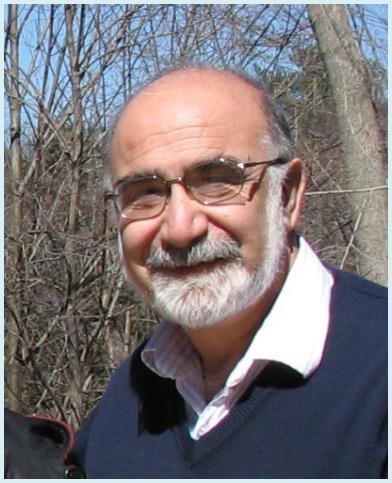
Nanomedicines ALLIANCE

NanoMed Digest

Nanomedicines Alliance Newsletter
February 2014

NANOMEDICINES ALLIANCE WELCOMES ASTRAZENECA: VAHE BEDIAN AND DETLEV BINISZKIEWICZ



Dr. Vahe Bedian joined AstraZeneca in 2006, as Director of Biotherapeutics, managing a biologics team in collaboration with MedImmune. Since late 2011 he has assumed the position of Director, External Projects (Licensing), in the Oncology Innovative Medicines Unit of AstraZeneca. In this position he has contributed to the development of strategies for nanoparticle approaches in Oncology, and the evaluation of various platforms and products. Prior to AstraZeneca, Vahe was a Senior Research Fellow at Pfizer, where he managed therapeutic antibody collaborations and developed biotherapeutics strategies across different disease areas. He has championed immune enhancement approaches for cancer therapy and shepherded a number of projects through discovery and early clinical development. In academic positions at University of Pennsylvania and Clarkson University, Vahe's research focused on Drosophila developmental biology. He obtained his Ph.D. in Biophysics from the State University of New York at Buffalo, working on dynamical models of the origin of the genetic code.

Dr. Detlev Biniszkiewicz pursued his academic career at the Whitehead Institute at Massachusetts Institute of Technology (MIT), where he studied epigenetic changes in embryonic stem cells and DNA repair mechanisms in cancer using transgenic mouse models.

After his academic fellowship, Detlev served as Principal at The Boston Consulting Group (BCG), where he led numerous projects for biotechnology and pharmaceutical companies. Detlev then joined the Novartis Institutes for BioMedical Research (NIBR) as Head of Strategic Projects and Planning, leading the strategy organization of NIBR reporting directly to the COO. Subsequently, Detlev became the Global Head of Portfolio Management at Novartis Institutes for BioMedical Research, and was responsible for the oversight and strategy of the entire portfolio of projects ranging from Target Discovery to Proof-of-Concept.

At AstraZeneca, Detlev holds the position of Vice President of Strategy within the Oncology Innovative Medicines Unit. His group is responsible for the Oncology strategy, identification and prioritization of licensing opportunity, and external academic alliances and collaborations.

Regulatory and Legislative Developments

2014 National Nanotechnology Initiative Strategic Plan

The US National Nanotechnology Initiative (NNI) has released its final 2014 strategic plan. NNI plans to pursue further advances in nanotechnology R&D, educational resources for the public, the transition of nanotechnology into products for public benefit, and the responsible development of nanotechnology through engagement with industry, universities, and government agencies. The strategic plan outlines how NNI plans to progress in all of these goals and the interests of each agency in addressing them.
http://nano.gov/sites/default/files/pub_resource/2014_nni_strategic_plan.pdf

Concept Paper on European Nanomaterial Register

Germany's Federal Environment Agency (UBA) has released a paper entitled "Concept for a European Register of Products Containing Nanomaterials." UBA supports this action as a precautionary measure, to enable authorities to establish enforcement and monitoring priorities, and to ensure traceability in the supply chain. UBA also maintains that this register should be established and maintained at the EU level to avoid duplication of efforts and to control costs. A nanomaterials register would also centralize information about the impact, marketing, use, and concentration of nanomaterials. Further objectives are outlined in the concept paper.
http://www.umweltbundesamt.de/sites/default/files/medien/378/publikationen/information_concept_nanoregister_npr_e_0.pdf

