1901 Emil Adolf von Behring Germany “for his work on serum therapy, especially its application against diphtheria, by which he has opened a new road in the domain of medical science and thereby placed in the hands of the physician a victorious weapon against illness and deaths"[[13]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1901-13)

1902 Sir Ronald Ross Kingdom “for his work on malaria, by which he has shown how it enters the organism and thereby has laid the foundation for successful research on this disease and methods of combating it"[[14]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1902-14)

1903 Niels Ryberg Finsen [Denmark](https://en.wikipedia.org/wiki/Denmark) ( [Faroe Islands](https://en.wikipedia.org/wiki/Faroe_Islands))" [for] his contribution to the treatment of diseases, especially lupus vulgaris, with concentrated light radiation, whereby he has opened a new avenue for medical science"[[15]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1903-15)

**1904** [**Ivan Petrovich Pavlov**](https://en.wikipedia.org/wiki/Ivan_Pavlov)** Russia “in recognition of his work on the physiology of digestion, through which knowledge on vital aspects of the subject has been transformed and enlarged"**[**[16]**](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1904-16)

1905 [Robert Koch](https://en.wikipedia.org/wiki/Robert_Koch) Germany “for his investigations and discoveries in relation to tuberculosis"[[17]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1905-17)

1906 [Camillo Golgi](https://en.wikipedia.org/wiki/Camillo_Golgi) [Italy](https://en.wikipedia.org/wiki/Kingdom_of_Italy), Santiago Ramón y Cajal Spain “in recognition of their work on the structure of the nervous system"[[18]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1906-18)

1907 Charles Louis Alphonse Laveran France “in recognition of his work on the role played by protozoa in causing diseases"[[19]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1907-19)

1908 Ilya Ilyich Mechnikov [Russia](https://en.wikipedia.org/wiki/Russian_Empire), Paul Ehrlich Germany “in recognition of their work on immunity"[[20]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1908-20)

1909 Emil Theodor Kocher  Switzerland “for his work on the physiology, pathology and surgery of the [thyroid gland](https://en.wikipedia.org/wiki/Thyroid_gland)"[[21]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1909-21)

1910 Albrecht Kossel Germany “in recognition of the contributions to our knowledge of [cell chemistry](https://en.wikipedia.org/wiki/Cell_biology) made through his work on proteins, including the [nucleic substances](https://en.wikipedia.org/wiki/Nucleic_acid)"[[22]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1910-22)

1911 Allvar Gullstrand Sweden “for his work on the dioptric of the [eye](https://en.wikipedia.org/wiki/Human_eye)"[[23]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1911-23)

1912 Alexis Carrel [France](https://en.wikipedia.org/wiki/France)" [for] his work on vascular [suture](https://en.wikipedia.org/wiki/Surgical_suture) and the [transplantation](https://en.wikipedia.org/wiki/Organ_transplantation) of [blood vessels](https://en.wikipedia.org/wiki/Blood_vessel) and [organs](https://en.wikipedia.org/wiki/Organ_%28anatomy%29)"[[24]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1912-24)

1913 Charles Richet [France](https://en.wikipedia.org/wiki/France)"[for] his work on [anaphylaxis](https://en.wikipedia.org/wiki/Anaphylaxis)"[[25]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1913-25)

1914 Robert Bárány Hungary “for his work on the physiology and pathology of the [vestibular apparatus](https://en.wikipedia.org/wiki/Vestibular_apparatus)"[[8]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1914-8)

1915 *Not awarded*

1916 *Not awarded*

1917 *Not awarded*

1918 *Not awarded*

1919 Jules Bordet [Belgium](https://en.wikipedia.org/wiki/Belgium)"for his discoveries relating to [immunity](https://en.wikipedia.org/wiki/Immune_system)"[[26]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1919-26)

1920 Schack August Steenberg Krogh Denmark “for his discovery of the capillary motor regulating mechanism"[[27]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1920-27)

1921 *Not awarded*

1922 [Archibald Vivian Hill](https://en.wikipedia.org/wiki/Archibald_Hill) United Kingdom, [Otto Fritz Meyerhof](https://en.wikipedia.org/wiki/Otto_Fritz_Meyerhof) Germany “for his discovery relating to the production of heat in the [muscle](https://en.wikipedia.org/wiki/Muscle)"[[9]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1922-9), "for his discovery of the fixed relationship between the consumption of [oxygen](https://en.wikipedia.org/wiki/Oxygen) and the [metabolism](https://en.wikipedia.org/wiki/Metabolism) of [lactic acid](https://en.wikipedia.org/wiki/Lactic_acid) in the muscle"[[9]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1922-9)

**1923 Sir Frederick Grant Banting**[**Canada**](https://en.wikipedia.org/wiki/Canada)**,** [**John James Rickard Macleod**](https://en.wikipedia.org/wiki/John_James_Rickard_Macleod)** Kingdom “for the discovery of**[**insulin**](https://en.wikipedia.org/wiki/Insulin)**"**[**[28]**](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1923-28)

1924 Willem Einthoven Netherlands “for the discovery of the mechanism of the [electrocardiogram](https://en.wikipedia.org/wiki/Electrocardiogram)"[[29]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1924-29)

1925 *Not awarded*

1926 Johannes Andreas Grib Fibiger Denmark “for his discovery of the Spiroptera carcinoma"[[10]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1926-10)

1927Julius Wagner-Jauregg Austria “for his discovery of the therapeutic value of [malaria](https://en.wikipedia.org/wiki/Malaria) [inoculation](https://en.wikipedia.org/wiki/Inoculation) in the treatment of [dementia paralytica](https://en.wikipedia.org/wiki/General_paresis_of_the_insane)"[[30]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1927-30)

