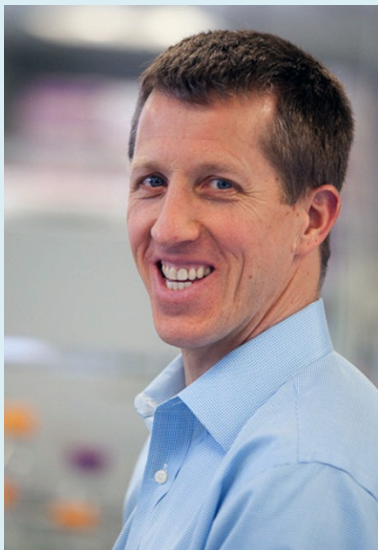




MEMBER SPOTLIGHT: JEFF HRKACH



Jeff joined BIND Biosciences (now BIND Therapeutics) in 2007. He is currently the Senior Vice President of Technology, Research and Development, and has previously served as Interim President and Vice President of Pharmaceutical Sciences. Prior to joining BIND, Jeff was the Senior Director of Drug Delivery and Strategic Product Development at Momenta Pharmaceuticals, serving as program leader for the Drug Delivery and generic Copaxone programs and as Alliance Manager for the Sandoz/Novartis collaboration. Prior to Momenta, Jeff was the Director of Pulmonary Formulations at Alkermes, focusing on the AIR (Advanced Inhalation Research) large porous particle technology development programs. Jeff joined AIR at its inception following his postdoctoral appointment with Professor Robert Langer at MIT.

Jeff received his Ph.D. in Chemistry and M.S. in Polymer Science from Carnegie Mellon University and his B.S. in Chemistry from the Philadelphia College of Pharmacy and Science.

REGULATORY AND LEGISLATIVE DEVELOPMENTS

Project on European Framework for Nano Safety Testing

The European Union (EU) is funding a project focused on “a pan-European infrastructure for quality in nanomaterials safety testing,” called QualityNano. The initiative began in 2012 to create a space wherein shareholders can share best scientific practices in the field. Dozens of partners in 13 countries share research efforts centered on the safe development of nanoscale technologies.

<http://www.qualitynano.eu/>

Center for Nanotechnology in Society Establishes Institute for Innovation

The National Science Foundation (NSF) has established a grant to found a new Virtual Institute for Responsible Innovation (VIRI) at the Center for Nanotechnology in Society at Arizona State University. VIRI aims to disseminate a standard of ethics and sustainability in the nanotechnology research community. The

institute has nine academic partners throughout the US, UK, the Netherlands, Germany, Denmark, Norway, Brazil, and Canada.

<http://cns.asu.edu/viri>

Nanosafety Recommendation for OECD Countries

The Organization for Economic Co-operation and Development (OECD) has published a recommendation that its member companies “apply the existing international and national chemical regulatory frameworks or other management systems, adapted to take into account the specific properties of manufactured nanomaterials.” The OECD also recommends that member countries make data relevant to the safety of nanomaterials available to the public.

The recommendation was produced by the Chemicals Committee.

<http://acts.oecd.org/Instruments/ShowInstrumentView.aspx?InstrumentID=298&InstrumentPID=314&Lang=en&Book=False>

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

OECD Publishes Report on Nanomaterials Risk

The OECD has released a final report called "Co-Operation on Risk Assessment: Prioritisation of Important Issues on Risk Assessment of Manufactured Nanomaterials." The report is based on survey analysis. The report concludes that nanomaterial identification, environmental effects, exposure models, physical chemistry, and other factors are important to consider in determining the risk of manufactured nanomaterials.

[http://search.oecd.org/officialdocuments/displaydocumentpdf/?cote=env/jm/mono\(2013\)18&doclanguage=en](http://search.oecd.org/officialdocuments/displaydocumentpdf/?cote=env/jm/mono(2013)18&doclanguage=en)

Report from NNI and OECD Symposium

The OECD and National Nanotechnology Initiative (NNI) jointly hosted a symposium in March 2012 entitled "Assessing the Economic Impact of Nanotechnology." The symposium acknowledged the need for public investment in

nanotechnology, the problem of defining nanotechnology, the evolving policy landscape, and many more issues for international attention.

http://www.oecd.org/sti/nano/Washington%20Symposium%20Report_final.pdf

Partners Focus on Common European Approach in NanoREG Project

Over fifty Europe-based partners in fifteen countries have invested in the NanoREG project, an initiative focused on establishing a common European approach to the regulatory testing of nanomaterials. The project is intended to be 42-months long and introduce a more developed understanding of environmental, health, and safety issues. The Joint Research Commission of the European Union is participating in the project.

http://ihcp.jrc.ec.europa.eu/our_activities/nanotechnology/eu-fp7-nanoreg-project-gets-under-way

REVIEWS AND OTHER PUBLICATIONS OF INTEREST

Sensitive capture of circulating tumour cells by functionalized graphene oxide nanosheets.

Nature Nanotechnology, September 2013. Hyeun Joong Yoon, Tae Hyun Kim, Zhuo Zhang, Ebrahim Azizi, Trinh M. Pham, Costanza Paoletti, Jules Lin, Nithya Ramnath, Max S. Wicha, Daniel F. Hayes, Diane M. Simeone, Sunitha Nagrath.

