

Miami-Florida Jean Monnet Center of Excellence
European and Eurasian Studies Program



EU Jean Monnet Project
Health and Innovation: “Nanotechnology for Medicine”
June 14-15, 2017 - Miami

WORKSHOP PARTICIPANTS: BIOGRAPHICAL NOTES

Panelists



Serge Braun, PharmD, Ph.D.
Chief Scientific Officer
AFM-Telethon, Evry, France
Member of the French National Academy of Pharmacy

Dr. Serge Braun is currently Scientific Director of AFM-Telethon, the French Muscular dystrophy Association acting in innovative therapies of rare diseases, and President of Genosafe, a CRO company dedicate to QC of biotherapeutic products.

He has 10 years of experience in the neuromuscular diseases field in the academic sector (Univ. Strasbourg France and USC Neuromuscular Center, Los Angeles) and 10 years in the biotechnology sector (Vice-President Research of Transgene SA, Gene therapy biotech company) where he developed his career in the field of gene therapy of genetic diseases and of immunotherapy of cancer.

He was co-founder of Neurofit, a contract research organization specialized in preclinical testings of both the central and the peripheral nervous system. He was Vice-President of Alsace BioValley, the tri-national initiative, non-profit making organization, for the development of a major biotech cluster in Europe.



Tarek R. Fadel, Ph.D.

Assistant Director, The Marble Center for Cancer Nanomedicine
The Koch Institute for Integrative Cancer Research
Massachusetts Institute of Technology, Cambridge MA

Dr. Tarek Fadel is the Assistant Director of the Marble Center for Cancer Nanomedicine at the MIT Koch Institute for Integrative Cancer Research. Before joining MIT, Dr. Fadel was a Staff Scientist at the National Nanotechnology Coordination Office (NNCO), the coordinating body for the U.S. National Nanotechnology Initiative (NNI). During his time at NNCO, he served as the Executive Secretary for the Nanoscale Science, Engineering, and Technology (NSET) Subcommittee of the White House's National Science and Technology Council's Committee on Technology. The NSET Subcommittee coordinates planning, budgeting, program implementation, and review of the NNI.

Dr. Fadel received his PhD from Yale University in 2011, where he continued as a post-doctoral researcher to develop nanoscale platforms for cancer immunotherapy. He previously held positions as Vice President for Research at the International Technology Research Institute, and Product and Systems Interaction Engineer at Hewlett Packard Enterprise. Dr. Fadel is lead author of several peer-reviewed publications in the fields of nanomedicine, cancer immunotherapy, and biophysics.



Sergio Gonzalez-Arias, M.D., Ph.D., FAANS, FACS

Executive Associate Dean, Clinical Affairs
Chairman, Department of Neuroscience
College of Medicine, Florida International University
Chief of Neurological Surgery, Baptist Hospital, FL

Dr. Gonzalez-Arias is chief of neurological surgery at Baptist Hospital and chair of neurosurgery at Florida International University's Herbert Wertheim College of Medicine. He is the founding and current medical director of Baptist Hospital's Neuroscience Center and has served as chief of the hospital's Department of Surgery and is past president of the medical staff. He has lectured nationally and internationally on minimally invasive spine surgery and stereotactic radiosurgery. He is a fellow of the American Association of Neurological Surgeons and the American College of Surgeons. He served as chair of the international committee of the Joint Council of State Neurosurgical Societies and is a past president of the Florida Neurological Society.

He is currently involved in multicenter clinical research in minimally invasive spine surgery. Dr. Gonzalez-Arias received his M.D. and Ph.D. degrees from the University of Zaragoza in Zaragoza, Spain. He completed his surgical internship at Rush- Presbyterian St. Luke's Hospital in Chicago and his neurosurgical residency at Jackson Memorial Hospital – University of Miami. He is Board-certified by the American Board of Neurological Surgery and a fellow of the American College of Surgeons.



Babak Kateb, M.D.