1928 Charles Jules Henri Nicolle France “for his work on [typhus](https://en.wikipedia.org/wiki/Typhus)"[[31]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1928-31)

1929 Christiaan Eijkman Netherlands, Sir [Frederick Gowland Hopkins](https://en.wikipedia.org/wiki/Frederick_Gowland_Hopkins) United Kingdom “for his discovery of the antineurotic [vitamin](https://en.wikipedia.org/wiki/Vitamin)"[[32]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1929-32) "for his discovery of the growth-stimulating [vitamins](https://en.wikipedia.org/wiki/Vitamin)"[[32]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1929-32)

**1930 Karl Landsteiner Austria “for his discovery of human**[**blood groups**](https://en.wikipedia.org/wiki/ABO_blood_group_system)**"**[**[33]**](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1930-33)

1931 Otto Heinrich Warburg Germany “for his discovery of the nature and mode of action of the [respiratory enzyme](https://en.wikipedia.org/wiki/Cytochrome)"[[34]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1931-34)

1932 Sir Charles Scott Sherrington [United Kingdom](https://en.wikipedia.org/wiki/United_Kingdom), Edgar Douglas Adrian [United Kingdom](https://en.wikipedia.org/wiki/United_Kingdom)"for their discoveries regarding the functions of [neurons](https://en.wikipedia.org/wiki/Neuron)"[[35]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1932-35)

**1933 Thomas Hunt Morgan States “for his discoveries concerning the role played by the**[**chromosome**](https://en.wikipedia.org/wiki/Chromosome)**in**[**heredity**](https://en.wikipedia.org/wiki/Heredity)**"**[**[36]**](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1933-36)

1934 George Hoyt Whipple [United States](https://en.wikipedia.org/wiki/United_States), [George Richards Minot](https://en.wikipedia.org/wiki/George_Minot) [United States](https://en.wikipedia.org/wiki/United_States), [William Parry Murphy](https://en.wikipedia.org/wiki/William_P._Murphy) States “for their discoveries concerning [liver](https://en.wikipedia.org/wiki/Liver) therapy in cases of anemia"[[37]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1934-37)

1935 Hans Spemann Germany “for his discovery of the organizer effect in [embryonic development](https://en.wikipedia.org/wiki/Embryonic_development)"[[38]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1935-38)

1936 Sir Henry Hallett Dale [United Kingdom](https://en.wikipedia.org/wiki/United_Kingdom), [Otto Loewi](https://en.wikipedia.org/wiki/Otto_Loewi) [Austria](https://en.wikipedia.org/wiki/Austria)  Germany" for their discoveries relating to [chemical transmission of nerve impulses](https://en.wikipedia.org/wiki/Neurotransmitter)"[[39]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1936-39)

1937 Albert Szent-Györgyi von Nagyrapolt Hungary “for his discoveries in connection with the biological combustion processes, with special reference to [vitamin C](https://en.wikipedia.org/wiki/Vitamin_C) and the catalysis of [fumaric acid](https://en.wikipedia.org/wiki/Fumaric_acid%22%20%5Co%20%22Fumaric%20acid)"[[40]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1937-40)

1938 Corneille Jean François Heymans Belgium “for the discovery of the role played by the [sinus](https://en.wikipedia.org/wiki/Paranasal_sinuses) and [aortic mechanisms](https://en.wikipedia.org/wiki/Aorta) in the regulation of [respiration](https://en.wikipedia.org/wiki/Respiration_%28physiology%29)"[[11]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1938-11)

1939 [Gerhard Domagk](https://en.wikipedia.org/wiki/Gerhard_Domagk) Germany “for the discovery of the [antibacterial](https://en.wikipedia.org/wiki/Antibacterial) effects of prontosil"[[41]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1939-41)

19 40 *Not awarded*

1941 *Not awarded*

194 2*Not awarded*

1943 Carl Peter Henrik Dam [Denmark](https://en.wikipedia.org/wiki/Denmark), "for his discovery of [vitamin K](https://en.wikipedia.org/wiki/Vitamin_K)"[[12]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1943-12)

1944 Joseph Erlanger [United States, [Herbert Spencer Gasser](https://en.wikipedia.org/wiki/Herbert_Spencer_Gasser) [United States](https://en.wikipedia.org/wiki/United_States)s](https://en.wikipedia.org/wiki/United_States)" for their discoveries relating to the highly differentiated functions of single [nerve fibres](https://en.wikipedia.org/wiki/Nerve_fibre)"[[42]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1944-42)

**1945 Sir Alexander Fleming**[**United Kingdom**](https://en.wikipedia.org/wiki/United_Kingdom)**, Sir Ernst Boris Chain Kingdom “for the discovery of**[**penicillin**](https://en.wikipedia.org/wiki/Penicillin)**and its curative effect in various**[**infectious diseases**](https://en.wikipedia.org/wiki/Infectious_disease)**"**[**[43]**](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1945-43)

1945 Howard Walter Florey Australia “for the discovery of [penicillin](https://en.wikipedia.org/wiki/Penicillin) and its curative effect in various [infectious diseases](https://en.wikipedia.org/wiki/Infectious_disease)"[[43]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1945-43)

1946 Hermann Joseph Muller United States “for the discovery of the production of [mutations](https://en.wikipedia.org/wiki/Mutation) by means of [X-ray](https://en.wikipedia.org/wiki/X-ray) [irradiation](https://en.wikipedia.org/wiki/Irradiation)"[[44]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1946-44)

