

Conference Agenda
4th Annual Personalized Nanomedicine Symposium
Miami, FL

November 2nd, 2017

Registration – Welcome Breakfast

7:30 AM – 8:00 AM Monte Carlo Room 1
5800 Blue Lagoon Drive, Pullman Miami Airport Hotel, Miami, Florida

Master of Ceremony Karla S. Munoz, M.B.A., M.S.

8:00 AM – 8:05 AM **John Rock, M.D., M.S.P.H.**
*Founding Dean, FIU Herbert Wertheim College of Medicine
Senior Vice President for Health Affairs*

8:05 AM – 8:10 AM **Andres G. Gil, M.S.W., Ph.D.**
*Vice President for Research and Economic Development,
Dean of University Graduate School
Florida International University*

8:10 AM – 8:15 AM **Sergio Gonzalez - Arias, M.D., Ph.D.**
*Executive Associate Dean, Clinical Affairs
Chair, Department of Neuroscience
Professor and Chief, Division of Neurosurgery
Director, Continuing Medical Education
FIU Herbert Wertheim College of Medicine*

8:15 AM – 8:20 AM **Madhavan Nair, Ph.D.**
SPNM Founding President

Keynote Speaker

8:20 AM – 9:00 AM **“Quo Vadis Nanomedicine? Current Status and Future Opportunities
in Cancer”**

Piotr Grodzinski, Ph.D.
*Director, NCI Office of Cancer Nanotechnology Research
National Cancer Institute (NCI)
National Institutes of Health (NIH)*

Introduced by **Minesh Mehta, M.D.**
*Deputy Director and Chief of Radiation Oncology
Miami Cancer Institute*

Baptist Health of South Florida

Symposium I

Unique Nano-Engineering for Personalized NanoMedicine

Chair: Avindra Nath, M.D.

*Clinical Director, NINDS
Director, Translational Neuroscience Center
Chief Investigator, Section of Infections of the Nervous System
National Institutes of Health (NIH)*

Chair: Richard J. Cote, M.D., FRCPATH, FCAP

*Professor and Joseph R. Coulter Jr. Chair
Department of Pathology
Director, Dr. John T. Macdonald Foundation Biomedical Nanotechnology Institute
University of Miami Miller School of Medicine*

9:00 AM – 9:20 AM

“The promise of new technologies to reduce, refine, or replace animal use while reducing risks of drug induced liver injury in pharmaceutical development ”

S1: Ye Kaiming, Ph.D.

*Professor and Chair, Department of Biomedical Engineering
Director, STEM Cell and Tissue Engineering Laboratory
Fellow, American Institute of Medical and Biological Engineering
Binghamton University, State University of New York*

9:20 AM – 9:40 AM

“Polymeric nanoparticles: Tumor microenvironment variability and implications for new nanoparticle design and development”

S2: Omid Farokhzad, M.D.

*Professor
Brigham and Women’s Hospital
Harvard Medical School*

9:40 AM – 10:00 AM

“Caged affinity nanoparticles: Applications to personalized medicine”

S3: Lance Liotta, M.D., Ph.D.

*University Professor
Co-Director, Center for Applied Proteomics and Molecular Medicine
Medical Director, Clinical Proteomics Lab
College of Science*

George Mason University

10:00 AM – 10:20 AM

BREAK

Symposium II

Personalized NanoMedicine for Diagnosis and Treatment

Chair: Piotr Grodzinski, Ph.D.

*Director, NCI Office of Cancer Nanotechnology Research
National Cancer Institute (NCI)
National Institutes of Health (NIH)*

Chair: Mahendra Kumar, Ph.D.

*Professor
Psychiatry and Behavioral Sciences
Chief, Psychoneuroendocrinology
University of Miami Miller School of Medicine*

10:20 AM – 10:50 AM

“Nanoprodrugs for solid cancers.”

Plenary Speaker: John S. Yu, M. D.

*Director, Surgical Neuro-Oncology
Professor, Neurosurgery
Surgical Director, Neuro-Oncology
Vice Chair, Neurosurgical Oncology in Department of Neurosurgery
Cedars-Sinai Medical Center*

Introduced by **Babak Kateb, M.D.**

*Founding Chairman of the Board of Directors
CEO and Scientific Director
Society for Brain-Mapping and Therapeutics (SBMT)*

10:50 AM – 11:10 AM

“Nanosensors for personalized medicine”

S1: Thomas Thundat, Ph.D.

*Professor
Department of Chemical and Materials Engineering
Canada Excellence Research Chair in Oil Sands Molecular
Engineering
University of Alberta*

11:10 AM – 11:30 AM

“Thermally responses adhesives for ocular wound sealing”

S2: Mark Thompson, Ph.D.

