

## **NOBEL PRIZES AWARDED TO YALE ALUMNI AND FACULTY, 1934-2006**

TOTAL LAUREATES - 24

### **NOBEL PRIZES IN CHEMISTRY**

#### **ALUMNI**

Fenn, John, PhD 1940. Awarded the Nobel Prize in Chemistry 2002, "for the development of methods for identification and structure analyses of biological macromolecules."

Onsager, Lars, PhD 1935, Yale professor of chemistry. Awarded The Nobel Prize in Chemistry 1968, "for the discovery of the reciprocal relations bearing his name, which are fundamental for the thermodynamics of irreversible processes."

#### **FACULTY**

Altman, Sidney, Yale professor of biology, 1980-. Co-winner of The Nobel Prize in Chemistry 1989, "for their discovery of catalytic properties of RNA." (RIBONUCLEIC ACID, complex compound of high molecular weight that functions in cellular protein synthesis and replaces DNA (deoxyribonucleic acid) as a carrier of genetic codes in some viruses

### **NOBEL PRIZES IN PHYSICS**

#### **ALUMNI**

Davis, Raymond Jr., PhD 1942. Co-Awarded the Nobel Prize in Physics 2001 (with Masatoshi Koshiba and Riccardo Giacconi), "for pioneering contributions to astrophysics, which have led to the discovery of cosmic X-ray sources."

Gell-Mann, Murray, BS 1948. Awarded The Nobel Prize in Physics 1969, "for his contributions and discoveries concerning the classification of elementary particles and their interactions."

Lawrence, Ernest Orlando (1901-1958), PhD 1925. Physicist who in 1930 invented and continued to develop the cyclotron (particle accelerator). For his researches in atomic structure and transmutation he received the 1939 Nobel Prize in Physics. With the cyclotron he produced artificially radioactive elements and neutrons useful in nuclear, chemical, and biological research. During WWII he was in charge of the development of the electromagnetic process of separating Uranium-235 for the production of the atomic bomb.

Lee, David, PhD 1959. Co-winner of The Nobel Prize in Physics 1996, "for their discovery of superfluidity in helium-3."

#### **FACULTY**

Lamb, Willis E, Jr., Yale professor of physics, 1962-74. Co-winner of The Nobel Prize in Physics 1955, "for his discoveries concerning the fine structure of the hydrogen spectrum."

## **NOBEL PRIZES IN PHYSIOLOGY OR MEDICINE**

### **ALUMNI**

Enders, John Franklin, BA 1919. American bacteriologist. The 1954 Nobel Prize in Physiology or Medicine was awarded jointly to Enders, T. H. Weller, and F. C. Robbins for their success in growing polio viruses in cultures of various tissues.

Gilman, Alfred G. BS 1962. Co-winner of The Nobel Prize in Physiology or Medicine 1994, "for their discovery of G-proteins and the role of these proteins in signal transduction in cells."

Lederberg, Joshua, PhD 1948. Awarded The Nobel Prize in Physiology or Medicine 1958. "for his discoveries concerning genetic recombination and the organization of the genetic material of bacteria"

Richards, Dickinson, BA 1917. Co-winner of The Nobel Prize in Physiology or Medicine 1956, "for their discoveries concerning heart catheterization and pathological changes in the circulatory system."

Whipple, George, BA 1900. co-winner of the 1934 Nobel Prize in Physiology or Medicine "for their discoveries concerning liver therapy in cases of anaemia."

Wieschaus, Eric, PhD 1974. Co-winner of The Nobel Prize in Physiology or Medicine 1995, "for their discoveries concerning the genetic control of early embryonic development."

### **FACULTY**

Palade, George E., Yale professor of cell biology, 1973-. Co-winner of The Nobel Prize in Physiology or Medicine 1974, "for their discoveries concerning the structural and functional organization of the cell.

Tatum, Edward L., Yale faculty botany and microbiology, 1945-8. Co-winner of The Nobel Prize in Physiology or Medicine 1958 for their discovery that genes act by regulating definite chemical events."

Theiler, Max, Yale epidemiology faculty 1964-67. Awarded The Nobel Prize in Physiology or Medicine 1951 "for his discoveries concerning yellow fever and how to combat it"

## **NOBEL PRIZES IN ECONOMICS**

### **ALUMNI**

Akerlof, George A., 1962. Co-Awardee of 2001 Nobel prize for economics (with A. Michael Spence and Joseph E. Stiglitz), "for their analyses of markets with asymmetric information".

Phelps, Edmund S., 1959 PhD. Awarded the 2006 Nobel in Economics, “for his analysis of intertemporal tradeoffs in macroeconomic policy.” Phelps’ work has been credited with deepening our understanding of the relation between short-run and long-run effects of economic policy. His contributions have had a decisive impact on economic research as well as policy.

Vickrey, William, 1935. Economist who was credited with innovations in the analysis of the problems of incomplete, or asymmetrical, information. Co-Awardee of 1996 Nobel Prize for economics for his work on informational asymmetries. He concentrated on solutions to many practical problems in public transportation and highway and utility use.

#### FACULTY

Debreu, Gerard, Yale professor of economics, 1955-62. Awarded the 1983 Nobel in Economics, "for having incorporated new analytical methods into economic theory and for his rigorous reformulation of the theory of general equilibrium."

Koopmans, Tjalling, Yale professor of economics, 1955-85. Co-winner of the 1975 Nobel Prize in Economic Sciences, for his “contributions to the theory of optimum allocation of resources.” At Yale he developed econometrics, a branch of economics devised to mathematically analyze problems involving productivity and efficiency.

Tobin, James, Yale professor of economics, 1950-. Awarded the Nobel Prize in Economics, 1981, "for his analysis of financial markets and their relations to expenditure decisions, employment, production and prices."

#### **NOBEL PRIZE IN LITERATURE**

Lewis Sinclair, BA 1907. Author of 'Main Street' (1920), 'Babbitt' (1922), 'Elmer Gantry' (1927), and 'Dodsworth' (1929). Awarded Pulitzer Prize 1926 NOVEL: Arrowsmith, but he refused to accept the prize. In 1930 he won the Nobel Prize in literature for the body of his writings. Lewis was the first American to receive the award. His writings revealed the hypocrisy of contemporary American life that stifles the spirit, adding to the dictionary the term “Babbitry,” a business or professional man who conforms unthinkingly to prevailing middle-class standards, and the phrase “Main Street mentality.” Lewis continued to write prolifically, with five novels on the bestseller lists from 1933-45.