1947 Carl Ferdinand Cori [United States](https://en.wikipedia.org/wiki/United_States), Gerty Theresa Cori, née Radnitz [United States](https://en.wikipedia.org/wiki/United_States), [Bernardo Alberto Houssay](https://en.wikipedia.org/wiki/Bernardo_Houssay) Argentina “for their discovery of the course of the catalytic conversion of [glycogen](https://en.wikipedia.org/wiki/Glycogen)"[[45]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1947-45)

1948 [Paul Hermann Müller](https://en.wikipedia.org/wiki/Paul_Hermann_M%C3%BCller)  Switzerland “for his discovery of the high efficiency of [DDT](https://en.wikipedia.org/wiki/DDT) as a contact [poison against several arthropods](https://en.wikipedia.org/wiki/Insecticide)"[[46]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1948-46)

1949 Walter Rudolf Hess  Switzerland “for his discovery of the functional organization of the [interbrain](https://en.wikipedia.org/wiki/Midbrain) as a coordinator of the activities of the internal organs"[[47]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1949-47)

1949 António Caetano Egas Moniz Portugal “for his discovery of the therapeutic value of leucotomy ([lobotomy](https://en.wikipedia.org/wiki/Lobotomy)) in certain psychoses"[[47]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1949-47)

1950 [Philip Showalter Hench](https://en.wikipedia.org/wiki/Philip_Showalter_Hench) [United States](https://en.wikipedia.org/wiki/United_States), [Edward Calvin Kendall](https://en.wikipedia.org/wiki/Edward_Calvin_Kendall) [United States](https://en.wikipedia.org/wiki/United_States), [Tadeusz Reichstein](https://en.wikipedia.org/wiki/Tadeus_Reichstein)  [Switzerland](https://en.wikipedia.org/wiki/Switzerland)  Poland “for their discoveries relating to the [hormones](https://en.wikipedia.org/wiki/Hormone) of the [adrenal cortex](https://en.wikipedia.org/wiki/Adrenal_cortex), their structure and biological effects"[[48]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1950-48)

1951[Max Theiler](https://en.wikipedia.org/wiki/Max_Theiler) [South Africa](https://en.wikipedia.org/wiki/South_Africa)  [United States](https://en.wikipedia.org/wiki/United_States) "for his discoveries concerning [yellow fever](https://en.wikipedia.org/wiki/Yellow_fever) and how to combat it"[[49]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1951-49)

1952 Selman Abraham Waksman States “for his discovery of [streptomycin](https://en.wikipedia.org/wiki/Streptomycin), the first [antibiotic](https://en.wikipedia.org/wiki/Antibiotic) effective against tuberculosis"[[50]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1952-50)

**1953 Sir Hans Adolf Krebs Kingdom “for his discovery of the**[**citric acid cycle**](https://en.wikipedia.org/wiki/Citric_acid_cycle)"[[51]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1953-51)

1953 Fritz Albert Lipmann [United States](https://en.wikipedia.org/wiki/United_States)  Germany “for his discovery of [co-enzyme A](https://en.wikipedia.org/wiki/Coenzyme_A) and its importance for intermediary metabolism"[[51]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1953-51)

1954 John Franklin Enders [United States](https://en.wikipedia.org/wiki/United_States), Frederick Chapman Robbins [United States](https://en.wikipedia.org/wiki/United_States), Thomas Huckle Weller States “for their discovery of the ability of [poliomyelitis](https://en.wikipedia.org/wiki/Poliomyelitis) [viruses](https://en.wikipedia.org/wiki/Virus) to grow in cultures of various types of tissue"[[52]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1954-52)

1955 Axel Hugo Theodor Theorell Sweden “for his discoveries concerning the nature and mode of action of oxidation enzymes"[[53]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1955-53)

1956 André Frédéric Cournand [United States](https://en.wikipedia.org/wiki/United_States)"for their discoveries concerning [heart catheterization](https://en.wikipedia.org/wiki/Heart_catheterization) and pathological changes in the [circulatory system](https://en.wikipedia.org/wiki/Circulatory_system)"[[54]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1956-54)

1956 Werner Forssmann Germany “for their discoveries concerning [heart catheterization](https://en.wikipedia.org/wiki/Heart_catheterization) and pathological changes in the [circulatory system](https://en.wikipedia.org/wiki/Circulatory_system)"[[54]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1956-54)

1956 [Dickinson W. Richards](https://en.wikipedia.org/wiki/Dickinson_W._Richards) States” for their discoveries concerning [heart catheterization](https://en.wikipedia.org/wiki/Heart_catheterization) and pathological changes in the [circulatory system](https://en.wikipedia.org/wiki/Circulatory_system)"[[54]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1956-54)

1957 [Daniel Bovet](https://en.wikipedia.org/wiki/Daniel_Bovet) Italy “for his discoveries relating to [synthetic compounds that inhibit the action of certain body substances](https://en.wikipedia.org/wiki/Antihistamine), and especially their action on the vascular system and the skeletal muscles"[[55]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1957-55)

1958 George Wells Beadle [United States](https://en.wikipedia.org/wiki/United_States), Edward Lawrie Tatum [United States](https://en.wikipedia.org/wiki/United_States), [Joshua Lederberg](https://en.wikipedia.org/wiki/Joshua_Lederberg) States” for their discovery that [genes](https://en.wikipedia.org/wiki/Gene) act by regulating definite chemical events"[[56]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1958-56)

1959 [Arthur Kornberg](https://en.wikipedia.org/wiki/Arthur_Kornberg) United States, Severo Ochoa Spain  States” for their discovery of the mechanisms in the biological synthesis of [ribonucleic acid](https://en.wikipedia.org/wiki/Ribonucleic_acid) and [deoxyribonucleic acid](https://en.wikipedia.org/wiki/Deoxyribonucleic_acid)"[[57]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1959-57)