Professor of Chemistry In-Organic Chemistry

Department of Chemistry

University of Southern California

11:30 AM – 11:50 AM

“Polymeric Nanocarriers for combination therapy”

S4: Tatiana Bronich, Ph.D.

Parke-Davis Professor of Pharmaceutical Sciences

Director, Nebraska Center for Nanomedicine

College of Medicine

University of Nebraska Medical Center

11:50 AM – 12:10 PM

“Iron formulations sensitize cancer cells to chemotherapy”

S5: Sundaram Ramakrishnan, Ph.D.

Professor, Department of Surgery

Department of Biochemistry and Molecular Biology

University of Miami

12:10 PM – 12:30 PM

“Smart nanovehicles for drug, gene and vaccine delivery”

S6: Surya Mallapragada, Ph.D.

Anson Marston Distinguished Professor

And Carol Vohs Johnson Chair

Department of Chemical and Biological Engineering

Iowa State University

12:30 PM– 1:15 PM

LUNCH BREAK

1:15 PM – 2:15 PM

Poster Session

Symposium III

Application of NanoMedicine and CRISPR Technology

Chair: Shamala Srinivas, Ph.D.

*Associate Director
Office of Referral, Review and Program Coordination
Division of Extramural Activities
National Cancer Institute (NCI) Shady Grove
National Institutes of Health (NIH)*

Chair: Larry Nagahara, Ph.D.

*Associate Dean for Research
Whiting School of Engineering
Johns Hopkins University
Former Associate Director, Division of Cancer Biology, NCI/NIH*

2:15 PM – 2:35 PM

“Synergism between CRISPR/Cas9 and Long Acting ART leads to elimination of HIV-1 with no rebound in humanized mice”

S1: Kamel Khalili, Ph.D.

*Laura H. Carnell Professor and Chair
Department of Neuroscience
Director, Center for Neurovirology and Comprehensive
NeuroAIDS Center
Co-Director, Center for translational AIDS Research
Lewis Katz School of Medicine
Temple University*

2:35 PM – 2:55 PM

“Targeting HIV Reservoirs by Personalized and Impersonalized NanoMedicine”

S2: Jonathan Karn, Ph.D.

*Reinberger Professor of Molecular Biology
Chairman, Department of Molecular Biology and Microbiology
Director, Center for AIDS Research
Case Western Reserve University*

2:55 PM – 3:15 PM

“HIV-1 and psychostimulant abuse –cures and constraints”

S3: Rosemarie Booze, Ph.D.

*Professor and Bicentennial Endowed Chair in Behavioral
Neuroscience
University of South Carolina*

3:15 PM – 3:35 PM

“HIV genomic diversity, CRISPR/Cas9-based therapeutics, and delivery”

S4: Brian Wigdahl, Ph.D.

Professor and Chair

Department of Microbiology and Immunology

Director, Institute for Molecular Medicine and Infectious Disease

Drexel University College of Medicine

3:35 PM – 3:55 PM

“Opiate-mediated potentiation of HAND: Blaming the Messenger”

S5: Shilpa Buch, Ph.D

Professor and Vice Chair for Research

Director, NE Center for Substance Abuse Research

Community Pride of Nebraska Professorship of Neuroscience

Chair, Women’s Mentoring Program

Department of Pharmacology and Experimental Neuroscience

University of Nebraska Medical Center

4:00 PM – 4:30 PM

BREAK

Symposium IV

Personalized NanoMedicine for HIV, Recreational Drugs, and CNS Diseases: Part 1

Chair: Jean M. Bidlack, Ph.D.

*Associate Chair and Professor of Pharmacology and Physiology
University of Rochester School of Medicine and Dentistry*

Chair: Sabita Roy, Ph.D.

*Professor and Associate Vice-Chair of Career Development and Mentoring
Department of Surgery
University of Miami*

4:30 PM – 4:50 PM

“Dual modes of dissemination of neural inflammation by HIV-1 Tat – Direct uptake versus Exosome release”

S1: Vinayaka Prasad, Ph.D.

*Professor
Department of Microbiology and Immunology
Albert Einstein College of Medicine*

4:50 PM – 5:10 PM

“Reduced cocaine use led to coronary plaque regression in HIV-infected cocaine users”

S2: Shenghan Lai, M.D., M.P.H.

