375 Years of Science

by Fatima Mirza

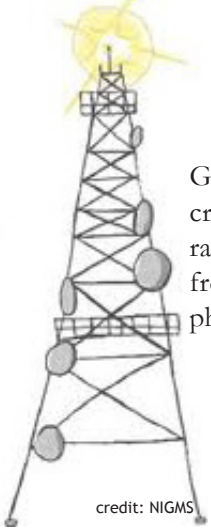
Harvard is celebrating its 375th birthday this year! Over the course of the past four centuries, the students and staff at Harvard created a name for the institution. Their dedication to discovery and drive for understanding shaped the university and the world at large. However, some of the most profound discoveries arose from serendipity. Albert Einstein summarized the nature of discovery through perhaps one of the most universally accepted ideas of all time: "If we knew what we were doing, it wouldn't be called research".

1782

Harvard Medical School founded (1)

1867

Harvard School of Dental Medicine founded (1)



credit: NIGMS

1872

Graduate School of Arts and Science founded (1)

1919

George Washing Pierce invented the crystal oscillator, which allowed a radio station to broadcast at a fixed frequency and facilitated multiple phone calls on a single line. (2)

1922

Harvard School of Public Health Founded (1)

1928

Phillips Drinker invented the Iron Lung at the Harvard School of Public Health in order to remedy problems in breathing for polio patients. (1)

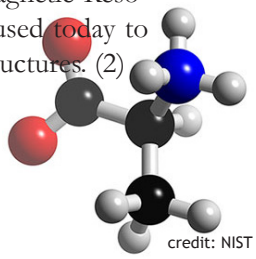
credit: Mary Hilpertshauser, CDC

1944

Howard Aiken created the Mark I, the first large-scale automatic and digital computer. (2)

1946

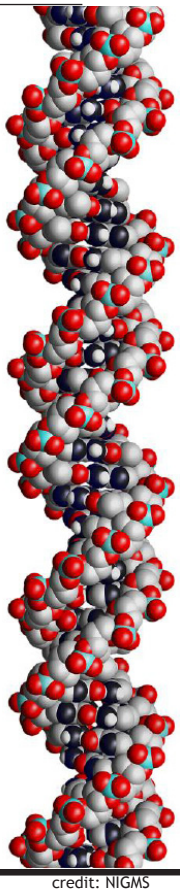
Edward M. Purcell shared the 1952 Nobel Prize in Physics for his discovery of Nuclear Magnetic Resonance, that is widely used today to visualize molecular structures. (2)



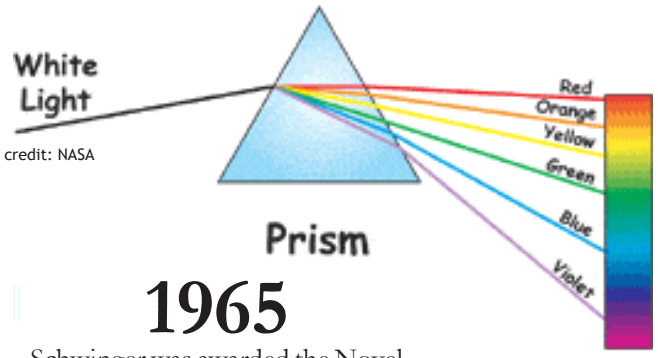
credit: NIST

1950-60's

DNA, Genes, and Proteins James Watson helped in the discovery of DNA, and continued his work in understanding the interplay of DNA and proteins at Harvard. (2)



credit: NIGMS



credit: NASA

1965

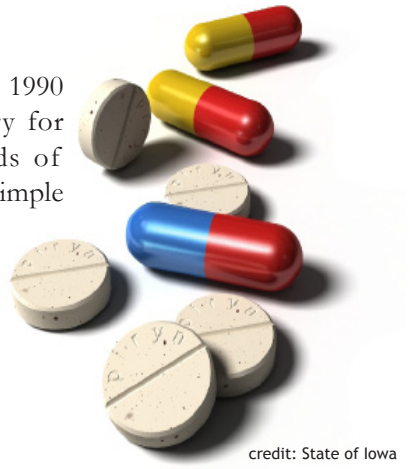
Schwinger was awarded the Novel Prize in Physics in 1965 for work with Quantum Electrodynamics, describing how light and matter interact. (2)

1970s

Sheldon L. Glashow and Steven Weinberg were awarded the 1979 Nobel Prize in Physics for describing the relationship between electromagnetism and radioactivity. The understanding of these two forces as subdivisions of another overarching force provided an insight into the nature of matter. (2)

1980s

Elias J. Corey received the 1990 Nobel Prize in Chemistry for discovering new methods of synthesizing drugs from simple constituents. (2)

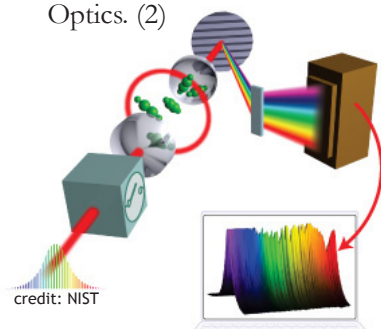

credit: State of Iowa

2007

Harvard School of Engineering and Applied Science Founded (1)

1963

Roy Jay Glauber explained the differences in the fundamental characteristics of different types of light in the field of Quantum Optics. (2)


credit: NIST

1959

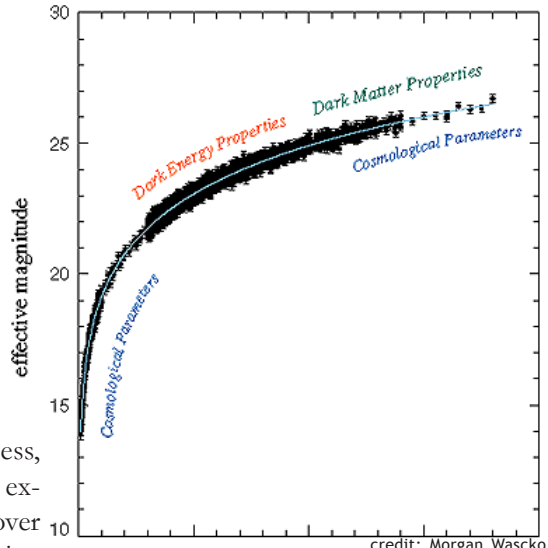
Dr. Bernard Lown, currently a professor at the Harvard School of Public Health, conducted research with Defibrillators and Cardioverters to understand controlling disturbances in the electrochemical function of the heart. (2)

1970s

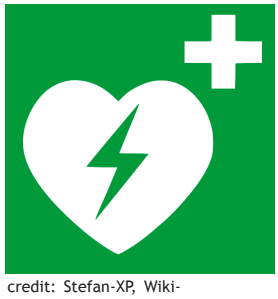
Baruj Benacerraf received the 1980 Novel Prize in Medicine and Physiology for his description of the underlying processes in immunization, allergies, and transplant rejections. (2)

1998

Saul Perlmutter, Adam Riess, and Brian Schmidt studied expanding stars only to discover dark energy, the force pushing galaxies away from one another. (2)



credit: Morgan Wascko, Louisiana State University


credit: Stefan-XP, Wikimedia Commons

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1. "A Century of Progress." Harvard Medical School History. The President and Fellows of Harvard College, Jul 2010. Web. 26 Oct 2011. <http://hms.harvard.edu/public/history/history.html>.
2. "Harvard University." Discoveries and Innovations that Changed the World. University-Discoveries, n.d. Web. 26 Oct 2011. <http://university-discoveries.com/harvard-university>.