1960 Sir Frank Macfarlane Burnet [Australia](https://en.wikipedia.org/wiki/Australia), Sir Peter Brian Medawar [Brazil](https://en.wikipedia.org/wiki/Brazil) "for discovery of acquired immunological tolerance"[[58]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1960-58)

1961Georg von Békésy [United States](https://en.wikipedia.org/wiki/United_States)  Hungary “for his discoveries of the physical mechanism of stimulation within the cochlea"[[59]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1961-59)

**1962 Francis Harry Compton Crick****United Kingdom, James Dewey Watson****United States, Maurice Hugh Frederick Wilkins**[**New Zealand**](https://en.wikipedia.org/wiki/New_Zealand)**Kingdom “for their discoveries concerning the molecular structure of**[**nucleic acids**](https://en.wikipedia.org/wiki/Nucleic_acid)**and its significance for information transfer in living material"**[**[60]**](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1962-60)

1963 Sir John Carew Eccles [Australia](https://en.wikipedia.org/wiki/Australia), Sir Alan Lloyd Hodgkin [United Kingdom](https://en.wikipedia.org/wiki/United_Kingdom) Sir [Andrew Fielding Huxley](https://en.wikipedia.org/wiki/Andrew_Huxley) United Kingdom “for their discoveries concerning the ionic mechanisms involved in excitation and inhibition in the peripheral and central portions of the [nerve](https://en.wikipedia.org/wiki/Nerve) cell membrane"[[61]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1963-61)

1964 Konrad Bloch [United States](https://en.wikipedia.org/wiki/United_States), Feodor Lynen Germany “for their discoveries concerning the mechanism and regulation of the [cholesterol](https://en.wikipedia.org/wiki/Cholesterol) and [fatty acid](https://en.wikipedia.org/wiki/Fatty_acid) [metabolism](https://en.wikipedia.org/wiki/Metabolism)"[[62]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1964-62)

1965 François Jacob [France](https://en.wikipedia.org/wiki/France), [André Lwoff](https://en.wikipedia.org/wiki/Andr%C3%A9_Michel_Lwoff) France, [Jacques Monod](https://en.wikipedia.org/wiki/Jacques_Monod) France “for their discoveries concerning [genetic control of enzyme](https://en.wikipedia.org/wiki/Transcription_%28genetics%29) and virus synthesis"[[63]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1965-63)

**1966 Peyton Rous States” for his discovery of**[**tumour**](https://en.wikipedia.org/wiki/Tumour)**-inducing**[**viruses**](https://en.wikipedia.org/wiki/Virus)**"**[**[64]**](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1966-64)

1966 Charles Brenton Huggins States” for his discoveries concerning [hormonal treatment](https://en.wikipedia.org/wiki/Hormonal_therapy_%28oncology%29) of prostatic cancer"[[64]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1966-64)

1967 Ragnar Granit [Finland](https://en.wikipedia.org/wiki/Finland)  [Sweden](https://en.wikipedia.org/wiki/Sweden), Haldan Keffer Hartline [United States](https://en.wikipedia.org/wiki/United_States), [George Wald](https://en.wikipedia.org/wiki/George_Wald) States” for their discoveries concerning the primary physiological and chemical visual processes in the [eye](https://en.wikipedia.org/wiki/Human_eye)"[[65]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1967-65)

1968 [Robert W. Holley](https://en.wikipedia.org/wiki/Robert_W._Holley) United States, [Har Gobind Khorana](https://en.wikipedia.org/wiki/Har_Gobind_Khorana) India  [United States](https://en.wikipedia.org/wiki/United_States), [Marshall W. Nirenberg](https://en.wikipedia.org/wiki/Marshall_Warren_Nirenberg) United States[[67]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-67)"for their interpretation of the [genetic code](https://en.wikipedia.org/wiki/Genetic_code) and its function in protein synthesis"[[66]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1968-66)

1969 [Max Delbrück](https://en.wikipedia.org/wiki/Max_Delbr%C3%BCck) United States, Alfred D. Hershey [United States](https://en.wikipedia.org/wiki/United_States), Salvador E. Luria [Italy](https://en.wikipedia.org/wiki/Italy)  States” for their discoveries concerning the replication mechanism and the genetic structure of [viruses](https://en.wikipedia.org/wiki/Virus)"[[68]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1969-68)

1970 Julius Axelrod [United States](https://en.wikipedia.org/wiki/United_States), Ulf von Euler [Sweden](https://en.wikipedia.org/wiki/Sweden), Sir Bernard Katz Kingdom “for their discoveries concerning the humoral transmitters and the mechanism for their storage, release and inactivation"[[69]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1970-69)

1971 Earl W. Sutherland, Jr. United States” for his discoveries concerning the mechanisms of the action of hormones"[[70]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1971-70)

1972 Gerald M. Edelman [United States](https://en.wikipedia.org/wiki/United_States), [Rodney R. Porter](https://en.wikipedia.org/wiki/Rodney_Robert_Porter) United Kingdom “for their discoveries concerning the chemical structure of antibodies"[[71]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1972-71)

1973 Karl von Frisch [West Germany](https://en.wikipedia.org/wiki/West_Germany), Nikolas Tinbergen [Netherlands](https://en.wikipedia.org/wiki/Netherlands), "for their discoveries concerning organization and elicitation of individual and social behaviour patterns"[[72]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1973-72)

1974 Albert Claude [United States](https://en.wikipedia.org/wiki/United_States), [Christian de Duve](https://en.wikipedia.org/wiki/Christian_de_Duve) [Belgium](https://en.wikipedia.org/wiki/Belgium), George E. Palade [United States](https://en.wikipedia.org/wiki/United_States)  Romania “for their discoveries concerning the structural and functional organization of the cell"[[73]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1974-73)

