



3rd NYU Biomedical and Biosystems Conference
AGENDA
NYU ABU DHABI SAADIYAT CAMPUS
Institute Conference Center (Building A6)
12-14/JANUARY/2020

Sunday, January 12, 2020 | DAY 1

8:15 to 9:00AM **Registration and Coffee, A6 - Foyer**

A6 - Lecture Hall

9:00 to 9:20AM Opening Welcome: Fabio Piano

9:20 to 10:00AM Lead Talk: Jelena Kovacevic
Biomedical and Health Related Research at NYU Tandon

10:00 to 10:40AM Lead Talk: Abraham Lee
Microfluidic Precision Medicine – Identifying the Minimal Representative Unit for top
down Diagnostics and Bottom up Treatment

10:40 to 11:00AM **Coffee Break, A6 - Foyer**

11:00 to 11:40AM Lead Talk: Zhong-Lin Lu
Evaluating Myelin Integrity in the Optic Nerve with Myelin SHIFT MRI

11:40 to 12:20PM Lead Talk: Rui L. Reis
New Approaches Using Biodegradable Polymers and Stem Cells for Regenerative and
Precision Medicine Approaches

12:20 to 1:20PM **Lunch Break, A6 – Foyer**

Biomaterials and Tissue Engineering	Biosystems, Bioelectronics, and Biosensors	Biomedical and Clinical Imaging
A6 - 004	A6 - Lecture Hall	A6 - 005
1:20 to 1:40PM		
Ryan Branski The Most Bioactive Organ-biomaterials and Novel Therapeutics for the Vocal Folds	Sameer Sonkusale Flexible Thread-Based Biomedical Diagnostics and Therapy	Joel S. Schuman New Technology for Glaucoma Assessment-Visible light Optical Coherence Tomography
1:40 to 2:00PM		
Mrityunjay Doddamani 3D Printed Heart for Pre-operative Clinical Practice	Sahika Inal Organic Electronics for Biointerfacing	Yao Wang Machine Learning for Medical Image Processing
2:00 to 2:20PM		
Lukasz Witek 3D Printing Strategies for Extensive Bony Defect Reconstructions	Uchechukwu Wejinya Fabrication of Nanosurfaces for Nano-Bio Applications	James Fishbaugh Time Will Tell: Trajectories of Growth and Disease Progression from Spatiotemporal Analysis of Longitudinal Imaging
2:20to 2:40PM		
Thorsten Kirsch CRLF1 and Cartilage Maintenance and Repair	Tuncay Alan Ultrafast Star-Shaped Acoustic Micromixers for High throughput Synthesis of Functional Nanoparticles	Lama Al-Aswad Detecting Undiagnosed Eye Disease Using Mobile, Real- Time Teleophthalmology in At-Risk Populations
2:40 to 3:00PM		
Nikhil Gupta Machine learning methods applied to characterization of viscoelastic properties of biomaterials	Deji Akinwande Wearable tattoo sensors based on graphene/2D materials	Hiroshi Ishikawa Artificial Intelligence in Glaucoma

3:00 to 3:20PM

Coffee Break, A6 - Foyer

Translational Medicine	Biosystems, Bioelectronics, and Biosensors - Part 2	Biomedical and Clinical Imaging - Part 2
A6 - 004	A6 - Lecture Hall	A6 - 005
3:20 to 3:40PM		
Homero Rivas Improving Global Access to Healthcare through Digital Health	Shuichi Takayama Microfluidic Studies of Lung Injury, Infection, and Fibrosis	Andreas H. Hielscher Vascular Optical Tomographic Imaging of Peripheral Artery Disease for Diabetic Foot Syndrome
3:40 to 4:00PM		
Yong Shin Development of Diagnostic Platform using Biomedical Engineering Techniques and its Clinical Applications	Mohammed Zourob An integrated and ultrasensitive Biosensors & Diagnostic tools for Biomedical Applications	Anastasios Hantzakos Imaging of the larynx: What is next?
4:00 to 4:20PM		
Carlos Abril Minimally Invasive Vista: Use of Magnetics in Laparoscopic Surgery	Rong Fan Single-cell BioMEMS tools for monitoring cancer immunotherapy	Osama Abdulla Integrating Advanced MRI Derived Biomarkers in the UAE Healthy Future Study
4:20 to 4:40PM		
Gehad ElGhazali Precision medicine for treatment of Primary Immunodeficiency disorders	Yanyi Huang Accurately assessing genomic heterogeneity in complex biosystems: from bulk to single cells	Dipesh Chaudhury Effect of Social Stress on Circadian Rhythms and Sleep-Wake Cycle
4:40 to 5:00PM		
Farah Emad Shamout Machine Learning for the Detection of Clinical Deterioration	Dan Dongeun Huh Human organs-on-a-chip: Microengineered biomimicry of human physiological systems	Khalil Ramadi Focal Interfacing with the Heterogeneous Brain