*Professor of Pathology, Radiology, Psychiatry, Medicine & Epidemiology
Johns Hopkins School of Medicine*

5:10 PM – 5:30 PM

“Discovery of neo-antigens toward a combined immunotherapy for HTLV-associated neuroinflammatory disease”

S3: Pooja Jain, Ph.D.

*Professor of Microbiology and Immunology
Professor of Neurobiology and Anatomy
Institute for Molecular Medicine and Infectious Disease
Drexel University College of Medicine*

5:30 PM – 5:50 PM

“Tat and HIV latency in astrocytes”

S4: Johnny He, Ph.D.

*Regents Professor and Interim Dean
Department of Cell Biology and Immunology*

University of North Texas Health Science Center

5:50 PM – 6:10 PM

“Blood Brain Barrier injury in HIV infection complicated by diabetes: Potential for nanomedicine approaches”

S5: Yuri Persidsky, M.D., Ph.D.

Professor and Chairman

Department of Pathology and Laboratory Medicine

Temple University

6:10 PM – 6:30 PM

“Targeting HIV-induced mitochondrial dysfunction: A Nano approach”

S6: Michal Toborek, M.D., Ph.D.

Leonard M. Miller Professor of Biochemistry and Molecular Biology

Professor and Vice-Chair for Research

Department of Biochemistry and Molecular Biology

Miller School of Medicine

University of Miami

6:30 PM – 8:00 PM

DINNER at Pullman Miami Airport Hotel (Paris Room)

November 3rd, 2017

8:00 AM – 8:25 AM **BREAKFAST**

8:25 AM – 8:30 AM **Karla S. Munoz, M.B.A., M.S.**
Secretary, SPNM
Master of Ceremony

Symposium V

Personalized NanoMedicine for HIV, Cancer, and CNS Diseases: Part 2

Chair: Ranga Srinivas, Ph.D.

Chief, Extramural Project Review Branch
National Institute on Alcohol Abuse and Alcoholism (NIAAA)
National Institutes of Health (NIH)

Chair: Sulie L. Chang, Ph.D.

Professor, Department of Biological Sciences
Director, Institute of NeuroImmune Pharmacology
Seton Hall University

8:30 AM – 8:50 AM

“Effects of silica nanoparticles on endolysosome function in primary cultured neurons”

S1: Jonathan D. Geiger, Ph.D.

Chester Fritz distinguished Professor
UND School of Medicine and Health Sciences
Department of Basic Biomedical Sciences

8:50 AM – 9:10 AM

“A nanomedicine approach for HIV coinfections”

S2: Jessica L. Reynolds, Ph.D.

Research Associate Professor
Proposal Development Officer
Department of Medicine
University at Buffalo, The State University of New York

9:10 AM – 9:30 AM

“Destination Brain: Nanoformulations for Gene Delivery to Challenging Targets”

S3: Anuja Ghorpade, Ph.D.

Interim Vice President for Research

*Professor, Institute for Molecular Medicine
University of North Texas Health Science Center*

9:30 AM – 9:50 AM

"Extracellular vesicles from monocytes: Phosphatidylserine, morphine binding, and possible modulation by kappa and mu opioid receptors"

S4: Jean M. Bidlack, Ph.D.

*Associate Chair and Professor of Pharmacology and Physiology
University of Rochester School of Medicine and Dentistry*

with Sanjay Maggirwar, M.B.A., Ph.D.

*Vice Chair and Professor
Department of Microbiology and Immunology
University of Rochester School of Medicine and Dentistry*

9:50 AM – 10:10 AM

"Nanoparticle mediated targeting of altered metabolisms in cancer"

S5: Shanta Dhar, Ph.D.

*Associate Professor of Biochemistry and Molecular Biology
Assistant Director of Technology and Innovation
Sylvester Comprehensive Cancer Center Nanotherapeutics
Research Laboratory
University of Miami Miller School of Medicine*

10:10 AM – 10:30 AM

BREAK

Symposium VI

Personalized NanoMedicine for HIV, Recreational Drugs, and Emerging Infections: Part 3

Chair: Kendall J. Bryant, Ph.D.

*Director, HIV/AIDS Research
National Institutes of Health (NIH)
National Institute on Alcohol Abuse and Alcoholism (NIAAA)*

Chair: Marcus Kaul, Ph.D.

*Chair, SNIP Meeting Committee
Associate Professor of Biomedical Sciences
School of Medicine, Division of Biomedical Sciences
University of California, Riverside*

10:30 AM – 10:50 AM

***“Nano-engineered therapeutics for sustained release:
Targeting CNS HIV-1 infection”***

S1: Rahul Dev Jayant, Ph.D.