1975 David Baltimore [United States](https://en.wikipedia.org/wiki/United_States), Renato Dulbecco [Italy](https://en.wikipedia.org/wiki/Italy)  United States, [Howard Martin Temin](https://en.wikipedia.org/wiki/Howard_Martin_Temin) States” for their discoveries concerning the interaction between [tumour viruses](https://en.wikipedia.org/wiki/Tumor_virus) and the genetic material of the cell"[[74]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1975-74)

1976 Baruch S. Blumberg [United States](https://en.wikipedia.org/wiki/United_States), D. Carleton Gajdusek States” for their discoveries concerning new mechanisms for the origin and dissemination of infectious diseases"[[75]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1976-75)

1977 [Roger Guillemin](https://en.wikipedia.org/wiki/Roger_Guillemin) [United States](https://en.wikipedia.org/wiki/United_States), [Andrew V. Schally](https://en.wikipedia.org/wiki/Andrew_Schally) [Canada](https://en.wikipedia.org/wiki/Canada)  [Poland](https://en.wikipedia.org/wiki/Poland)  States” for their discoveries concerning the [peptide hormone](https://en.wikipedia.org/wiki/Peptide_hormone) production of the [brain](https://en.wikipedia.org/wiki/Brain)"[[76]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1977-76)

1977 Rosalyn Yalow United States” for the development of radioimmunoassay of peptide hormones"[[76]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1977-76)

**1978 Werner Arber  Switzerland, Daniel Nathans**[**United States**](https://en.wikipedia.org/wiki/United_States)**, Hamilton O. Smith States” for the discovery of**[**restriction enzymes**](https://en.wikipedia.org/wiki/Restriction_enzyme)**and their application to problems of molecular genetics"**[**[77]**](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1978-77)

1979 [Allan M. Cormack](https://en.wikipedia.org/wiki/Allan_McLeod_Cormack) South Africa  [United States, Sir Godfrey N. Hounsfield [United Kingdom](https://en.wikipedia.org/wiki/United_Kingdom)s](https://en.wikipedia.org/wiki/United_States)"for the development of computer assisted tomography"[[78]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1979-78)

1980 Baruj Benacerraf [Venezuela](https://en.wikipedia.org/wiki/Venezuela)  [United States](https://en.wikipedia.org/wiki/United_States), Jean Dausset [France](https://en.wikipedia.org/wiki/France), [George D. Snell](https://en.wikipedia.org/wiki/George_Davis_Snell) United States” for their discoveries concerning genetically determined [structures on the cell surface](https://en.wikipedia.org/wiki/Major_histocompatibility_complex) that regulate [immunological reactions](https://en.wikipedia.org/wiki/Immune_system)"[[79]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1980-79)

1981 [Roger W. Sperry](https://en.wikipedia.org/wiki/Roger_Wolcott_Sperry) States” for his discoveries concerning the functional specialization of the cerebral hemispheres"[[80]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1981-80)

1981 David H. Hubel [Canada](https://en.wikipedia.org/wiki/Canada)  [United States](https://en.wikipedia.org/wiki/United_States), Torsten N. Wiesel Sweden “for their discoveries concerning information processing in the [visual system](https://en.wikipedia.org/wiki/Visual_system)"[[80]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1981-80)

1982 Sune K. Bergström [Sweden](https://en.wikipedia.org/wiki/Sweden), Bengt I. Samuelsson Sweden “for their discoveries concerning [prostaglandins](https://en.wikipedia.org/wiki/Prostaglandin) and related biologically active substances"[[81]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1982-81)

1982 Sir John R. Vane Kingdom “for their discoveries concerning [prostaglandins](https://en.wikipedia.org/wiki/Prostaglandin) and related biologically active substances"[[81]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1982-81)

**1983 Barbara McClintock United States” for her discovery of mobile genetic elements"**[**[82]**](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1983-82)

1984 Niels K. Jerne Denmark, Georges J.F. Köhler [West Germany](https://en.wikipedia.org/wiki/West_Germany), [César Milstein](https://en.wikipedia.org/wiki/C%C3%A9sar_Milstein) [Argentina](https://en.wikipedia.org/wiki/Argentina)  Kingdom “for theories concerning the specificity in development and control of the [immune system](https://en.wikipedia.org/wiki/Immune_system) and the discovery of the principle for production of monoclonal antibodies"[[83]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1984-83)

1985 [Michael S. Brown](https://en.wikipedia.org/wiki/Michael_Stuart_Brown) [United States](https://en.wikipedia.org/wiki/United_States), [Joseph L. Goldstein](https://en.wikipedia.org/wiki/Joseph_L._Goldstein) States” for their discoveries concerning the regulation of [cholesterol](https://en.wikipedia.org/wiki/Cholesterol) metabolism"[[84]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1985-84)

1986 Stanley Cohen [United States](https://en.wikipedia.org/wiki/United_States), Rita Levi-Montalcini Italy “for their discoveries of growth factors"[[85]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1986-85)

1987 Susumu Tonegawa Japan “for his discovery of the genetic principle for generation of [antibody](https://en.wikipedia.org/wiki/Antibody) diversity"[[86]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1987-86)

1988 Sir James W. Black United Kingdom, Gertrude B. Elion United States, George H. Hitchings States” for their discoveries of important principles for drug treatment"[[87]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1988-87)

**1989 J. Michael Bishop United States,** [**Harold E. Varmus**](https://en.wikipedia.org/wiki/Harold_E._Varmus)** United States for their discovery of the cellular origin of**[**retroviral**](https://en.wikipedia.org/wiki/Retrovirus)**oncogenes"**[**[88]**](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1989-88)

