



BMC-GPMLS distinguished lecture series:

Dr. Joseph Loscalzo



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Network Medicine: New Approach to Diagnosis and Treatment of Disease

ABSTRACT: Since the 19th century, clinicians and researchers have used the reductionist approach to study human biology, disease, and therapeutics. Although successful this strategy has major shortcomings, most importantly oversimplification of complex phenomena. Unravelling that complexity in a more integrative way has been limited by restricted data sets and inadequate analytical approaches. Biomedicine is now poised to explore the integrative system responses that govern pathophenotype. Growth in large genomic data sets, detailed phenotyping and improved approaches to network-based analysis provide the opportunity to define the response of biological systems to perturbations. Biomedical science is now able to explore pathobiological complexity. This new field of network medicine, applies systems biology and network science approaches to molecular pathobiology and treatment, offering a novel path toward defining and treating disease, and facilitates the trajectory of true precision medicine.

BIOSKETCH: Dr. Loscalzo obtained his undergraduate degree, his M.D. and PhD in biochemistry at the University of Pennsylvania. After training in internal medicine and cardiology at Brigham and Women's Hospital he joined the Harvard Medical School faculty before moving to Boston University. In 2005 he returned to Harvard, taking up his current role. He is internationally recognized for his work on the vascular biology of nitric oxide, redox biology, systems pathobiology, and network medicine. He has been elected to, among others, the American Association for the Advancement of Science, and the National Academy of Medicine, and received many awards, including the Outstanding Investigator Prize from the International Society for Heart Research. He has participated in the Council of Councils of the National Institutes of Health.

Time: Monday, May 13th, 11.00-12.00

Location: Fróði auditorium, Sturlugata 8