

International Conference and Exhibition on  
**Nanomedicine & Drug Delivery**

May 29-31, 2017  
Osaka, Japan

**200+**

Participation

**15+**

Interactive  
Sessions

**10+**

Keynote  
Lectures

**50+**

Plenary  
Lectures

**3+**

Workshops

**10+**

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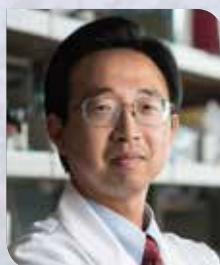
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# Keynote Speakers @ Nanodelivery 2017

## DQAsome-based delivery of Phosphorothioate gapmer antisense oligonucleotides as therapy for *Clostridium difficile*

### Biography:

Volkmar Weissig, Sc.D., Ph.D. is a Tenured Full Professor of Pharmacology and Chair of the Department of Pharmaceutical Sciences and Co-Director of the Nanomedicine Center of Excellence in Translational Cancer Research at Midwestern University Glendale, AZ, USA. Dr. Weissig holds 16 patents and he has published over 100 research papers, review articles and book chapters, mostly in the area of nano drug delivery systems. He also edited and published 8 books. Since the late 1990s he has pioneered the development of vesicular nanocarriers for the delivery of biologically active molecules to mitochondria within living mammalian cells in vitro and in vivo. In 2009 he was inducted into the World Technology Network as a Fellow and in 2014 Dr. Weissig was elected Inaugural President of the World Mitochondria Society.



Volkmar Weissig  
Midwestern University  
USA

## Combination siRNA/drug nanopreparations for multidrug resistant cancer

### Biography:

Vladimir P. Torchilin, Ph.D., D.Sc. is a University Distinguished Professor of Pharmaceutical Sciences and Director, Center for Pharmaceutical Biotechnology and Nanomedicine, Northeastern University, Boston. His interests include drug delivery and targeting, nanomedicine, multifunctional and stimuli-sensitive pharmaceutical nanocarriers, biomedical polymers, experimental cancer therapy. He has published more than 400 original papers, more than 150 reviews and book chapters, wrote and edited 12 books, and holds more than 40 patents. Google Scholar shows more than 44,000 citations of his papers with H-index of 96. He is Editor-in-Chief of Current Drug Discovery Technologies, Drug Delivery, and OpenNano, Co-Editor of Current Pharmaceutical Biotechnology and on the Editorial Boards of many other journals. He received more than \$30 M from the governmental and industrial sources in research funding. He has multiple honors and awards and in 2011, Times Higher Education ranked him number 2 among top world scientists in pharmacology for the period of 2000-2010.



Vladimir P. Torchilin  
Northeastern University  
USA

## Modes of topical and localized drug delivery of nanoparticle and microparticle based formulations

### Biography:

Irach B. Taraporewala has over 30 years' experience in drug discovery/drug development R&D. He currently is President of the Sitara Pharmaceutical Consulting Group. He previously served as founder, CEO, President and Chief Technology Officer, and on the Board of Directors of OHR Pharmaceutical, Inc. an ophthalmology drug development company, and as a Drug Development consultant at PAREXEL Consulting. Dr. Taraporewala has published papers in drug development and delivery in reputed journals and has lectured extensively. He received a Ph.D. in Medicinal Chemistry from the Philadelphia College of Pharmacy and Science, and has been Principal Investigator on several NIH/DoD biomedical research grants.



Irach B Taraporewala  
President  
Sitara Pharmaceutical  
Consulting Group  
USA

## Development and Bio-applications of Nontoxic C-Dots

### Biography:

Dr. Roger M. Leblanc received a B.Sc. degree in Chemistry from Université Laval in 1964, followed by a Ph.D. in Physical Chemistry in 1968. Then, he obtained a postdoc position at the Royal Institution of Great Britain for two years before moving to the University of Québec, Trois-Rivières, Canada, where he spent 20+ years of studying photobiophysics. He moved his research to the University of Miami in 1994. Dr. Leblanc is Professor and Chair of Chemistry Department at University of Miami. And his research interests are centered on biophotophysics, spectroscopy and surface chemistry and he has published more than 500 research articles related to these topics and has guided more than 100 Ph.D. and M.Sc.