1990[Joseph E. Murray](https://en.wikipedia.org/wiki/Joseph_Murray) United States, E. Donnall Thomas United States” for their discoveries concerning organ and cell transplantation in the treatment of human disease"[[89]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1990-89)

1991Erwin Neher Germany, [Bert Sakmann](https://en.wikipedia.org/wiki/Bert_Sakmann) Germany “for their discoveries concerning the function of single ion channels in cells"[[90]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1991-90)

1992[Edmond H. Fischer](https://en.wikipedia.org/wiki/Edmond_H._Fischer)  Switzerland, [Edwin G. Krebs](https://en.wikipedia.org/wiki/Edwin_G._Krebs) United States "for their discoveries concerning reversible [protein](https://en.wikipedia.org/wiki/Protein) [phosphorylation](https://en.wikipedia.org/wiki/Phosphorylation) as a biological regulatory mechanism"[[91]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1992-91)

1993Sir Richard J. Roberts United Kingdom, Phillip A. Sharp United States” for their discoveries of split genes"[[92]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1993-92)

1994Alfred G. Gilman [United States](https://en.wikipedia.org/wiki/United_States), Martin Rodbell States” for their discovery of [G-proteins](https://en.wikipedia.org/wiki/G-protein) and the role of these proteins in signal transduction in cells"[[93]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1994-93)

1995[Edward B. Lewis](https://en.wikipedia.org/wiki/Edward_B._Lewis) [United States](https://en.wikipedia.org/wiki/United_States), [Christiane Nüsslein-Volhard](https://en.wikipedia.org/wiki/Christiane_N%C3%BCsslein-Volhard) [Germany](https://en.wikipedia.org/wiki/Germany), [Eric F. Wieschaus](https://en.wikipedia.org/wiki/Eric_F._Wieschaus) States” for their discoveries concerning the genetic control of early [embryonic development](https://en.wikipedia.org/wiki/Embryonic_development)"[[94]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1995-94)

1996[Peter C. Doherty](https://en.wikipedia.org/wiki/Peter_C._Doherty) [Australia](https://en.wikipedia.org/wiki/Australia), [Rolf M. Zinkernagel](https://en.wikipedia.org/wiki/Rolf_M._Zinkernagel)  Switzerland “for their discoveries concerning the specificity of the [cell mediated immune defence](https://en.wikipedia.org/wiki/Major_histocompatibility_complex)"[[95]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1996-95)

**1997**[**Stanley B. Prusiner**](https://en.wikipedia.org/wiki/Stanley_B._Prusiner)** States” for his discovery of**[**Prions**](https://en.wikipedia.org/wiki/Prion)**- a new biological principle of infection"**[**[96]**](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1997-96)

1998[Robert F. Furchgott](https://en.wikipedia.org/wiki/Robert_F._Furchgott) [United States](https://en.wikipedia.org/wiki/United_States), [Louis J. Ignarro](https://en.wikipedia.org/wiki/Louis_Ignarro) [United States](https://en.wikipedia.org/wiki/United_States), [Ferid Murad](https://en.wikipedia.org/wiki/Ferid_Murad) States” for their discoveries concerning [nitric oxide](https://en.wikipedia.org/wiki/Nitric_oxide) as a signalling molecule in the cardiovascular system"[[97]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1998-97)

1999 [Günter Blobel](https://en.wikipedia.org/wiki/G%C3%BCnter_Blobel) [Germany](https://en.wikipedia.org/wiki/Germany)  States” for the discovery that [proteins](https://en.wikipedia.org/wiki/Protein) have intrinsic signals that govern their transport and localization in the cell"[[98]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-1999-98)

2000 [Arvid Carlsson](https://en.wikipedia.org/wiki/Arvid_Carlsson) [Sweden](https://en.wikipedia.org/wiki/Sweden), [Paul Greengard](https://en.wikipedia.org/wiki/Paul_Greengard) [United States](https://en.wikipedia.org/wiki/United_States), [Eric R. Kandel](https://en.wikipedia.org/wiki/Eric_Kandel) States” for their discoveries concerning [signal transduction](https://en.wikipedia.org/wiki/Signal_transduction) in the [nervous system](https://en.wikipedia.org/wiki/Nervous_system)"[[99]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2000-99)

**2001** [**Leland H. Hartwell**](https://en.wikipedia.org/wiki/Leland_H._Hartwell)****[**United States**](https://en.wikipedia.org/wiki/United_States)**, Sir**[**Tim Hunt**](https://en.wikipedia.org/wiki/Tim_Hunt)****[**United Kingdom**](https://en.wikipedia.org/wiki/United_Kingdom)**, Sir**[**Paul M. Nurse**](https://en.wikipedia.org/wiki/Paul_Nurse)** Kingdom “for their discoveries of key regulators of the**[**cell cycle**](https://en.wikipedia.org/wiki/Cell_cycle)**"**[**[100]**](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2001-100)

2002 [Sydney Brenner](https://en.wikipedia.org/wiki/Sydney_Brenner) [South Africa](https://en.wikipedia.org/wiki/South_Africa), [H. Robert Horvitz](https://en.wikipedia.org/wiki/H._Robert_Horvitz) [United States](https://en.wikipedia.org/wiki/United_States), Sir [John E. Sulston](https://en.wikipedia.org/wiki/John_Sulston) Kingdom “for their discoveries concerning 'genetic regulation of organ development

2003 [Paul Lauterbur](https://en.wikipedia.org/wiki/Paul_Lauterbur) [United States](https://en.wikipedia.org/wiki/United_States), Sir [Peter Mansfield](https://en.wikipedia.org/wiki/Peter_Mansfield) Kingdom “for their discoveries concerning [magnetic resonance imaging](https://en.wikipedia.org/wiki/Magnetic_resonance_imaging)"[[102]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2003-102)