5:00 to 6:30PM Poster Session, A6 - Foyer

6:30 to 8:00PM Plenary Talk: Wolfgang Drexler
Seeing the Invisible – Optical Coherence Tomography in Medicine
Followed by refreshments and light supper

Monday, January 13, 2020 | DAY 2

8:00 to 8:30AM Registration and Coffee, A6 - Foyer

A6 - Lecture Hall

8:40 to 9:20AM Lead Talk: Andrew D. Hamilton
Heterofunctionalized Proteomimetic Foldamer Libraries for Biomolecular Recognition

9:20 to 10:00AM Lead Talk: Amy Herr
Precision Medicine: Profiling Cellular-to-Molecular Diversity using Microengineered Tools

10:00 to 10:20AM Coffee Break, A6 - Foyer

10:20 to 11:00AM Lead Talk: Soren Brage
Physical Activity and Metabolic Disease: An Epidemiological Perspective

11:00 to 11:40AM Lead Talk: Mohamad Sawan
Biosystems for the Diagnostic and Treatment of Neurodegenerative Diseases

11:40 to 12:00AM Group Photo, A6 - Foyer

12:00 to 1:00PM Lunch A6 - Foyer

Public Health	Biosystems, Bioelectronics & Biosensors - Part 3	Drug Delivery and Discovery
A6 - 004	A6 - Lecture Hall	A6 - 005
1:00 to 1:20PM		
Hussein Saadi Diabetes and Obesity in the Middle East: Challenges and Opportunities	Sindy Tang Microfluidic tools for single-cell wound repair studies	Donna Huryn Academic Drug Discovery: Playing to the Strengths to Address Challenging Targets and Unmet Medical Needs in Cancer and Kidney Disease
1:20 to 1:40PM		

<p>Riad Bayoumi An eight-year population- based study of the glycemic status of women during pregnancy</p>	<p>Je-Kyun Park Simple flow control in paper and PDMS for microfluidic point-of-care applications</p>	<p>David Rottela Discovery and Optimization of Kinase Inhibitors to Treat Parasitic Diseases</p>
<p>1:40 to 2:00PM</p>		
<p>Aiden Doherty Machine learning of wearable sensor data for the early detection of disease</p>	<p>Anas Alazzam Microfluidic systems for manipulation of cells using dielectrophoresis</p>	<p>Michael P. Pollastri Academic drug discovery: discovering neglected tropical disease therapeutics through a combination of lead repurposing and distributed drug discovery</p>
<p>2:00 to 2:20PM</p>		
<p>Kinda Khalaf The effect of Obesity on plantar pressure variability in young adults using traditional and non-linear dynamic measures</p>	<p>Suman Chakraborty Diagnostics with Blood at Extreme Point of Care</p>	<p>Marc Walters Will Silver Diamine Fluoride Supplant the Dentist's Drill?</p>
<p>2:20 to 2:40PM</p>		
<p>Habiba Alsafar Filling in the Gaps: The 1st Whole Genomes from the United Arab Emirates (UAE)</p>	<p>Yu Shrike Zhang Formulating Bioinks for Tissue Bioprinting</p>	<p>Sunil Kumar Protein Mimetic based structural and functional analysis of amyloid proteins</p>
<p>2:40 to 3:00PM</p>		
<p>Raghib Ali The UAE Healthy Future Study – Opportunities for Collaborative Research</p>	<p>Kalle Levon Biosensing using Hybrid System of Organic Electronics and CMOS technology</p>	<p>Mazin Magzoub Designed cell-penetrating peptide inhibitors of amyloid-beta aggregation and cytotoxicity</p>

Tuesday, January 14, 2020 | DAY 3

8:00 to 8:30AM Registration and Coffee, A6 - Foyer

A6 - Lecture Hall

8:40 to 9:20AM Lead Talk: E. Murat Tuzcu
Transcatheter Treatment of Heart Disease - A century of Innovation

9:20 to 10:00AM Lead Talk: Emmanuel Delamarche
Addressing the Pain Points of Point-of-Care Diagnostics Using Advanced Microfluidic Concepts

10:00 to 10:20AM Coffee Break, A6 - Foyer

10:20 to 11:00AM Lead Talk: Daniela Rhodes
Application of Cryo-EM and Correlative Light and EM Methods to Understanding the Structure and Function of Telomeres

