

Nanomaterials-Nanomedicine Workshop

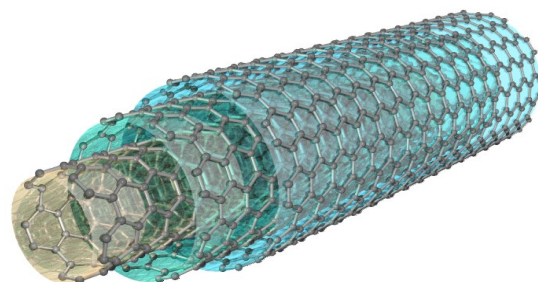
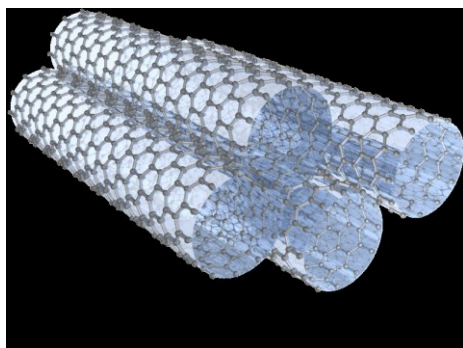
June 7, 2018

Aula magna C11

SPEAKERS:

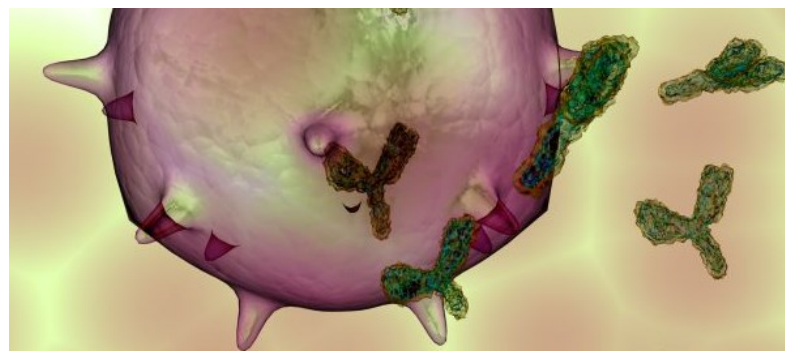
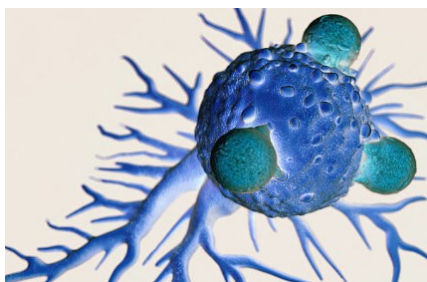
15.00 **Matteo Pasquali** (Rice University, Houston, TX)

Carbon Nanotubes as a solution to the materials-energy nexus?



16.30 **Davide Bedognetti** (Sidra Medical and Research Center in Doha, Qatar)

Systems biology approaches to identify determinants of cancer immune responsiveness



Matteo Pasquali is the A. J. Hartsook Professor of Chemical & Biomolecular Engineering, Chemistry, and Materials Science & NanoEngineering at Rice University, where he also serves as Chair of the Chemistry Department and previously served as Co-Director of the Carbon NanoTechnology Laboratory, as Master of Lovett College and as member of the academic senate. After receiving his Laurea from University of Bologna and PhD from University of Minnesota, Matteo joined Rice University in 2000 to start a laboratory on soft materials, which evolved into a key center for the scalable manufacturing and application of carbon nanotubes (CNTs) and graphene materials with enhanced mechanical, electrical and thermal properties. The laboratory houses about 20 PhD students and postdocs and currently targets applications in wearables, energy transmission and harvesting, biomedicine, aerospace, and defense. These CNT materials are already incorporated into prototypes (field emitters, data cables) and high-end products (audio cables). Matteo has advised over 90 graduate students and postdocs, who are now in key positions in industry, academia, national laboratories, startups, and finance. Matteo's work is funded by wide range of industries ranging from international and national oil companies to automotive, aerospace, electronics, and high tech companies. Matteo founded two companies, DexMat (smart CNT materials) and NanoLinea (medical applications of CNT fibers). Matteo's work has been recognized by numerous awards, including the NSF CAREER, Goradia innovation prize, Schlack award for man-made fibers, and multiple NASA Tech Brief Awards. Matteo is an elected Fellow of the American Physical Society.



Dr. Davide Bedognetti, MD, PhD is the Head of the Tumor Biology, Immunology, and Therapy Lab, and the Director of the Immunology, Inflammation, and Metabolism Department at Sidra Medical and Research Center in Doha, Qatar. He also serves as Adjunct Associate Professor at the Hamad Bin Khalifa University. Dr. Bedognetti received his MD and PhD in Clinical and Experimental Oncology and Hematology from the University of Genoa, Italy. After completing his medical residency in Medical Oncology in 2008, he joined the Infectious Disease and Immunogenetics Section (IDIS) of the US National Institutes of Health (NIH) where he completed his post-doctoral fellowship. From 2013 to 2015, he served also the Director of the Federation of Clinical Immunology Societies (FOCIS) Center of Excellence at NIH Clinical Center. The main research focus of Dr. Bedognetti's Lab is to define genetic determinants of immune-responsiveness in solid tumors using systems biology approaches. The ultimate goal is to develop novel and more efficient immunotherapeutic strategies. The team employs high-throughput approaches to de-convolute the molecular network of host-tumor interactions, and to understand its relationship with treatment effectiveness. They use samples from clinical studies as starting point of their analyses. Research is performed according to a "Bedside to Bench and Back" (BB&B) approach, defined as follows: i) hypothesis generation through analysis of human samples collected in clinical studies, ii) explanation/validation of the findings through experimental testing, and iii) translation of the results to the clinical setting. He has received several awards including the Merit and Young Investigator Awards of the Conquer Cancer Foundation of the American Society of Clinical Oncology (ASCO). Dr. Bedognetti is Member of the FOCIS Centers of Excellence Steering Committee, Chair of Society for Immunotherapy of Cancer (SITC) Early Career Scientist Committee, and Member of the SITC Cancer Immune Responsiveness Taskforce. He currently is Editor of the Tumor Microenvironment Section for the Journal of Translational Medicine.