2004 [Richard Axel](https://en.wikipedia.org/wiki/Richard_Axel) [United States](https://en.wikipedia.org/wiki/United_States), [Linda B. Buck](https://en.wikipedia.org/wiki/Linda_B._Buck) States” for their discoveries of [odorant receptors](https://en.wikipedia.org/wiki/Odorant_receptor) and the organization of the [olfactory system](https://en.wikipedia.org/wiki/Olfactory_system)"[[103]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2004-103)

2005 [Barry J. Marshall](https://en.wikipedia.org/wiki/Barry_Marshall) [Australia](https://en.wikipedia.org/wiki/Australia), [J. Robin Warren](https://en.wikipedia.org/wiki/Robin_Warren) Australia “for their discovery of the bacterium [*Helicobacter pylori*](https://en.wikipedia.org/wiki/Helicobacter_pylori) and its role in [gastritis](https://en.wikipedia.org/wiki/Gastritis) and [peptic ulcer disease](https://en.wikipedia.org/wiki/Peptic_ulcer_disease)"[[104]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2005-104)

2006 [Andrew Z. Fire](https://en.wikipedia.org/wiki/Andrew_Fire) [United States](https://en.wikipedia.org/wiki/United_States), [Craig C. Mello](https://en.wikipedia.org/wiki/Craig_Mello) States” for their discovery of [RNA interference](https://en.wikipedia.org/wiki/RNA_interference) - gene silencing by double-stranded RNA"[[105]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2006-105)

2007 [Mario R. Capecchi](https://en.wikipedia.org/wiki/Mario_Capecchi) [United States](https://en.wikipedia.org/wiki/United_States)  [Italy](https://en.wikipedia.org/wiki/Italy), Sir [Martin J. Evans](https://en.wikipedia.org/wiki/Martin_Evans) [United Kingdom](https://en.wikipedia.org/wiki/United_Kingdom), [Oliver Smithies](https://en.wikipedia.org/wiki/Oliver_Smithies) [United Kingdom](https://en.wikipedia.org/wiki/United_Kingdom) States” for their discoveries of principles for introducing specific gene modifications in mice by the use of [embryonic stem cells](https://en.wikipedia.org/wiki/Embryonic_stem_cell)."[[106]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2007-106)

2008 [Harald zur Hausen](https://en.wikipedia.org/wiki/Harald_zur_Hausen) [Germany](https://en.wikipedia.org/wiki/Germany%22%20%5Co%20%22Germany)"for his discovery of human papilloma viruses causing [cervical cancer](https://en.wikipedia.org/wiki/Cervical_cancer)"[[107]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2008-107)

2008 [Françoise Barré-Sinoussi](https://en.wikipedia.org/wiki/Fran%C3%A7oise_Barr%C3%A9-Sinoussi) [France](https://en.wikipedia.org/wiki/France), [Luc Montagnier](https://en.wikipedia.org/wiki/Luc_Montagnier) France “for their discovery of [human immunodeficiency virus](https://en.wikipedia.org/wiki/Human_immunodeficiency_virus)"[[107]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2008-107)

2009 [Elizabeth H. Blackburn](https://en.wikipedia.org/wiki/Elizabeth_Blackburn) [United States](https://en.wikipedia.org/wiki/United_States)  [Australia](https://en.wikipedia.org/wiki/Australia), [Carol W. Greider](https://en.wikipedia.org/wiki/Carol_W._Greider) [United States](https://en.wikipedia.org/wiki/United_States), [Jack W. Szostak](https://en.wikipedia.org/wiki/Jack_W._Szostak) States” for the discovery of how [chromosomes](https://en.wikipedia.org/wiki/Chromosome) are protected by [telomeres](https://en.wikipedia.org/wiki/Telomere) and the [enzyme](https://en.wikipedia.org/wiki/Enzyme) [telomerase](https://en.wikipedia.org/wiki/Telomerase)"[[108]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2009-108)

2010 Sir [Robert G. Edwards](https://en.wikipedia.org/wiki/Robert_G._Edwards) Kingdom “for the development of [in vitro fertilization](https://en.wikipedia.org/wiki/In_vitro_fertilization)"[[109]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2010-109)

2011 [Bruce A. Beutler](https://en.wikipedia.org/wiki/Bruce_Beutler) [United States](https://en.wikipedia.org/wiki/United_States), [Jules A. Hoffmann](https://en.wikipedia.org/wiki/Jules_A._Hoffmann) France “for their discoveries concerning the activation of [innate immunity](https://en.wikipedia.org/wiki/Innate_immunity)"[[110]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2011-110)

2011 [Ralph M. Steinman](https://en.wikipedia.org/wiki/Ralph_M._Steinman) Canada “for his discovery of the [dendritic cell](https://en.wikipedia.org/wiki/Dendritic_cell) and its role in [adaptive immunity](https://en.wikipedia.org/wiki/Adaptive_immunity)" (awarded posthumously)[[111]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-111)[[112]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-guardian_nobel_prize-112)[[110]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2011-110)

2012 Sir [John B. Gurdon](https://en.wikipedia.org/wiki/John_Gurdon) [United Kingdom](https://en.wikipedia.org/wiki/United_Kingdom), [Shinya Yamanaka](https://en.wikipedia.org/wiki/Shinya_Yamanaka)Japan “for the discovery that mature cells can be [reprogrammed](https://en.wikipedia.org/wiki/Induced_pluripotent_stem_cell) to become [pluripotent](https://en.wikipedia.org/wiki/Pluripotency_%28biological_compounds%29)"[[113]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2012-113)