Reviews and Other Publications of Interest

Robust Nonenzymatic Hybrid Nanoelectrocatalysts for Signal Amplification toward Ultrasensitive Electrochemical Cytosensing. Journal of the American Chemical Society, Vol. 136, Issue 6, pp. 2288 – 2291, February 2014. Tingting Zheng, Qingfeng Zhang, Sheng Feng, Jun-Jie Zhu, Qian Wang, Hui Wang.
http://pubs.acs.org/doi/abs/10.1021/ja500169y

Magnetic Field-Induced T Cell Receptor Clustering by Nanoparticles Enhances T Cell Activation and Stimulates Antitumor Activity. ACS Nano, February 2014. Karlo Perica, Ang Tu, Anne Richter, Joan Glick Bieler, Michael Edidin, Jonathan P. Schneck.
http://pubs.acs.org/doi/abs/10.1021/nn405520d

Human serum albumin binding to silica nanoparticles – effect of protein fatty acid ligand. Physical Chemistry Chemical Physics, February 2014. Joo Chuan Ang, Mark J. Henderson, Richard A. Campbell, Jhih-Min Lin, Peter N. Yaron, Andrew Nelson, Thomas Faunce, John W. White.
http://pubs.rsc.org/en/Content/ArticleLanding/2014/CP/c4cp00293h#!divAbstract

Insights into the Cellular Response Triggered by Silver Nanoparticles Using Quantitative Proteomics. ACS Nano, February 2014. Thiago Verano-Braga, Rona Miethling-Graff, Katarzyna Wojdyla, Adelina Rogowska-Wrzesinska, Jonathan R. Brewer, Helmut Erdmann, Frank Kjeldsen.
http://pubs.acs.org/doi/abs/10.1021/nn4050744

Two-Photon-Triggered Drug Delivery via Fluorescent Nanovalves. Small, February 2014. Jonas Croissant, Arnaud Chaix, Olivier Mongin, Miao Wang, Sébastien Clément, Laurence Raehm, Jean-Olivier Durand, Vincent Hugues, Mireille Blanchard-Desce, Marie Maynadier, Audrey Gallud, Magali Gary-Bobo, Marcel Garcia, Jie Lu, Fuyuhiko Tamanoi, Daniel P. Ferris, Derrick Tarn, Jeffrey I. Zink.
\http://onlinelibrary.wiley.com/doi/10.1002/smll.201400042/abstract;jsessionid=C1F74C4FCB94DDE43E36FB2953DA2017.f02t01?systemMessage=Wiley+Online+Library+will+be+disrupted+Saturday%2C+15+March+from+10%3A00-12%3A00+GMT+%2806%3A00-08%3A00+EDT%29+for+essential+maintenance

Prevention of vascular inflammation by nanoparticle targeting of adherent neutrophils. Nature Nanotechnology, Vol. 9, pp. 204 – 210, February 2014. Zhenjia Wang, Jing Li, Jaehyung Cho, Asrar B. Malik.
http://www.nature.com/nnano/journal/v9/n3/full/nnano.2014.17.html

Modulation of Drug Resistance in Ovarian Adenocarcinoma Using Chemotherapy Entrapped in Hyaluronan-Grafted Nanoparticle Clusters. ACS Nano, February 2014. Keren Cohen, Rafi Emmanuel, Einat Kisin-Finfer, Doron Shabat, Dan Peer.
http://pubs.acs.org/doi/abs/10.1021/nn500205b

Guiding intracortical brain tumour cells to an extracortical cytotoxic hydrogel using aligned polymeric nanofibres. Nature Materials, Vol. 13, pp. 308 – 316, February 2014. Anjana Jain, Martha Betancur, Gaurangkumar D. Patel, Chandra M. Valmikinathan, Vivek J. Mukhatyar, Ajit Vakharia, S. Balakrishna Pai, Barunashish Brahma, Tobey J. MacDonald, Ravi V. Bellamkonda.
http://www.nature.com/nmat/journal/v13/n3/full/nmat3878.html