11:00 to 11:40AM Lead Talk: Andrzej Lewenstam
Electrochemical Sensors in Routine Clinical Chemistry - Challenges and Perspectives

11:40 to 12:00AM Sponsor Talk

12:00 to 1:00PM Lunch, A6 - Foyer

Quantitative Biology	Biosystems, Bioelectronics & Biosensors - Part 4	Biomaterials and Tissue Engineering - Part 2
A6 - 004	A6 - Lecture Hall	A6 - 005
1:00 to 1:20PM		
Giorgio Scita Solid-to-Liquid phase transition in pathophysiology	Daniel Irimia Neutrophilic Chain-Reactions during Infections and Sepsis	Bikramjit Basu Translational Research at the Intersection of Engineering, Biology and Medicine: Opportunities and Challenges
1:20 to 1:40PM		

Amitabha Chattopadhyay Exploring Endocytosis of the Serotonin1A Receptor: Role of Membrane Cholesterol	Stephen Arnold Assembly of a multiplexed & single molecule sensitive nanoplasmonic-WGM Biosensor using light forces	Roger Narayan 3D Printing Approaches for Drug Delivery
1:40 to 2:00PM		
Piul S Rabbani Multipotent mesenchymal cell Exosomes and their application in diabetic wound healing	Wenhui Wang Microfluidic devices for single cell manipulation and analysis	Benjamin Keselowsky Biomaterials and Immuno-Engineering for Tolerance and Suppression
2:00 to 2:20PM		
George Shubeita Navigating the Crowded Cell	Mohamed Abdelgawad Effect of geometrical and flow parameters on nanoprecipitation of polymeric nanoparticles inside Microchannels	Yaser E. Greish Biomimetic deposition of bone-like mineral: towards the regeneration of defective hard tissue
2:20 to 2:40PM		
Piergiorgio Percipalle Chromatin and transcriptional regulation during development and differentiation: the role of cytoskeletal proteins	Weiqiang Chen Engineering an in vitro leukemia niche model for personalized CAR T-cell immunotherapy	Vijay Sanjairaj Electrohydrodynamic- jet 3D-Printed Polycaprolactone/ Polypyrrole conductive scaffolds as potential nerve guide conduits for peripheral nerve injury repair
2:40 to 3:00PM		
Mohamed Al-Sayegh Nuclear β -actin contributes to an open chromatin for activation of adipogenic pioneer factor CEBPA during transcriptional reprogramming	Mohammad A. Qasaimeh Advanced Microfluidic Probes for Biomedical Applications	Jeremy Teo (Immuno) Mechanobiology of Antigen Presenting Cells and Implications for Tissue Engineering

3:00 to 3:20PM

Coffee Break, A6 - Foyer

Translational Medicine - Part 2	Biosystems, Bioelectronics & Biosensors - Part 5	Frontiers in Bioengineering and Medicine
A6 - 004	A6 - Lecture Hall	A6 - 005
3:20 to 3:40PM		
Matthew Kroh Biomedical Innovation: Development of New Technologies in Academic Medicine	Marcella M. Gomez Prediction and Control of Biological Systems using an NN-based architecture	Sunil K. Agrawal Robotics to Characterize, Retrain, and Restore Human Movements
3:40 to 4:00PM		
Francesco Serino The great long term results with uncertain mechanism of action of Cyanoacrylate in venous surgery	Paul Laibinis Surface Modification for Controlling Biomolecular Adsorption	Peter Yingxiao Wang Molecular and Cellular Immune-engineering for Cancer Therapy
4:00 to 4:20PM		
Florian Roser From bench to brain – Translational Research in Neurosurgery	Rafael Song Phenotyping of Thrashing Forces Exerted by Partially Immobilized C. elegans using Elastomeric Micropillar Arrays	S. Farokh Atashzar Intelligent NeuroRobotics: From Smart Rehabilitation to Agile Assistance
4:20 to 4:40PM		
Rihab Nasr Circulating microRNA as potential biomarkers in Early Stage Breast Cancer in Lebanese women	Serdal Kirmizialtin Understanding DNA attraction in divalent ions	Sylvie Coupaud Rehabilitation strategies to reduce or reverse disuse- related bone loss
4:40 to 5:00PM		
Matija Snuderl Machine learning and AI in molecular diagnostics and clinical management of cancer	Andras Gyorgy Competition for shared cellular resources decreases the robustness of toggle switches by pushing them towards monostability	Wael M. Rabeh Glucose Metabolism for the Inhibition of Cancer Growth

5:00 to 5:40PM	Closing Session	A6 - Lecture Hall
----------------	-----------------	-------------------

5:00 to 5:40PM Closing Session, A6 - Lecture Hall