Roger M. Leblanc  
University of Miami  
USA

# Keynote Speakers @ Nanodelivery 2017

## Drug delivery across the blood brain barrier

### Biography:

Alain L. Fymat is a medical-physical scientist and an educator who was educated at the Universities of Bordeaux and Paris-Sorbonne, France, and the University of California at Los Angeles. He is the current President/CEO and Professor at the International Institute of Medicine & Science. He was formerly Professor of Radiology, Radiological Sciences, Radiation Medicine (Oncology), Critical Care Medicine, and Physics at several U.S. and European Universities. His current research interests lie at the interface between science and medicine (precision medicine, nanobiotechnology, nanomedicine, genetics/epigenetics/ecogenetics). He has extensively published (> 300 scholarly publications) and lectured in several national and international academic, professional, governmental and industrial venues. He is a Board member of several institutions, Editor of the Journals "Nanobiotechnology" and "Global Nanomedicine", and Honored Editor of the Journals "Cancer Prevention and Current Research" and "Nanomedicine Research".



Alain L Fymat,  
International Institute of  
Medicine and Science California  
USA

## Title: Cathepsin nanofibers substrates for targeted drug delivery

### Biography:

Professor Blum's main research focus is on the generation of novel chemical probes targeted to proteolytic enzymes and their application for medical uses such as molecular imaging and therapy. She also applies her original probes for basic research investigating the involvement of proteases in normal and pathological conditions. Over the years at the Hebrew University her group among other projects has developed novel probes for caspase-3 and discovered its activity in the ER. (Shaulove-Rotem 2016); and developed novel photodynamic probes targeted to cathepsin proteases and used them for combined detection and therapy of cancer (Ben-Nun 2015). Recently, she began also work on the nano-scale materials where she developed novel protease sensitive drug delivery molecules (Ben-Nun 2016) and nano-probes for CT molecular imaging.



Galia Blum, Institute of  
Drug Research, The Hebrew  
University, Israel

## Application of mass spectrometry imaging in the diagnosis of difficult melanocytic lesions

### Biography:

Rossitza Lazova trained in Dermatopathology with Dr. A. Bernard Ackerman. She was an Associate-Professor of Dermatology and Pathology and Director of the Dermatopathology Fellowship at the Department of Dermatology at Yale University for 20 years. Currently she is a Director of Dermatopathology at the California Skin Institute in San Jose, USA. Her main interest are melanocytic lesions and particularly Spitzoid neoplasms and melanoma. Dr. Lazova founded the Yale Spitzoid Neoplasm Repository and introduced Mass Spectrometry Imaging as an ancillary method in the diagnosis of difficult melanocytic lesions. Dr. Lazova has directed numerous sessions at national and international meetings in the US and throughout the world and has given hundreds of presentations worldwide. She has over one hundred publications including two textbooks and numerous chapters. She is on the editorial board of many reputable scientific journals. Dr. Lazova served as Vice President of the International Society of Dermatopathology.



Rossitza Lazova  
Director of Dermatopathology  
California Skin Institute  
USA

08:00-09:00 Registrations

## Regency-C

09:00-09:25 Opening Ceremony

## Keynote Forum

09:25-09:30 **Introduction**09:30-10:00 **Title: Combination siRNA/drug nanopreparations for multidrug resistant cancer**

Vladimir Torchilin, Northeastern University, USA

10:00-10:30 **Title: Modes of topical and localized drug delivery of nanoparticle and microparticle based formulations**

Irach B Taraporewala, Sitara Pharmaceutical Group, USA

## Group Photo

Networking and Refreshments 10:30-10:45 @ FOYER

10:45-11:15 **Title: Development and bio-applications of nontoxic C-Dots**

Roger M Leblanc, University of Miami, USA

11:15-11:45 **Title: DQAsome-based delivery of phosphorothioate gapmer antisense oligonucleotides as therapy for****Clostridium difficile**

