsi, and Ramesh Raskar.

[Atomic-resolution structure of the CAP-Gly domain of dynactin on polymeric microtubules determined by magic angle spinning NMR spectroscopy](#). Proceedings of the National Academy of Sciences, Vol. 112, No. 47, November 2015. Si Yan, Changmiao Guo, Guangjin Hou, Huilan Zhang, Xingyu Lu, John Charles Williams, Tatyana Polenova.

[A Versatile Microarray Platform for Capturing Rare Cells](#). Scientific Reports, Vol. 5, Article No. 15342, October 2015. Falko Brinkmann, Michael Hirtz, Anna Haller, Tobias M. Gorges, Michael J. Vellekoop, Sabine Riethdorf, Volkmar Müller, Klaus Pantel, Harald Fuchs.

[Self-assembled 20-nm 64Cu-micelles enhance accumulation in rat glioblastoma](#). Journal of Controlled Release, Vol. 220, Part A, pp. 51-60, December 2015. Jai Woong Seo, JooChuan Ang, Lisa M. Mahakian, Sarah Tam, Brett Fite, Elizabeth S. Ingham, Janine Beyer, John Forsayeth, Krystof S. Bankiewicz, Ting Xu, Katherine W. Ferrara.

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Recovery of Drug Delivery Nanoparticles from Human Plasma Using an Electrokinetic Platform Technology. Small, Vol. 11, Issue 38, pp. 5088 – 5096, October 2015. Stuart Ibsen, Avery Sonnenberg, Carolyn Schutt, Rajesh Mukthavaram, Yasan Yeh, Inanc Ortac, Sareh Manouchehri, Santosh Kesari, Sadik Esener, Michael Heller.

Label-Free Nanoplasmonic-Based Short Noncoding RNA Sensing at Attomolar Concentrations Allows for Quantitative and Highly Specific Assay of MicroRNA-10b in Biological Fluids and Circulating Exosomes. ACS Nano, Vol. 9, Issue 11, pp. 11075 – 11089, October 2015. Gayatri K. Joshi, Samantha Deitz-McElyea, Thakshila Liyanage, Katie Lawrence, Sonali Mali, Rajesh Sardar, Murray Korc.

Towards detection and diagnosis of Ebola virus disease at point-of-care. Biosensors and Bioelectronics, Vol. 75, pp. 254 – 272, January 2016. Ajeet Kaushik, Sneham Tiwari, Rahul Dev Jayant, Aileen Marty, Madhavan Nair.

Direct visualization of dispersed lipid bicontinuous cubic phases by cryo-electron tomography. Nature Communications, Vol. 6, Article No. 8915, November 2015. Davide Demurtas, Paul Guichard, Isabelle Martiel, Raffaele Mezzenga, Cécile Hébert, Laurent Sagalowicz.

Modulatory Role of Surface Coating of Superparamagnetic Iron Oxide Nanoworms in Complement Opsonization and Leukocyte Uptake. ACS Nano, Vol. 9, Issue 11, pp. 10758 - 10768, October 2015. Swetha Inturi, Guankui Wang, Fangfang Chen, Nirmal K. Banda, V. Michael Holers, LinPing Wu, Seyed Moein Moghimi, Dmitri Simberg.

Mesoporous Silica Nanoparticles with pH-Sensitive Nanovalves for Delivery of Moxifloxacin Provide Improved Treatment of Lethal Pneumonic Tularemia. ACS Nano, Vol. 9, Issue 11, pp. 10778 - 10789, October 2015. Zilu Li, Daniel L. Clemens, Bai-Yu Lee, Barbara Jane Dillon, Marcus A. Horwitz, Jeffrey I. Zink.

Conferences and Workshops

Kuwait International Nanotechnology Conference, 9-11 February 2016, Kuwait

Drug delivery
Therapy techniques
Cell repair
Regenerative medicine

NanoEngineering for Medicine and Biology Conference, 21 – 24 February 2016, Houston, TX

Nanolmaging
Nanoparticle-based delivery
Nano and Microfluidics

10th World Meeting on Pharmaceutics, Biopharmaceutics, and Pharmaceutical Technology, 4 – 7 April 2016, Glasgow, United Kingdom

2D and 3D printing in drug delivery
Nanoparticles
Cellular drug transport

Bionanomaterials Conference, 8 – 11 May 2016, Varna Bulgaria

Synthesis
Characterization
Toxicity
Therapeutics

Nano in Bio 2016, 31 May – 5 June 2016, Le Gosier, French West Indies

Biosensors & nanobioelectronics
Bio-inspired materials & drug delivery
Nanobiomechanics & nanomedicine
Tissue engineering & regenerative medicine
Nanotechnologies & biomedical applications

International Conference on Nanosciences & Nanotechnologies, 5-8 July 2016, Thessaloniki, Greece

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

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 \(NTI\)](#)

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Nano Journals

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

[Institute of Physics – Nanotechnology](#)

[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](#)

Contact

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