2013 [James E. Rothman](https://en.wikipedia.org/wiki/James_E._Rothman) [United States](https://en.wikipedia.org/wiki/United_States), Randy W. Schekman [United States](https://en.wikipedia.org/wiki/United_States), [Thomas C. Südhof](https://en.wikipedia.org/wiki/Thomas_C._S%C3%BCdhof) [United States](https://en.wikipedia.org/wiki/United_States)  Germany “for their discoveries of machinery regulating [vesicle](https://en.wikipedia.org/wiki/Vesicle_%28biology_and_chemistry%29) traffic, a major transport system in our [cells](https://en.wikipedia.org/wiki/Cell_%28biology%29)"[[114]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2013-114)

2014 [John O'Keefe](https://en.wikipedia.org/wiki/John_O%27Keefe_%28neuroscientist%29) [United States](https://en.wikipedia.org/wiki/United_States)  [United Kingdom](https://en.wikipedia.org/wiki/United_Kingdom), [May-Britt Moser](https://en.wikipedia.org/wiki/May-Britt_Moser) [Norway](https://en.wikipedia.org/wiki/Norway), [Edvard I. Moser](https://en.wikipedia.org/wiki/Edvard_I._Moser) Norway “for their discoveries of cells that constitute a positioning system in the brain"[[115]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2014-115)

2015 [William C. Campbell](https://en.wikipedia.org/wiki/William_C._Campbell_%28scientist%29) [Ireland](https://en.wikipedia.org/wiki/Republic_of_Ireland)  [United States](https://en.wikipedia.org/wiki/United_States), [Satoshi Ōmura](https://en.wikipedia.org/wiki/Satoshi_%C5%8Cmura)Japan “for their discoveries concerning [a novel therapy](https://en.wikipedia.org/wiki/Avermectin) against infections caused by roundworm parasites"[[116]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2015-116)

2015 [Tu Youyou](https://en.wikipedia.org/wiki/Tu_Youyou) China “for her discoveries concerning [a novel therapy](https://en.wikipedia.org/wiki/Artemisinin) against [malaria](https://en.wikipedia.org/wiki/Malaria)"[[116]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2015-116)

2016 [Yoshinori Ohsumi](https://en.wikipedia.org/wiki/Yoshinori_Ohsumi)Japan “for his discoveries of mechanisms for [autophagy](https://en.wikipedia.org/wiki/Autophagy)"[[117]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2016-117)

2017 [Jeffrey C. Hall](https://en.wikipedia.org/wiki/Jeffrey_C._Hall) [United States](https://en.wikipedia.org/wiki/United_States), Michael Rosbash [United State, [Michael W. Young](https://en.wikipedia.org/wiki/Michael_W._Young) [United States](https://en.wikipedia.org/wiki/United_States)s](https://en.wikipedia.org/wiki/United_States)"for their discoveries of molecular mechanisms controlling the [circadian rhythm](https://en.wikipedia.org/wiki/Circadian_rhythm)"[[118]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2017-118)

2018 [James P. Allison](https://en.wikipedia.org/wiki/James_P._Allison) [United States](https://en.wikipedia.org/wiki/United_States), [Tasuku Honjo](https://en.wikipedia.org/wiki/Tasuku_Honjo)Japan “for their discovery of cancer therapy by inhibition of negative immune regulation"[[119]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2018-119)

2019 [William Kaelin Jr.](https://en.wikipedia.org/wiki/William_Kaelin_Jr.) [United States](https://en.wikipedia.org/wiki/United_States), [Peter J. Ratcliffe](https://en.wikipedia.org/wiki/Peter_J._Ratcliffe) [United Kingdom](https://en.wikipedia.org/wiki/United_Kingdom), [Gregg L. Semenza](https://en.wikipedia.org/wiki/Gregg_L._Semenza) States” for their discoveries of [how cells](https://en.wikipedia.org/wiki/Cellular_respiration) sense and adapt to oxygen availability"[[120]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2019-120)

2020 [Harvey J. Alter](https://en.wikipedia.org/wiki/Harvey_J._Alter) [United States](https://en.wikipedia.org/wiki/United_States), [Michael Houghton](https://en.wikipedia.org/wiki/Michael_Houghton_%28virologist%29) [United Kingdom](https://en.wikipedia.org/wiki/United_Kingdom), [Charles M. Rice](https://en.wikipedia.org/wiki/Charles_M._Rice) States” for the discovery of [Hepatitis C virus](https://en.wikipedia.org/wiki/Hepatitis_C_virus)"[[121]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2020-121)

2021 [David Julius](https://en.wikipedia.org/wiki/David_Julius) [United States](https://en.wikipedia.org/wiki/United_States), [Ardem Patapoutian](https://en.wikipedia.org/wiki/Ardem_Patapoutian) [United States](https://en.wikipedia.org/wiki/United_States) [Lebanon](https://en.wikipedia.org/wiki/Lebanon), "for the discovery of receptors for temperature and touch"[[122]](https://en.wikipedia.org/wiki/List_of_Nobel_laureates_in_Physiology_or_Medicine#cite_note-nobel-2021-122)

**The first woman to win a Nobel Prize was Marie Curie, who won the Nobel Prize in Physics in 1903 with her husband, Pierre Curie, and Henri Becquerel; in 1911, she won the Nobel Prize in Chemistry. Curie's daughter, Irène Joliot-Curie, won the Nobel Prize in Chemistry in 1935, making the two the only mother-daughter pair to have won Nobel Prizes**

**Scientists Jenifer Doudna and Emmanuelle Charpentier received the prestigious Nobel Prize in Chemistry for 2020 for their large contribution to the development of so-called genetic scissors, the CRIPSR-Cas9 method.**