Volkmar Weissig, Midwestern University, USA

## Sessions:

Nanomedicine | Novel Drug Delivery Systems | Regenerative Medicine and Tissue Engineering

Session Chair: Vladimir Torchilin, Northeastern University, USA

Session Chair: Volkmar Weissig, Midwestern University, USA

11:45-12:05 **Title: Smart soft matter enabled nanomedicines**

Michael Whittaker, ARC Centre of Excellence in Convergent Bio-Nano Science &amp; Technology, Australia

12:05-12:25 **Title: Electrofluidinamics: A new toolbox to design instructive platforms for tissue engineering and****molecular therapies**

Vincenzo Guarino, National Research Council of Italy, Italy

12:25-12:45 **Title: Vascular-targeted TNF $\alpha$  and IFN $\gamma$  inhibited orthotopic colorectal tumor growth**

Chi Hin Cho, The Chinese University of Hong Kong, China

12:45-13:05 **Title:  $\beta$ -casein nanovehicles for oral delivery of chemotherapeutic drug combinations overcoming****P-glycoprotein-mediated multidrug resistance in human gastric cancer cells**

Yoav D Livney, Israel Institute of Technology, Israel

Lunch Break 13:05-13:45 @ Regency-DE

## Work Shop

13:45-14:25 **Title: Engineered nanomaterials: Toward effective safety management in research laboratories**

Thierry Meyer, EPFL Safety Competence Center, Switzerland

14:25-14:45 **Title: Bone microenvironment targeted nanoparticles for metastatic prostate cancer treatment**

Jamboor Vishwanatha, UNT Health Science Center, USA

14:45-15:05 **Title: Polymer cancerostatics with a coiled coil motif targeted against murine leukemia**

Michal Pechar, Czech Academy of Sciences, Czech Republic

15:05-15:25 **Title: Self-assembly PEGylation Retaining Activity (SPRA) Technology via a host-guest interaction surpassing****conventional PEGylation methods of Insulin**

Hidetoshi Arima, Kumamoto University, Japan

Networking and Refreshments 15:25-15:40 @ FOYER

15:40-16:00 **Title: Bioengineered nanomedicines for modulation of intestinal anti-diabetic peptide delivery**

Bruno Sarmiento, University of Porto, Portugal

16:00-16:20 **Title: The drug delivery (r)evolution: Nanomedicine and 3D printing for personalized therapies**

Yareli Rojas-Aguirre, CCADET-UNAM, Mexico

## Sessions:

Nanomedicine and Nanotechnology | Synthesis of Nanoparticles for Drug Delivery | Nanomaterials for drug delivery

Session Chair: Vladimir Torchilin, Northeastern University, USA

Session Chair: Volkmar Weissig, Midwestern University, USA

16:20-16:40 **Title: Ultrasound microbubbles: unique vehicles for targeted delivery of therapeutic molecules**

Rene J P Musters, VU University Medical Center, The Netherlands

- 16:40-17:00 **Title: Bacterial-Derived Gamma Polyglutamic Acid ( $\gamma$ -PGA) as a Protective Agent for Beneficial Viruses and its Potential Applications as a Smart Delivery System**  
Iza K Radecka, University of Wolverhampton, UK
- 17:00-17:20 **Title: Liposomes targeted with therapeutic antibodies: a potent tool in anticancer therapy**  
Aleksander F Sikorski, University of Wroclaw, Poland
- 17:20-17:40 **Title: Peptide-based nanoparticles of immune-evasive, immune-tolerable, and immune-active properties**  
Shunsaku Kimura, Kyoto University, Japan
- 17:40-18:00 **Title: Islet-based insulin delivery to the brain for treatment of cognitive and metabolic disorders**  
Konstantin Bloch, Tel Aviv University, Israel
- 18:00-18:20 **Title: Biological and Micellar Properties of Nano Transition Metal (Co, Fe, Ni, Cu and Zn) Complexes of 4-(1H-Imidazo[4,5-f][1,10]Phenanthroline-2-yl)-N,Ndimethylbenzene Amine.**  
Md Abdus Subhan, Shah Jalal University of Science and Technology, Bangladesh