<http://www.nature.com/nnano/journal/vaop/ncurrent/full/nnano.2013.194.html>

DNA Nanotechnology: From Sensing and DNA Machines to Drug-Delivery Systems.

ACS Nano, September 2013. Chun-Hua Lu, Bilha Willner, Itamar Willner.

<http://pubs.acs.org/doi/abs/10.1021/nn404613v>

Tumor-targeted drug delivery systems based on supramolecular interactions between iron oxide-carbon nanotubes PAMAM-PEG-PAMAM linear-dendritic copolymers.

Journal of the Iranian Chemical Society, Vol. 10, Issue 4, pp. 701-708, August 2013. Mohsen Adeli, Masoumeh Ashiri, Beheshteh Khodadadi Chegeni, Pezhman Sasanpour.

<http://link.springer.com/article/10.1007%2Fs13738-012-0203-3>

Generation of Effector Memory T Cell-Based Mucosal and Systemic Immunity with Pulmonary Nanoparticle Vaccination.

Science Translational Medicine, Vol. 5, Issue 204, September 2013. Adrienne V. Li, James J.

Moon, Wuhbet Abraham, Heikyung Suh, Jamal Elkhader, Michael A. Seidman, Minmin Yen, Eung-Jun Im, Maria H. Foley, Dan H. Barouch, Darrell J. Irvine.

<http://stm.sciencemag.org/content/5/204/204ra130>

Microscale Polymer Bottles Corked with a Phase-Change Material for Temperature-Controlled Release.

Angewandte Chemie, Vol. 52, Issue 40, pp. 10468-10471, September 2013. Dong Choon Hyun, Ping Lu, Sang-Il Choi, Unyong Jeong, Younan Xia.

<http://onlinelibrary.wiley.com/doi/10.1002/anie.201305006/abstract;jsessionid=CDCE652CAC82AFE943B64E4D3A89C96C.f04t04>

DNA-directed self-assembly of shape-controlled hydrogels.

Nature Communications, Vol. 4, Article Number 2275, September 2013. Hao Qi, Majid Ghodousi, Yanan Du, Casey Grun, Hojae Bae, Peng Yin, Ali Khademhosseini.

<http://www.nature.com/ncomms/2013/130909/ncomms3275/full/ncomms3275.html>

Site-specific positioning of dendritic alkyl chains on DNA cages enables their geometry-dependent self-assembly.

Nature Chemistry, Vol. 5, pp. 868-875, September 2013. Thomas G. W. Edwardson, Karina M. M. Carneiro, Christopher K. McLaughlin, Christopher J. Serpell, Hanadi F. Sleiman.

<http://www.nature.com/nchem/journal/v5/n10/full/nchem.1745.html>

Rapidly-Dissolvable Microneedle Patches Via a Highly Scalable and Reproducible Soft Lithography Approach. *Advanced Materials*, Vol. 25, Issue 36, pp. 5060-5066, September 2013. Katherine A. Moga, Lissett R. Bickford, Robert D. Geil, Stuart S. Dunn, Ashish A. Pandya, Yapei Wang, John H. Fain, Christine F. Archuleta, Adrian T. O'Neill, Joseph M. DeSimone.
<http://onlinelibrary.wiley.com/doi/10.1002/adma.201300526/abstract>

Microencapsulation of Chemotherapeutics into Monodisperse and Tunable Biodegradable Polymers via Electrified Liquid Jets: Control of Size, Shape, and Drug Release. *Advanced Materials*, Vol. 25, Issue 33, pp. 4555-4560, September 2013. Pouria Fattahi, Ali Borhan, Mohammad Reza Abidian.
<http://onlinelibrary.wiley.com/doi/10.1002/adma.201301033/abstract>

CONFERENCES AND WORKSHOPS

6th International Symposium on Nanotechnology, Occupational and Environmental Health, October 28-31, 2013, Nagoya, Japan

Nanomaterial processing and characterization
 Health effects and toxicity
 ADME
 Environmental toxicity
 Risk assessment and management

<http://square.umin.ac.jp/nanoeh6/index.html>

Carbon-Based Nano-Materials and Devices, November 3-8, 2013, Hualien, Taiwan

Synthesis of carbon-based nanomaterials
 Characterization and processing of carbon-based nanomaterials
 Devices and Applications of carbon-based nanomaterials
 Multiscale modeling and computation

<http://www.engconfintl.org/13ap.html>

2013 AAPS Annual Meeting Short Course #2: Quality Control of Nano Particulate Drugs: Manufacturing, Characterization, and Regulatory Considerations, November 10, 2013, San Antonio, Texas, USA

Manufacturing Methods
 Regulatory Perspectives
 Physical/Chemical Stability
 Standards Development

<http://www.nxtbook.com/nxtbooks/aaps/annualmeeting2013/preprogram/#/114>

Nanomedicines: Addressing the Scientific and Regulatory Gap, November 21, 2013, New York, NY, USA

Regulatory Challenges
 Characterization
 Nanosimilars

<http://www.nyas.org/Events/Detail.aspx?cid=21bd8d58-3e14-4748-8ef9-5d7626031635>

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>

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>

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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