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NOVEMBER 5, 2015
4:00 P.M.
208 LIGHT HALL

ELAZER R. EDELMAN, M.D., PH.D.
PUSHING INNOVATION AT THE CUSP OF ENGINEERING, BIOLOGY AND MEDICINE

Upcoming Discovery Lecture:

SUSAN LINDQUIST, PH.D.
2014 Vanderbilt Prize Winner
Professor of Biology, MIT
Investigator, HHMI
Member, Institute of Medicine
Member, National Academy of Sciences

Nov. 19, 2015
208 Light Hall / 4:00 P.M.
Elazer R. Edelman, MIT Cabot Professor of Health Sciences and Technology, MIT, and Harvard Medical School Professor of Medicine, is a cardiac care unit cardiologist at Brigham and Women’s Hospital and director of MIT’s Biomedical Engineering Center. His research melds clinical and medical training, focusing on how tissue architecture and local biochemical regulation maintain homeostasis. Edelman and his students were amongst the first to validate that vascular diseases are the sum of effects from endogenous growth promoters like heparin and suppressors like heparin-binding growth factors, to define the nomenclature and kinetics of the FGF-2 receptor complex, and demonstrate that mode of growth factor or inhibitor delivery determines biologic effect.

Applied research flows from recapitulating natural regulation. The development and mathematical characterization of perivascular and stent-based drug delivery mimicked natural control of chemomediators, and design of endovascular stents from first principles leveraged understanding of vascular repair. Basic and applied aspects are intimately joined as exemplified by work with antisense oligonucleotides, HDL receptor biology and tissue engineered endothelial implants in vascular and cancer diseases. Almost 300 students and fellows have passed through Edelman’s laboratory.

Elazer R. Edelman is fellow of the American College of Cardiology, American Heart Association, American Institute for Medical and Biological Engineering, American Society for Clinical Investigation, National Academy of Medicine, National Academy of Engineering and National Academy of Inventors. As Chief Scientific Advisor of Science: Translational Medicine and member of the FDA Scientific Board he has set the tone for the national debate on translational research and innovation.