Panel Discussion

Day 1 Concludes

Day 2 | May 30, 2017 | Tuesday

Regency-C

Keynote Forum

- 09:30-10:00 **Title: Drug delivery across the blood brain barrier**  
Alain L Fymat, International Institute of Medicine and Science California, USA
- 10:00-10:30 **Title: Cathepsin nanofibers substrates for targeted drug delivery**  
Galia Blum, The Hebrew University of Jerusalem, Israel
- 10:30-11:00 **Title: Application of mass spectrometry imaging in the diagnosis of difficult melanocytic lesions**  
Rossitza Lazova, California Skin Institute, USA

Networking and Refreshments 11:00-11:15 @ Regency-DE

Sessions:

Nanomedicine | Novel Drug Delivery Systems

Session Chair: Alain L Fymat, International Institute of Medicine and Science California, USA

Session Chair: Erwan Rauwel, Tallinn University of Technology, Estonia

- 11:15-11:35 **Title: Nanomaterial synthesis and study for biomedicine and cancer treatment**  
Erwan Rauwel, Tallinn University of Technology, Estonia
- 11:35-11:55 **Title: Platform technologies for accelerating the translation of nanomedicine**  
Chun Xia Zhao, The University of Queensland, Australia
- 11:55-12:15 **Title: Stability of ranibizumab and aflibercept for sustained release, Their delivery from thiolated chitosan-based hydrogels**  
Miguel Moreno, Nanyang Technological University, Singapore
- 12:15-12:35 **Title: Conformational epitopes-based lipopeptide vaccines against Schistosoma mansoni and Necator americanus**  
David Passlick, Max Planck Institute for Polymer Research, Germany
- 12:35-12:55 **Title: The NanoAssemblr platform: Novel nanoparticle engineering for delivery of the genetic toolbox**  
Mehran Ghiaci, Isfahan University of Technology, Iran

Lunch Break 12:55-13:35 @ Regency-DE

- 13:35-13:55 **Title: Fabrication, characteristic, and future-biomedicine applications of villous oxalates**  
Chen Hsu, Lungwha University, Taiwan
- 13:55-14:15 **Title: Synthesis, antibacterial, cytotoxicity and sensing properties of starch-capped silver nanoparticles**  
Oluwatobi S Oluwafemi, University of Johannesburg, South Africa
- 14:15-14:35 **Title: "Quadrugnostic" Nanomedicine for overcoming anticancer drug resistance and for diagnostics**  
Yoav D Livney, Israel Institute of Technology, Israel
- 14:35-14:55 **Title: Development of an in vitro model to predict the passage of polymersomes nanovectors through the endothelial barrier for an optimized drug delivery to tumor cells**  
Agathe Figarol, IPBS CNRS- UMR, France
- 14:55-15:15 **Title: Rapid prototyped nanocomposite magnetic scaffolds for tissue regeneration**  
Roberto De Santis, National Research Council of Italy, Italy
- 15:15-15:35 **Title: Consecutive evaluation of graphene oxide and reduced graphene oxide nanoplatelets immunotoxicity on monocytes**  
Chia-Hua Lin, National Formosa University, Taiwan
- 15:35-15:55 **Title: Nano-liposomes using supercritical fluid system for nutraceuticals**  
Manohar Balaraman, CSIR-Central Food technological research Institute, India

- 16:10-16:30 **Title: Supercritical micronization as an important technique to produce pharmaceutical microparticles**  
Beatriz P Nobre, Lisbon University, Portugal
- 16:30-16:50 **Title: Lipid-dendrimer hybrid nanosystems as smart carriers of anti-cancer agents**  
Gigi N.C. Chiu, University of Singapore, Singapore
- 16:50-17:10 **Title: Impermeable metal nano-capsules for drug delivery without side effects**  
James Hitchcock, University of Leeds, UK