Founding Chairman of the Board of SBMT, President of Brain Mapping Foundation, Scientific Director of SBMT and Brain Mapping Foundation, Director of National Center for Nano-Bio-Electronics, Senior Editor of SBMT-NeuroMapping & Therapeutics, Chairman of Neuroscience-20/G20 Summit Brain Mapping Initiative, Scientific Director and Chief Strategy Officer (CSO), California Neurosurgical Institute, CA, USA

Dr. Babak Kateb is a neuroscientist with more than 15 years of research experience. His research has been focused on introduction of advance diagnostics and therapeutics into clinical neuroscience in order to rapidly identify and introduce game changing technologies to treat neurological disorders such as brain cancer, Alzheimer’s disease, Parkinson’s disease, brain and spinal disorders. Dr. Babak established Society for Brain Mapping and Therapeutics (SBMT), and currently he is the founding chairman of the board of directors & CEO Society for Brain Mapping and Therapeutics (SBMT), President and Scientific Director of the Brain Mapping Foundation and Director of National Center for Nano-Bio-Electronics; the center is focused on integration of nanotechnology, cellular therapeutics/stem cell, medical device and imaging. He was Director of Research and Development at the Department of Neurosurgery at City of Hope Cancer Center. He was a Research Scientist at Department of Neurosurgery at Cedars Sinai Medical center for near a decade where he developed partnership between Cedars-Sinai and NASA and established clinical trials using NASA technologies. He is a recipient of NASA Tech Brief Award for his pioneering work on sniffing cancer cells using NASA’s electronic nose and the SBMT Pioneer in Medicine award. He is editor of the “Textbook of Nanoneuroscience and Nanoneurosurgery”, published by Taylor & Francis 2013 and the editor of the textbook “Neurophonic and Brain Mapping,” which is due for a release for Dec. 2015. In 2015 he took over a new role at California Neurosurgical Institute (CNI) as Scientific Director and Director of Strategic Alliance; CNI provides neurological and neurosurgical care for 5 major hospitals (4 million residents) in LA. He has been deeply involved in global neuroscience legislation: he has chaired 3 congressional briefing on Brain Mapping and given a talk to the Canadian Parliament. His initiatives have impacted the health care delivery to the wounded soldiers in the US. He has been one of the key players in President Obama’s BRAIN initiative and co-author of the G20 World Brain Mapping and Therapeutics Initiative and African Brain Mapping Initiative.



Madhavan Nair, Ph.D.

Distinguished Professor and Chair, Dept. of Immunology
Director, Institute of NeuroImmune Pharmacology
Associate Dean Bio-Medical Research
Associate VP, NanoMedicine; College of Medicine, Florida International University, FL

Dr. Madhavan Nair received his PhD from Tata Memorial Cancer Center, Bombay University, India in Cancer Immunology and trained at Memorial Sloan Kettering Cancer Center, New York City. He then joined the faculty of the Department of Pediatrics at University of Michigan, Ann Arbor and subsequently worked at the Department of Medicine and Microbiology at SUNY, Buffalo, NY as a Tenured Professor and Director of Research in Allergy and Immunology. He is a certified Clinical Nutrition Specialist (CNS), Fellow of American College of Nutrition (FACN) and Fellow of American Academy of Allergy, Asthma and Immunology (FAAAI).

Dr. Nair and his colleagues discovered the suppressor factor in cancer serum (1978) and first reported that intravenous drug users manifest low natural killer cell activity (1986) and morphine induces apoptosis of normal lymphocytes (1997). In 1988, Dr Nair reported for the first time (PNAS) that HIV recombinant purified gene products possess significant biological activities. His original discovery that cocaine increases the sensitivity to HIV infection by increasing the HIV co-receptors and methamphetamine

exacerbates the HIV replication in dendritic cells had a profound effect on the role of these drugs on HIV disease progression. His recent research mainly involves the role of different drugs of abuses such as alcohol, morphine, cocaine and methamphetamine on neuro-AIDS and therapeutic approach to control Neuro-AIDS by specific drug targeting to brain using nanotechnology.

Dr. Nair is the first FIU researcher to earn a prestigious MERIT Award from the National Institutes of Health recognizing outstanding competence and productivity in research (2008-2018). Nair is also the recipient of University of Michigan Distinguished Research Scientist Award (1990), Exceptional Research Scholar Award from State University of New York (2005), Excellence in Faculty Scholarship Award from FIU (2008) and Presidential Leadership Operational Excellence Award from FIU in 2009.

Dr. Nair has published more than 100 papers as first and/or senior author, mentored more than 50 undergraduate, graduate, postdoctoral fellows, high school and minority students, served in various committees, organized various national and international conferences, chaired number of scientific sessions and served in various NIH study sections committees as chair/ member since 1980. His research is currently supported with four major NIH grants.

<https://medicine.fiu.edu/about/faculty-and-staff/people/nairm.html>

Discussants



Agarwal Ashutosh, Ph.D.

