



REGULATORY AND LEGISLATIVE DEVELOPMENTS

European Nano Projects

Three projects funded by European Commission grants are in their finalization stages. These projects are “Enabling Nanomedicines Translation” (ENATRANS), the NanoFacturing project, and the NanoPilot project. The NanoPilot project plans to build a very small pilot line for the production of polymer based nanopharmaceuticals in compliance with GMP.

http://www.etp-nanomedicine.eu/public/press-documents/press-articles/ETPN%20PR_CSA%20and%20Pilot%20lines%20projects%20final.pdf

NIOSH and CNSE Partnership

The US National Institute for Occupational Safety and Health (NIOSH) and the Colleges of Nanoscale Science and Engineering (CNSE) at SUNY Polytechnic Institute have signed a memorandum of understanding with one another. The organizations plan to cooperate to promote research and guidance on occupational safety and health in nano industries. NIOSH and CNSE also hope that this memorandum will lead to joint educational and business initiatives for the development of new risk management guidance, recommendations, and findings on the potential human health impacts of exposure to nanomaterials.

<http://www.cdc.gov/niosh/updates/upd-10-2-14.html>

REVIEWS AND OTHER PUBLICATIONS OF INTEREST

[Pyr1]-Apelin-13 delivery via nano-liposomal encapsulation attenuates pressure overload-induced cardiac dysfunction.

Biomaterials, October 2014. Vahid Serpooshan, Senthilkumar Sivanesan, Xiaoran Huang, Morteza Mahmoudi, Andrey V. Malkovskiy, Mingming Zhao, Mohammed Inayathullah, Dhananjay Wagh, Xuexiang J. Zhang, Scott Metzler, Daniel Bernstein, Joseph C. Wu, Pilar Ruiz-Lozano, Jayakumar Rajadas.

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Nanosafety Research—Are We on the Right Track? *Angewandte Chemie*, Vol. 53, Issue 46, pp. 12304 – 12319, October 2014. Harald F. Krug.

<http://onlinelibrary.wiley.com/doi/10.1002/anie.201403367/abstract;jsessionid=20C2F22C2DE756B0AE37090BCD199568.f03t04>

Coherent anti-Stokes Raman scattering microscopy of single nanodiamonds.

Nature Nanotechnology, Vol. 9, pp. 940 – 946, October 2014. Iestyn Pope, Lukas Payne, George Zorinians, Evan Thomas, Oliver Williams, Peter Watson, Wolfgang Langbein, Paola Borri.

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Molecular Cancer Therapeutics, October 2014. Raghavendra Gowda, SubbaRao V. Madhunapantula, Arati Sharma, Omer F. Kuzu, Gavin P. Robertson.

<http://mct.aacrjournals.org/content/13/10/2328>

Artificial Tribotactic Microscopic Walkers: Walking Based on Friction Gradients.

Physical Review Letters, October 2014. Joshua P. Steimel, Juan L. Aragones, Alfredo Alexander-Katz.

<http://journals.aps.org/prl/abstract/10.1103/PhysRevLett.113.178101>

RF heating of magnetic nanoparticles improves the thawing of cryopreserved biomaterials.

Technology, Vol. 2, Issue 3, 2014. Michael L. Etheridge, Yi Xu, Leoni Rott, Jeunghwan Choi, Birgit Glasmacher, John C. Bischof.

<http://www.worldscientific.com/doi/abs/10.1142/S2339547814500204>

A Solvent-Free Thermosponge Nanoparticle Platform for Efficient Delivery of Labile Proteins.

Nano Letters, October 2014. Won Il Choi, Nazila Kamaly, Lorena Riol-Blanco, In-Hyun Lee, Jun Wu, Archana Swami, Cristian

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<http://pubs.acs.org/doi/abs/10.1021/nl502994y>

Ultrafast electron dynamics in phenylalanine initiated by attosecond pulses. *Science*, Vol. 346, No. 6207, pp. 336 – 339, October 2014. F. Calegari, D. Ayuso, A. Trabatttoni, L. Belshaw, S. De Camillis, S. Anumula, F. Frassetto, L. Poletto, A. Palacios, P. Decleva, J. B. Greenwood, F. Martín, M. Nisoli.

<http://www.sciencemag.org/content/346/6207/336>

Transparent and flexible low noise graphene electrodes for simultaneous electrophysiology and neuroimaging. *Nature Communications*, Vol. 5, Article no. 5259, October 2014. Duygu Kuzum, Hajime Takano, Euijae Shim, Jason C. Reed, Halvor Juul, Andrew G. Richardson, Julius de Vries, Hank Bink, Marc A. Dichter, Timothy H. Lucas, Douglas A. Coulter, Ertugrul Cubukcu, Brian Litt.

<http://www.nature.com/ncomms/2014/141020/ncomms6259/full/ncomms6259.html>

DNA brick crystals with prescribed depths.

Nature Chemistry, Vol. 6, pp. 994 – 1002, October 2014. Yonggang Ke, Luvena L. Ong, Wei Sun, Jie Song, Mingdong Dong, William M. Shih, Peng Yin.