*Assistant Professor
Center for Personalized NanoMedicine
Department of Immunology
Herbert Wertheim College of Medicine
Florida International University*

10:50 AM – 11:10 AM

***“HIV-1 Nef produced by astrocytes disrupts the blood brain
barrier that causes inflammation in gut and lung tissues”***

S2: Richard J. Noel, Jr. Ph.D.

*Chair of Basic Sciences Department
Professor of Biochemistry
Director of Molecular and Genomics Core
Ponce Health Sciences University
Ponce Research Institute*

11:10 AM – 11:30 AM

“Epigenetic modulation of HIV neuropathic pain”

S3: Hao Shuanglin, Ph.D.

*Professor and Director of Preclinical and Basic Research
Department of Anesthesiology
University of Miami Miller School of Medicine*

11:30 AM – 11:50 AM

“Magnetically guided delivery of magneto-electro nanoparticles to the brain of non-human primate”

S4: Ajeet Kaushik Kumar, Ph.D.

*Assistant Professor
Center for Personalized NanoMedicine
Department of Immunology
Herbert Wertheim College of Medicine
Florida International University*

11:50 AM – 12:10 PM

“Monocyte-derived exosomes upon exposure to cigarette smoke condensate alter their characteristics and show protective effect against cytotoxicity and HIV-1 replication”

S5: Santosh Kumar, Ph.D.

*Associate Professor, Pharmaceutical Sciences
University of Tennessee Health Science Center*

12:10 PM – 12:30 PM

“Going beyond CD59, a key complement regulator: from anti-HIV to a cell ablation tool for drug addiction research”

S6: Xuebin Qin, M.D., Ph.D.

*Associate Professor of Neuroscience
Temple University*

12:30 PM – 12:50 PM

“Development of exosome-based nanotherapeutics to treat neurotropic viral infections”

S7: Andrea Raymond, Ph.D.

*Assistant Professor
Center for Personalized NanoMedicine
Department of Immunology
Herbert Wertheim College of Medicine
Florida International University*

12:50 PM – 1:45 PM

LUNCH

Symposium VII

Early Career Investigators in Nanomedicine

Chair: Chenzhong Li, Ph.D.

*Program Director, Nanobiosensing Program
Chemical, Bioengineering, Environmental & Transport Systems Division
National Science Foundation*

Chair: Fatah Kashanchi, Ph.D.

*Professor
Laboratory of Molecular Virology
George Mason University*

1:45 PM – 1:55 PM

“Theranostics: The development of novel polymers for tumor targeted nanomedicine”

S1: John Hidalgo, B.S.

Florida International University

1:55 PM – 2:05 PM

“Targeting HIV-1 in the brain with magneto-electric nanoparticles (MENPs)”

S2: Diana V. Avila, Ph.D.

University of Miami

2:05 PM – 2:15 PM

“Novel elvitegravir nanoformulation approach to suppress the viral load in HIV- infected macrophages”

S7: Yuqing Gong, M.S.

University of Tennessee Health Science Center

2:15 PM – 2:25 PM

“Theranostics: The development of novel polymers for tumor targeted nanomedicine”

S4: Shrita Sarkar, M.S.

University of Miami

2:25 PM – 2:35 PM

“Nanomedicine for trans-epithelial oral delivery of ivermectin for zika”

S5: Bapurao Surnar, Ph.D.

University of Miami

2:35 PM – 2:45 PM

“Hybrid magneto-plasmonic liposomes for image-guided and brain-targeted drug delivery”

S9: Asahi Tomitaka, Ph.D.

Florida International University

2:45 PM – 2:55 PM

“Formulation of pure nanodrugs for therapeutic biomedical applications”

S3: Suzana Hamdan, Ph.D.

University of Miami

2:55 PM – 3:05 PM

“Long-acting magnetic nanoformulation for the treatment of HIV-1 infection”

S8: Evelyn Garcia, B.S.

Florida International University

3:05 PM – 3:15 PM

“Rapid RNA test for zika virus”

S6: David Broyles, Ph.D.

University of Miami

3:15 PM– 3:25 PM

Q & A Section

3:30 PM – 3:45 PM

Future Perspectives for Personalized NanoMedicine:
Panel Discussion

Leaders:

Chenzhong Li, Ph.D. – NSF

Piotr Grodzinski, Ph.D. – NIH/NCI

Kendall Bryant, Ph.D. – NIH/NIAAA

Shamala Srinivas, Ph.D – NIH/NCI

Ranga Srinivas, Ph.D. – NIH/NIAAA

3:50 PM – 4:10 PM

Award Ceremony

4:15 PM – 4:20 PM

Closing Remarks