Assistant Professor

Pathology & Biomedical Engineering

Dr. John T. Macdonald Foundation Biomedical Nanotechnology

University of Miami Miller School of Medicine

Dr. Ashutosh Agarwal is an Assistant Professor of Biomedical Engineering and Pathology and a core faculty member of the Dr. John T. Macdonald Foundation Biomedical Nanotechnology Institute at the University of Miami (BioNIUM). He is also affiliated with the Diabetes Research Institute and the Sylvester Comprehensive Cancer Center at the University of Miami Miller School of Medicine. He received his Ph.D. in Materials Science and Engineering at the University of Florida in 2009 and postdoctoral research experience at Columbia University and Harvard University. Dr. Agarwal joined the University of Miami as a faculty member in 2014 where he heads the Physiometric Microsystems Laboratory.

His research laboratory is focused on developing organ on chip platforms that mimic human organ level complexity within a fluidic microsystem capable of measuring functional readouts. The seminar will provide an overview of the design, fabrication, and testing of multiple microsystems, including 'Heart on a Chip' (funded by UM/FIU award in Nanotechnology), 'Cancer on a Chip' (funded by BioNIUM research award), 'Pancreatic Islet on a Chip' (funded by NIH), and 'Microphysiological culture systems' (funded by Coulter Foundation). Upon validation, these technologies will be applied towards testing pharmaceutical agents and therapies, driving and monitoring the differentiation and maturation of stem cells, and uncovering mechanisms of human disease. These efforts are highly interdisciplinary and benefit from the participation of students, postdoctoral scholars, and faculty collaborators in biomedical engineering and the physical and clinical sciences.



Sapna Deo, Ph.D.
Associate Professor
Biochemistry and Molecular Biology
University of Miami Miller School of Medicine

Dr. Deo is an Associate Professor and Graduate Program Director (GPD) in the Department of Biochemistry and Molecular Biology (BMB) at University of Miami, Miller School of Medicine. Dr Deo's research interest is in the area of bionanotechnology and biosensors. Her research interest includes development of targeted delivery systems based on nanocarriers for targeted delivery, imaging, and sensing applications in biomedical field. Her group works on the development of technologies for point-of care detection of pathogens and design of novel nanobioanalytical techniques based on luminescent proteins and quantum dots for application in biomedicine. Dr. Deo is an author and co-author of over 100 scientific publications and several patents and a recipient of the NSF-CAREER Award. Dr. Deo serves on editorial boards of journals, NIH study section panels, and scientific advisory board of biotech industries. The research of her group is funded by the National Institute of General Medicine, the National Science Foundation, State of Florida, American Cancer Society, Coulter Foundation.



Marcio Fagundes, M.D.
Board-certified radiation oncologist
Miami Cancer Institute, Miami, Florida
Baptist Health South Florida

Marcio Fagundes is a Board-certified radiation oncologist with Miami Cancer Institute, a part of Baptist Health South Florida. He has extensive experience in proton therapy - the most advanced cancer treatment in the world – and has conducted significant research. Dr. Fagundes has presented research results showing the advantages of proton therapy for prostate cancer, breast cancer and head and neck cancer at numerous meetings of the Particle Therapy Co-Operative Group and the American Society of Therapeutic Radiation Oncologists – two professional associations to which he belongs. He also has published dozens of articles in peer reviewed journals, including Journal of Clinical Oncology, International Journal of Particle Therapy and International Journal of Radiation Oncology. Dr. Fagundes received his medical degree from Universidade Federal do Rio Grande do Sul in Porto Alegre, Brazil, and completed a radiation oncology residency at the University of Miami Miller School of Medicine/Jackson Memorial Hospital – Sylvester Comprehensive Cancer Center. He also completed a fellowship in radiation oncology at Harvard Medical School, Massachusetts General Hospital, in Boston. He gained teaching experience as an assistant professor of radiation oncology at Tufts University School of Medicine in Boston, and currently trains his peers on an innovative treatment protocol for prostate cancer. Before joining Miami Cancer Institute, Dr. Fagundes was medical director of the Provision Center for Proton Therapy in Knoxville, Tennessee.



