

Introduction of Dr. Philip A. Sharp, MIT Institute Professor
by
Kenneth P. Morse, Managing Director of the MIT Entrepreneurship Center
on the Occasion of the
First Robert A. Swanson Memorial Lecture
presented at the
Sixth Annual MIT Venture Capital & Private Equity Conference
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It is with great pleasure that I introduce Dr. Philip A. Sharp, MIT Institute Professor, Former head of the MIT Department of Biology, Director of the McGovern Institute for Brain Research, and Nobel Prize winning cancer researcher. He is one of the leading seed crystals in the super saturated solution of Kendall Square and MIT. He is a powerful magnet who has accelerated the growth of the Kendall Square cluster and helped make this area the epicenter of the biotech revolution.

Phil's address today is the first of a planned series of Robert A. Swanson Memorial Entrepreneurship Lectures, designed to acknowledge and perpetuate Bob Swanson's special qualities of leadership, passion, and entrepreneurship. Bob was the founder of Genentech, the sparkplug of the Big Bang of the Biotech Industry, which, as we heard this morning, is still evolving at warp speed into myriad new exciting frontiers.

As a student, Bob used to eat lunch here in this great hall. He was a chemistry major who aspired to be a banker until he was inoculated with the entrepreneurial virus in the New Enterprises course which required him to take an internship working in a start-up company on a problem that was keeping the CEO awake at night. The start-up was called Thermo Electron and the CEO was MIT alum George Hatsopoulos. Bob got the bug, and with some coaching from his MIT mentor, and later Kleiner Perkins, Bob started Genentech and never looked back.

The Bob Swanson Lectureship is funded by

Ann and John Doerr: John is a partner at Kleiner Perkins Caufield & Byers;
Diana Frazier, MIT Class of '81 and Peter Lawrence, both partners of FLAG
Capital Management;
Laura & Ken Morse, MIT Class of '68; and
Judy, Katie, and Erica Swanson.

It is totally appropriate and excellent that Professor Sharp was unanimously elected by our Committee to give the first Swanson Lecture. Phil and Bob were professional colleagues who became good friends, sharing a passion for, and commitment to, clarifying the mysteries of the primordial soup of DNA from which all life comes, and creating successes from the opportunities provided by their improved understanding of these mysteries.

Phil earned the 1993 Nobel Prize in Medicine and Physiology by making sense out of nonsense. Let me explain:

Dr. Sharp discovered that genes in cells with a nucleus are linked along their strand of DNA by surplus DNA segments that have no apparent protein message (hence, they are often referred to as “nonsense DNA”). Dr. Sharp subsequently discovered that DNA is copied into RNA, and the cell’s RNA splicing machinery then clips out the unneeded nonsense sections and splices the genetic material together as the model for assembling proteins.

Professor Sharp told a news conference at the MIT Center for Cancer Research when he won the Nobel Prize that 99% of the 100,000 genes in the human body share this structure.

Recent research suggests that some diseases – including cancer – may be directly due to breakdowns in the protein assembly process involving the removal of nonsense genetic segments. Dr. Sharp’s studies showed that protein production is far more complex than previously imagined. The discovery of surplus DNA has been called “perhaps the most unanticipated observation in molecular biology, with implications for the evolutionary origin of genes” by Dr. Pierre Chambon, professor of biochemistry at the Institute de Chimie Biologique in Strasbourg, France, and a pioneer in the field.

Like the majority of our most talented professors, Phil has sharp entrepreneurial instincts and impressive execution skills. Phil is the Co-Founder and Chairman of the Scientific Board of Biogen, and a member of its Board of Directors. He is also Co-Founder of Alnylam Pharmaceuticals where he serves as Chairman of the Scientific Board and a member of the company’s Board of Directors. He is an elected member of the National Academy of Science, the Institute of Medicine, the American Philosophical Society, the American Academy of Arts & Sciences, and an Honorary Fellow of the Royal Society of Edinburgh, Scotland.

Phil has adapted to and adopted New England most appropriately. When asked by our hosts, the VC Club, if he would like a car to pick him up for today’s conference, he replied instantly: “Don’t worry, young man, I know how to get to MIT in the snow!”

Dr. Philip Sharp...