## Poster Presentations @ 14:00-15:30

Poster Judges: Erwan Rauwel, Tallinn University of Technology, Estonia

Vladimir Torchilin, Northeastern University, USA

- PND01 **Title: Exposure to excess phenobarbital negatively influences the osteogenesis of chick embryos**  
Yu Yan, Jinan University, China
- PND02 **Title: Study of the interactions of polymeric nanoparticles with model lung surfactant**  
Weiam Daear, University of Calgary, Canada
- PND03 **Title: Co-delivery of Squalenoyl-Gemcitabine and Paclitaxel by thermo-responsive polymeric micelles to pancreatic cells in vitro**  
Mandana Emamzadeh, UCL School of Pharmacy, UK
- PND04 **Title: Synthesis of polymeric Nano Particles (NPs) for the encapsulation of Mono Myristin (MM)**  
Sirirat Boondireke, Srinakharinwirot University, Thailand
- PND05 **Title: In vivo imaging of passively tumor targeted polymer carrier and the enzymatically cleavable drug model**  
Robert Pola, Academy of Sciences of the Czech Republic, Czech Republic
- PND06 **Title: Preparation and in vitro evaluation of polymer conjugates actively targeted using RGD-based peptides**  
Eliska Bohmova, Academy of Sciences of the Czech Republic, Czech Republic
- PND07 **Title: Polymer nanotherapeutics for overcoming of multidrug resistance**  
Alena Braunova, Academy of Sciences of the Czech Republic, Czech Republic
- PND08 **Title: HA-based nanocomplexes for head and neck cancer with lymphatic metastasis**  
Chih-Peng Liu, Industrial Technology Research Institute, Taiwan
- PND09 **Title: Assembly of double-hydrophilic block copolymers triggered by gadolinium ions: New colloidal MRI contrast agents**  
Agathe Figarol, UPS/CNRS; IMRCP, France
- PND10 **Title: Polymeric self-assemblies for photodynamic therapy: A critical approach**  
Agathe Figarol, UPS/CNRS; IMRCP, France
- PND11 **Title: Laser triggered release of gemcitabine from polymer coated gold nanoshells for pancreatic cancer**  
Mina Emamzadeh, UCL School of Pharmacy, UK
- PND12 **Title: Impact of cargo-carrier interactions on micelles' biodistribution**  
Adrian T Press, Jena University Hospital, Germany
- PND13 **Title: Evaluation of drug delivery system targeting glioblastoma cells using liposome modified with monomeric fusion protein of CTX (M-CTX-FC)**  
Hafizah Mahmud, Okayama University, Japan
- PND14 **Title: Targeting of glioblastoma with multivalent of anti-CD44 antibodyPaclitaxel glycoside liposomes**  
Apriliana Cahya Khayrani, Okayama University, Japan
- PND15 **Title: A microfluidic-based gradient medical waveform generator for pharmacology in single-cell**  
Yiran Guo, Huazhong University of Science & Technology, China
- PND16 **Title: Modeling of 3D additive manufactured nanocomposite scaffolds**  
Paola Castaldo, Fastissues srls, Italy
- PND17 **Title: Chemiluminescence mediated light free photodynamic therapy**  
Berwin Singh S V, Chonbuk National University, Republic of Korea
- PND18 **Title: Evaluation of wound healing effect of hydrogen peroxide responsive vanillyl alcohol-containing polymer in vivo**  
Berwin Singh S V, Chonbuk National University, Republic of Korea
- PND19 **Title: Targeting of liposomes loaded with mitoxantrone, into melanoma cells in a 3D spheroid model**  
Nina Filipczak, University of Wroclaw, Poland
- PND20 **Title: Copper II ions detection via localized surface plasmon resonance**  
Seongjae Jo, Korea University, Republic of Korea
- PND21 **Title: Applications of flower-shaped polymer-ZnO nanocomposites for topical delivery of Dendropanax morbifera extract and ginsenoside Rh2**  
Josua Markus, Kyung Hee University, Republic of Korea