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Investigating the optimal size of anticancer nanomedicine. *Proceedings of the National Academy of Sciences*, Vol. 111, No. 43, pp. 15344 – 15349, October 2014. Li Tang, Xujuan Yang, Qian Yin, Kaimin Cai, Hua Wang, Isthier Chaudhury, Catherine Yao, Qin Zhou, Mincheol Kwon, James A. Hartman, Iwona T. Dobrucki, Lawrence W. Dobrucki, Luke B. Borst, Stéphane Lezmi, William G. Helderich, Andrew L. Ferguson, Timothy M. Fan, and Jianjun Cheng.

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Direct Mass Spectrometry Analysis of Biofluid Samples Using Slug-Flow Microextraction Nano-Electrospray Ionization. *Angewandte Chemie*, October 2014. Yue Ren, Morgan N. McLuckey, Jiangjiang Liu, Zheng Ouyang.

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Interactions of Skin with Gold Nanoparticles of Different Surface Charge, Shape, and Functionality. *Small*, October 2014. Rute Fernandes, Neil R. Smyth, Otto L. Muskens, Simone Nitti, Amelie Heuer-Jungemann, Michael R. Arden-Jones, Antonios G. Kanaras.

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Self-assembled micellar nanocomplexes comprising green tea catechin derivatives and protein drugs for cancer therapy. *Nature Nanotechnology*, Vol. 9, pp. 907 – 912, October 2014. Joo Eun Chung, Susi Tan, Shu Jun Gao, Nunnarpas Yongvongsoontorn, Soon Hee Kim, Jeong Heon Lee, Hak Soo Choi, Hirohisa Yano, Lang Zhuo, Motoichi Kurisawa, Jackie Y. Ying.

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Structure and mechanism of the tRNA-dependent lantibiotic dehydratase NisB.

Nature, October 2014. Manuel A. Ortega, Yue Hao, Qi Zhang, Mark C. Walker, Wilfred A. van der Donk, Satish K. Nair.

<http://www.nature.com/nature/journal/vaop/ncurrent/full/nature13888.html>

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<http://pubs.rsc.org/en/Content/ArticleLanding/2014/CC/C4C06495J#l/divAbstract>

Optical control of insulin release using a photoswitchable sulfonylurea. Nature Communications, Vol. 5, Article No. 5116, October 2014. Johannes Broichhagen, Matthias Schönberger, Simon C. Cork, James A. Frank, Piero Marchetti, Marco Bugliani, A. M. James Shapiro, Stefan Trapp, Guy A. Rutter, David J. Hodson, Dirk Trauner.
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A bioinspired omniphobic surface coating on medical devices prevents thrombosis and biofouling. Nature Biotechnology, Vol. 32, pp. 1134 – 1140, October 2014. Daniel C Leslie, Anna Waterhouse, Julia B Berthet, Thomas M Valentin, Alexander L Watters, Abhishek Jain, Philseok Kim, Benjamin D Hatton, Arthur Nedder, Kathryn Donovan, Elana H Super, Caitlin Howell, Christopher P Johnson, Thy L Vu, Dana E Bolgen, Sami Rifai, Anne R Hansen, Michael Aizenberg, Michael Super, Joanna Aizenberg, Donald E Ingber.
<http://www.nature.com/nbt/journal/v32/n11/full/nbt.3020.html>

CONFERENCES AND WORKSHOPS

International Conference on Translational Nanomedicine, 15 – 17 December 2014, Ahmedabad, India

Cancer research
 Nanobiomaterials
 Regenerative medicine
 Drug and gene delivery
<http://tnano2014.wordpress.com/>

EMBS Micro and Nanotechnology in Medicine Teleconference, 8 – 12 December 2014, Turtle Bay Resort, Oahu, Hawaii, USA

Bionanotechnology
 Diagnostics
 Lab-on-a-Chip
 Regenerative medicine
 Tissue engineering
<http://mnm.embs.org/2014/>

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

Nanoinstrumentation
 Nanoscale modeling
 Graphene
 Nanomedicine
<http://www.nanopt.org/15EN/topics.php?m=c&s=to>

1st European Conference on Pharmaceutics: Drug Delivery, 13 – 15 April 2015, Reims, France

Targeting
 Liposomes and nanoparticles
<http://www.apqi.org/Reims2015.htm>

5th Zing Bionanomaterials Conference, 25 – 28 April 2015, Algarve, Portugal

Synthesis
 Characterization
 Toxicity
 Therapeutics
http://www.zingconferences.com/conferences/5th-zing-bionanomaterials-conference/?utm_source=Bionano&utm_campaign=4c88800925-11_25_2014+150OFFER&utm_medium=email&utm_term=0_1b10fe4b2a-4c88800925-173199889

EuroNanoForum 2015, 10 – 12 June 2015, Riga, Latvia

Nanomanufacturing
 Advanced Materials
<http://euronanoforum2015.eu/>

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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