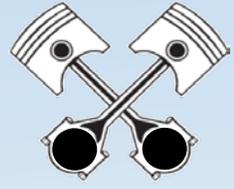


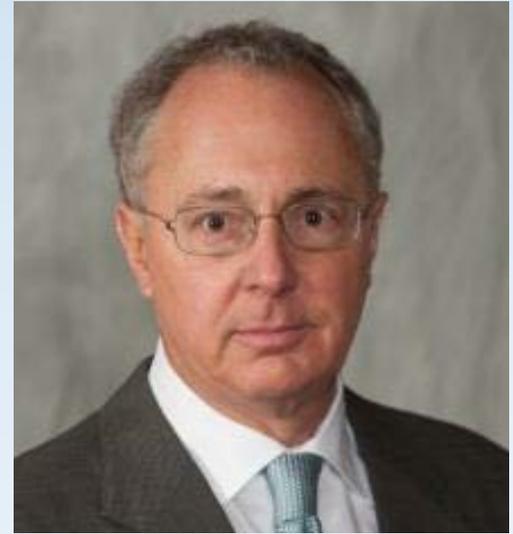


The HEMINAR

HORIZONS OF ENGINEERING, MEDICINE, AND INDUSTRY



Roger Perlmutter, M.D, Ph.D.
Executive Vice President, Merck & Co.
President, Merck Research Laboratories



Date: January 15, 2019
Time: 5:00 – 5:15 pm – Hors d'oeuvres / Discussion
5:15 – 6:15 pm – Seminar
Location: Zayed Main Floor: Arcade Conference Room

Building Better Medicines: *Drug Discovery and Development in the 21st Century*

Abstract: Improvements in human life expectancy during the past 50 years are owed in large part to the development of effective drugs and vaccines. These practical advances, which rest upon an improved understanding of normal physiology and fundamental mechanisms of disease, have dramatically reduced morbidity and mortality owing to infectious agents. While the development of medicines in the 20th century relied almost entirely upon products of organic synthesis, during the past 20 years biologicals have dramatically expanded the pharmaceutical armamentarium. One class of these – **antibodies** – now represents the largest single category of novel therapeutics, with indications spanning metabolic, infectious, rheumatologic, and oncologic diseases. These, in turn, have been joined by **nucleic acids**, for both modulation of gene expression as well as gene editing, and by the advent of **cell-based therapies**, which can in some cases generate what appear to be curative treatments for otherwise fatal hematologic malignancies. Today, progress in the selection of drug candidates, from improved identification of natural products with therapeutic potential, to the design of potent and effective products of chemical and biochemical synthesis, together are yielding experimental treatments for otherwise refractory illnesses. Looking forward, it can be confidently predicted that **further integration of the biological and physical sciences, driven by advanced methods of data acquisition and analysis, will permit the development of new medicines that provide even greater freedom from suffering and disease.**

Biography: Dr. Perlmutter is the Executive Vice President of Merck &Co. and President of Merck Research Laboratories. He was previously EVP and head of R&D at Amgen (2001 – 12) and held leadership positions of increasing responsibility at Merck from 1997 to 2001. Dr. Perlmutter was also professor and chairman of Immunology, University of Washington, and a Howard Hughes Medical Institute investigator. He received his M.D. and Ph.D. degrees from Washington University and pursued clinical training in internal medicine at the Massachusetts General Hospital and the University of California, San Francisco.



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