'Smart' gold nanoshells for combined cancer chemotherapy and hyperthermia. Biomedical Materials, Vol. 9, No. 2, February 2014. Zhongshi Liang, Xingui Li, Yegui Xie, Shunying Liu.
http://iopscience.iop.org/1748-605X/9/2/025012/

Probing nanoparticle translocation across the permeable endothelium in experimental atherosclerosis. Proceedings of the National Academy of Science, Vol. 111, No. 3, pp. 1078 – 1083, January 2014. YongTae Kim, Mark E. Lobatto, Tomohiro Kawahara, Bomy Lee Chung, Aneta J. Mieszawska, Brenda L. Sanchez-Gaytan, Francois Fay, Max L. Senders, Claudia Calcagno, Jacob Becraft, May Tun Saung, Ronald E. Gordon, Erik S. G. Stroes, Mingming Ma, Omid C. Farokhzad, Zahi A. Fayad, Willem J. M. Mulder, Robert Langer.
http://www.pnas.org/content/111/3/1078

Synergistic effects of cisplatin chemotherapy and gold nanorod-mediated hyperthermia on ovarian cancer cells and tumors. Nanomedicine, February 2014. Jonathan G Mehtala, Sandra Torregrosa-Allen, Bennett D Elzey, Mansik Jeon, Chulhong Kim, Alexander Wei.
http://www.pubfacts.com/detail/24498890/Synergistic-effects-of-cisplatin-chemotherapy-and-gold-nanorod-mediated-hyperthermia-on-ovarian-canc

CONFERENCES AND WORKSHOPS

Nanomedicine 2014, March 26 – 27, 2014, Edinburgh, Scotland, United Kingdom
- Aptamer targeted nanoparticles
- Cell and particle tracking
- Nanomaterial design
- Nanosuspensions

http://selectbiosciences.com/conferences/index.aspx?conf=NMUK2014

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

American Society for Nanomedicine 4th Annual Scientific Conference, March 28 – 30, 2014, Rockville, MD, USA
- Target drug delivery
- Toxicology
- Nanoimaging
- Therapeutics

http://amsocnanomed.org/conference-info

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

http://arkansasnanohealth.com/

SCT-SF Nano Joint Meeting, April 8, 2014, Paris, France
- Drug delivery
- Targeting and activating
- Pharmacokinetics
- Pharmacodynamics

http://www.ldorganisation.com/v2/produits.php?langue=english&cle_menus=1238915758

7th International Nanotoxicology Congress, April 23 – 26, 2014, Antalya, Turkey
- Characterization
- Biomedicine applications
- Genotoxicity and cancer
- Risk assessment
- Harmonization

http://www.nanotox2014.org/index.html

NANOSMAT USA 2014, May 19 – 22, 2014, Houston, Texas, USA
- Carbon-based nanomaterials
- Nanocomposites
- Self-assembly
- Modeling
- Interactive nanomaterials

http://www.nanosmat-usa.com/default.asp

NanoBio Europe, June 2 – 4, 2014, Münster, Germany
- Toxicology
- Characterization
- Regenerative Medicine
- Therapeutics

http://www.nanobio-europe.com/

Nanotech: Advanced Materials and Applications, June 15 – 19, 2014, Washington, DC

Bio nanomaterials
Drug and gene delivery
Cancer nanotechnology
Biosensing, diagnostics, and imaging

http://www.techconnectworld.com/Nanotech2014/

11th International Conference on Nanosciences and Nanotechnologies, July 8 – 11, 2014, Thessalonica, Greece

Nanofabrication
Self-assembly and self-organization
Clinical Applications
Nanobiotechnology

http://www.nanotexnology.com/index.php?option=com_content&view=article&id=48&Itemid=54

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.