Sung Jin Kim, PhD.
Associate Professor
Electrical and Computer Engineering
University of Miami College of Engineering

Dr. Sung Jin Kim is an Associate Professor in the Department of Electrical and Computer Engineering and jointly appointed in the Department of Pathology. He is also an affiliated member of Biomedical Nanotechnology Institute of University of Miami (BioNIUM). He received his Ph.D. degree in Electrical Engineering from the State University of New York at Buffalo in 2008. Since he joined UM in 2010, he has contributed to building the BioNIUM cleanroom facility for nano/micro device fabrication, and this core facility plays an important role to initiate interdisciplinary collaborative researches in UM. Dr. Kim's research focuses on Nanophotonics for energy and sensing applications. He uses engineered nanostructures and novel nanomaterials for novel optoelectronic devices. Recently he invented a novel plasmonic device, Plasmon Field Effect Transistor. This transformative nanotechnology-based sensing device offers robust and highly sensitive detection for biomolecules. He is conducting a NSF-funded research for the point-of-care cancer diagnosis by collaborating other UM faculty in Pathology and Urology departments. He also developed a real-time personal air quality monitoring system for various biomedical and clinical research. He and Dr. Kumar (Public Health Sciences) awarded a NIH R01 grant to study Dry Eye syndrome with this newly developed sensing system.



Minesh P Mehta, MD, FASTRO
Deputy Director and Chief of Radiation Oncology
Miami Cancer Institute, Miami, Florida
Baptist Health South Florida

Dr. Minesh Mehta is Deputy Director of the Miami Cancer Institute and Chief of Radiation Oncology. He is also the NRG/Oncology Brain Tumor Committee Chair. Previously, he was Professor of Radiation Oncology at the University of Maryland School of Medicine and Medical Director of the Maryland Proton Treatment Center in Baltimore, where he still retains an adjunct faculty appointment.

Dr. Mehta received his medical degree from the University of Zambia in Lusaka, and, after completing an internship at Ndola Central Hospital in Ndola, Zambia, he completed residency training in radiation oncology at the University of Wisconsin, after which he was appointed to the faculty of the University of Wisconsin School of Medicine in the Department of Human Oncology. He was appointed to Chairman of the Department of Human Oncology in 1997, a position he held for 10 years. From 2010 to 2012, Dr. Mehta was Professor of Radiation Oncology at Northwestern University in Chicago, where he was also Co-Leader of the Robert H. Lurie Cancer Center Solid Tumor Investigational Program.

Dr. Mehta has published widely, including several hundred journal articles and book chapters in the fields of thoracic and central nervous system tumors. His research has also involved the areas of radiosensitizers, radioprotectors, and radiation oncology technology, specifically intensity-modulated, image-guided radiation therapy.

Dr. Mehta has had responsibilities in several leadership roles, including departmental chairmanship, residency program directorship, medical school course directorship, as well as leadership positions in several national organizations including the American Society of Clinical Oncology, the American Society for Radiation Oncology, and the FDA.



Francisco M. Raymo, Ph.D.
Professor of Chemistry
Laboratory for Molecular Photonics
Department of Chemistry
University of Miami

Dr. Francisco M. Raymo received a Laurea in Chemistry from the University of Messina (Italy) in 1992 and a Ph.D. in Chemistry from the University of Birmingham (UK) in 1996. He was a postdoctoral associate at the University of Birmingham (UK) in 1996–1997 and at the University of California, Los Angeles in 1997–1999. He was appointed Assistant Professor of Chemistry at the University of Miami in 2000 and promoted to Associate Professor in 2004 and Full Professor in 2009. His research expertise combines the chemical synthesis of molecular, macromolecular and supramolecular constructs with the characterization of the electrochemical, photochemical and photophysical properties of the resulting materials. His current research interests are directed to the identification of operating principles to activate fluorescence, under the influence of chemical and optical stimulations, with the ultimate goals of detecting cancer cells, imaging biological samples with spatial resolution at the nanometer level and monitoring dynamic processes in real time within living organisms. He authored more than 240 publications, which have been cited approximately 14,000 times already, and his current h-index is 60.



