Nobel Laureates and the American Cancer Society

The American Cancer Society is honored to have given funding to 50 investigators who went on to win the Nobel Prize, considered the highest accolade any scientist can receive. This is a tribute to the Society's Research program and the strength of its peer-review process.

Congratulations to Our 50th ACS-Funded Nobel Prize Winner

Carolyn Bertozzi, PhD, research chemist at Stanford University: **1993** Awarded ACS

research grant **1997** Awarded 2nd ACS research grant **2000** Awarded 3rd ACS research grant **2000-2022** Mentored 8 ACS-funded researchers **2022** First woman funded by ACS to win a Nobel Prize

Read all about it.

Nobel Prize Winners

Carolyn Bertozzi, PhD

2022 Nobel Prize | Chemistry

Developed click chemistry and bio-orthogonal chemistry. Click chemistry enables technology that can be used in the design of precision cancer therapeutics. She specifically developed click reactions that work inside living organisms. Her bio-orthogonal reactions take place without disrupting the normal chemistry of the cell. These reactions are now used globally to explore cells and track biological processes.

William G. Kaelin Jr, MD

2019 Nobel Prize | Physiology or Medicine

Discovered the molecular “switch” that controls how cells respond to changing oxygen levels. Oxygen sensing is key to many diseases – for example, cancer cells hijack the oxygen process to increase their metabolism and fuel their growth. This discovery has had a significant impact on understanding cancer and has helped establish new treatment strategies. This prize was awarded jointly to William G. Kaelin, Jr., MD, Sir Peter J. Ratcliffe, MD, and Gregg L. Semenza, MD, PhD.

Gregg L. Semenza, MD, PhD

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James E. Rothman, PhD

2013 Nobel Prize | Physiology or Medicine

Defined the control of the movement of membranes in cells, which contributes greatly to

prize was awarded jointly to Mario R. Capecchi, PhD, Sir Martin J. Evans, PhD, and Oliver Smithies, PhD.

Oliver Smithies, PhD

2007 Nobel Prize | Physiology or Medicine

Developed techniques for manipulating individual genes, using mouse embryonic stem cells. This allowed for a more precise understanding of how individual genes worked in the mouse and accelerated the use of the mouse as a model of human cancer. This work has led to the identification of genes that are targets of cancer therapies. Dr. Smithies was funded for earlier work on genetic control of protein structure and synthesis. This prize was awarded jointly to Mario R. Capecchi, PhD, Sir Martin J. Evans, PhD, and Oliver Smithies, PhD.

Roger D Kornberg, PhD

2006 Nobel Prize | Chemistry

Studied the molecular basis of eukaryotic transcription

Craig C. Mello, PhD

2006 Nobel Prize | Physiology or Medicine

Helped discover RNA interf.f2 344.84 Tm /F2 12tDn3fof pr sold 0 rg /GS99 gs (Hby double-s0 0 chi,2t

Helpg4/F2 12 Tf 0 0 0 rg /GS96 gs (Studied the mo157.1A interf.f2 344.84 Tm /F2 11060 0 rg 1cr19tic control ofi (E

2004 Nobel Prize | Chemistry

Helped discover ubiquitin-mediated protein degradation. This prize was awarded jointly to Aaron Ciechanover, MD, Avram Hershko, MD, PhD, and Irwin Rose, PhD.

Leland Hartwell, PhD

2001 Nobel Prize | Physiology or Medicine

Discovered key regulators of the cell cycle

Günter Blobel, MD, PhD

1999 Nobel Prize | Physiology or Medicine

Discovered how proteins find their proper location in the cell

Edward B. Lewis, PhD

1995 Nobel Prize | Physiology or Medicine

Found evidence that certain patterns in development apply to human cancers

Alfred Gilman, MD, PhD

1994 Nobel Prize | Physiology or Medicine

Helped to understand how cells talk to one another

Phillip A. Sharp, PhD

1993 Nobel Prize | Physiology or Medicine

Showed that readable regions on DNA are separated by some regions that cannot be read

E. Donnall Thomas, MD

1990 Nobel Prize | Physiology or Medicine

Pioneered bone marrow transplantation

Sidney Altman, PhD

1989 Nobel Prize | Chemistry

Discovered that RNA can sometimes act as an enzyme

Thomas R. Cech, PhD

1989 Nobel Prize | Chemistry

Found evidence that RNA may have enzymatic properties in cells

J. Michael Bishop, MD

1989 Nobel Prize | Physiology or Medicine

Discovered latent cancer genes, oncogenes, in normal cells

Harold E. Varmus, MD

1989 Nobel Prize | Physiology or Medicine

Showed that defects in normal genes can cause cancer

Susumu Tonegawa, PhD

1987 Nobel Prize | Physiology or Medicine

Discovered how antibodies are made by cells of the immune system

Stanley Cohen, PhD

1986 Nobel Prize | Physiology or Medicine

Showed that some growth factors influence cancer development

Paul Berg, PhD

1980 Nobel Prize | Chemistry

Was the first to create a recombinant DNA molecule

Walter Gilbert, MD

Christian B. Anfinsen, PhD

Robert Burns Woodward, PhD

1965 Nobel Prize | Chemistry

Determined how the body uses small compounds to build organic molecules for life's functions

James D. Watson, PhD

1962 Nobel Prize | Physiology or Medicine

Discovered the double helix structure of DNA

Severo Ochoa, MD

1959 Nobel Prize | Physiology or Medicine

Discovered RNA polymerase, an enzyme that synthesizes RNA

Edward L. Tatum, PhD

1958 Nobel Prize | Physiology or Medicine

Reported that mutations can alter nutritional requirements of cells

George W. Beadle, PhD

1958 Nobel Prize | Physiology or Medicine

Provided evidence that for every enzyme there is one gene

Vincent du Vigneaud, PhD

1955 Nobel Prize | Chemistry

Isolated and synthesized two sulfurous pituitary hormones. The element sulfur plays an important role in the chemical processes that are the basis of all life.

Fritz Lipmann, MD, PhD

1953 Nobel Prize | Physiology or Medicine

Discovered an enzyme that helps to convert food into energy

Hermann Joseph Muller, PhD

1946 Nobel Prize | Physiology or Medicine

Discovered that x-ray irradiation can produce cell mutations

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