- PND22 **Title: Synthesis of nanomaterials for drugs delivery and cancer biomarkers and therapy**  
Badis Bendjemil, University Badji Mokhtar, Algeria
- PND23 **Title: Remote control of light-triggered virotherapy**  
Zi-Xian Liao, National Sun Yat-sen University, Taiwan
- PND24 **Title: CD44 targeting hyaluronic acid coated lapatinib nanocrystals for fostered efficacy against triple-negative breast cancer**  
Satish Agrawal, CSIR-Central Drug Research Institute, India
- PND25 **Title: Layer-by-layer assembly of gelatin on nanofibrils for 3D cultivation of cells**  
Ji Un Shin, Kangwon National University, South Korea
- PND26 **Title: Gold nanoparticles with densely-packed shells by surface-initiated atomic transfer polymerization shell for gene delivery**  
Sol Lee, Kangwon National University, South Korea
- PND27 **Title: Mesoporous alginate nanofiber mesh enhancing cell movement in the scaffold**  
Young Ju Son, Kangwon National University, South Korea

Group Photo (Poster Presentations)

Panel Discussion

Day 2 Concludes

Day 3 | May 31, 2017 | Wednesday

Regency-C

Young Researchers Forum

Session Chair: Erwan Rauwel, Tallinn University of Technology, Estonia

- 09:30-09:45 **Title: Linear and branched polyethynimines for skin regeneration treatment – In vitro study**  
Lucas B Naves, University of Minho, Portugal
- 09:45-10:00 **Title: Dental pulp stem cells as anticancer drug delivery system**  
Hamideh Salehi, University of Montpellier, France
- 10:00-10:15 **Title: Anti-angiogenic Efficacy Enhancement in Nano Phospholipid complex of Orthosiphon Stamineus Ethanolic Extract**  
Mansoureh Nazari Vishkaeia, Universiti Sains Malaysia, Malaysia
- 10:15-10:30 **Title: Size-dependent targeted GNPs as CT contrast agents for molecular imaging of cancer**  
Darya Tsvirkun, Institute of Drug Research, The Hebrew University of Jerusalem, Israel
- 10:30-10:45 **Title: Fluorometholone loaded nanospheres PLGA for the treatment of ocular disorders**  
Roberto González Pizarro, University of Barcelona, Spain
- 10:45-11:00 **Title: Encapsulation of agonist PPAR-  $\gamma$  in polymeric nanoparticles to treat ocular inflammatory processes**  
Marcelle Silva de Abreu, University of Barcelona, Spain

Networking and Refreshments 11:00-11:15 @ FOYER

- 11:15-11:30 **Title: The combination of pH-Responsive peptide and cationic liposomes can improve siRNA transfection efficiency in cancer cells**  
Shahd Abuhelal, King's College London, UK
- 11:30-11:45 **Title: Oral delivery of folate targeted colorectal cancer therapeutics**  
Dewan Taslima Akhter, University of Queensland, Australia
- 11:45-12:00 **Title: Controlling the stiffness of biomimetic silica nanocapsules and its impact on cellular uptake**  
Yue Hui, The University of Queensland, Australia
- 12:00-12:15 **Title: Synthesis of ginseng-based nanoparticles and its applications**  
Yeon-Ju Kim, Kyung Hee University, Republic of Korea
- 12:15-12:30 **Title: High yield synthesis of surfactant-free gold nanostars for biosensing, photothermal therapy and drug delivery applications**  
Akash Arya, Indian Institute of Technology Patna, India
- 12:45-13:00 **Title: Cerium oxide nanoparticles: An emerging class of UVA filter**  
Aditya Arya, India

Lunch Break 13:00-13:40 @ Regency-E

Award Ceremony

## Upcoming Conference

International Conference and Exhibition on

# Nanomedicine and Drug Delivery

May 28-30, 2017 Osaka, Japan