Alice Tomei, Ph.D.
Assistant Professor of Biomedical Engineering
Director, Islet Immunoengineering Laboratory
University of Miami

Dr. Tomei's background uniquely combines expertise in bioengineering and immunology and she is applying her skills to the development of novel immunoengineering platforms to prevent rejection after islet transplantation and to promote antigen-specific tolerance for a cure of type 1 diabetes. To that end, her strategy is to design and develop novel technology platforms with strong clinical translation potential that are supported by solid mechanistic studies in preclinical models of type 1 diabetes that are relevant to the human disease. Her enthusiastic commitment to type 1 diabetes cure-focused research is matched by a solid track record of academic achievements and translational efforts. She has trained in the best engineering school in Italy, the Politecnico di Milano. She conducted her PhD work at the École Polytechnique Fédérale de Lausanne (EPFL), Switzerland, under the mentorship of Dr. Melody Swartz, world leader in lymphatic and cancer mechanobiology. She conducted her postdoctoral fellowship at EPFL in the laboratory of Dr. Jeffrey Hubbell, world leader in molecular engineering, and in collaboration with Dr. Cherie Stabler, a leader in diabetes bioengineering research. In recognition of these accomplishments, in 2012, Dr. Tomei was invited to become part of the prestigious Juvenile Diabetes Research Foundation (JDRF) encapsulation consortium, which gathers the world leaders in islet encapsulation and transplantation, and promotes collaborations, sharing of data and protocols with the overall goal of advancing the field. Dr. Tomei has presented her research work at several international conferences, including at the Key Opinion Leaders Meeting on Stem Cell Derived Beta Cells at Harvard Medical School in Boston in October 2016, at the annual meeting of the Immunology of Diabetes Society in San Francisco in January 2017, and at the annual meeting of the international society for cellular therapy (ISCT) in the workshop on special advancements in cellular therapies and regenerative medicine in digestive diseases in London, in May 2017, and at the annual meeting of the American Diabetes Association in San Diego in June 2017. Finally, she was invited to serve as member of the grant review panels for both the JDRF and for the California Institute for Regenerative Medicine (CIRM). Dr. Tomei's research has been funded by the Diabetes Research Institute Foundation, the Iacocca Family Foundation, the Juvenile Diabetes Research Foundation (JDRF), the Helmsley Trust, the Tronchetti Provera Foundation, the Children with Diabetes Foundation, the Department of Defense, and the National Institute of Health, including a recently awarded JDRF career development award. In recognition of her research productive, Dr. Tomei was recently awarded the University of Miami College of Engineering 2016 Eliahu I. Jury Early Career Research Award for obtaining major research grants. These important achievements further highlight her recognition in the field of immunoengineering for type 1 diabetes.



Valérie Trentesaux

Attachée for Science and Technology (Based in the Consular Offices of Atlanta)
Embassy of France in Washington DC

Valerie has double skill in industrial and academic research, French and international. She is specialist in Innovation and technology transfer's services. She is familiar with the research institutional mechanisms.

As member of the Executive Committee of Inserm Transfert – Private affiliate of the French National Institute for Health (INSERM) - she supervised the institutional relationships from 2006 to 2015. She represents Inserm Transfert to the French Minister for Education and Research, and participated in 2010, to the task force for the 1 billions euros tenders dedicated to the technology transfer under the program called “Investissements d’Avenir”. In close contact with scientists, she set numerous partnerships between Inserm Transfert from private to public research agencies.

She was an active member of the French technology transfer life sciences comity (Covalliance).

From 1997 to 2006, as she worked at Pasteur Institute in the Technology Transfer Department, Valerie had the responsibility of the partnership agreements. She was the interface between Industries, scientists and research agencies.

Member of the board of the World AIDS Foundation (WAF) and the French and American Foundation (FAAF), she developed the partnership with the National Institute of Health (NIH), in USA.

During 1992 to 1997, as she worked at Sanofi Diagnostics Pasteur, she was in charge of its worldwide license agreements portfolio, she gained experience in pharmaceutical industry and her enthusiasm for research deepened.

Valerie studied in a business school called ISTEC.

HORIZON 2020 and EURAXESS PRESENTER



Viktoria Bodnarova

EURAXESS North America Regional Representative

Viktoria Bodnarova is the Regional Representative for EURAXESS North America, responsible for Canada and the US, as of 2013. Her main role is to inform the community of researchers of all scientific domains and nationalities based in North America about the funding and career opportunities the European Research Area

(ERA) offers (European, national or regional funding opportunities). Another important role is the management of the European Scientific Diasporas in North America initiative together with the EU Delegations and EU Member/Associated Countries.

Prior to her position in the US, she was a Project Manager and EURAXESS Network Coordinator at the Academy of Sciences of the Czech Republic. Viktoria holds a Master of Arts degree in International Relations and European Studies from the Metropolitan University in Prague. During her university studies, she participated in two exchange programs at Trent University (UK) and Concordia University (Canada).