

Medicine Nobel Laureates

YEAR	LAUREATE	COUNTRY	CONTRIBUTION
1901	Emil Adolf von Behring	Prussia	Serum therapy and its application against diphtheria
1902	Ronald Ross	UK	Work on malaria
1903	Niels Ryberg Finsen	Denmark	Treatment of diseases with concentrated light radiation
1904	Ivan Petrovich Pavlov	USSR	Physiology of digestion
1905	Robert Koch	Germany	Investigations on tuberculosis
1906	Camillo Golgi Santiago Ramon Cajal	Italy Spain	Structure of nervous system
1907	Charles Louis Alphonse Laveran	France	Work on role played by protozoa in causing diseases
1908	Ilya Ilyich Mechnikov Paul Ehrlich	Ukraine Prussia	Work on immunity
1909	Emil Theodor Kocher	Switzerland	Physiology, pathology and surgery of thyroid gland
1910	Albrecht Kossel	Germany	Cell chemistry
1911	Allvar Gullstrand	Sweden	Work on dioptrics of the eye
1912	Alexis Carrel	France	Work on vascular suture and transplantation of blood vessels
1913	Charles Robert Richet	France	Work on anaphylaxis
1914	Robert Barany	Austria	Physiology and pathology of vestibular apparatus
1915	Not Awarded		
1916			
1917			
1918			
1919	Jules Bordet	Belgium	Discoveries relating to immunity
1920	Schack A Steenberg Krogh	Denmark	Discovery of capillary motor regulating mechanism
1921	Not Awarded		
1922	Archibald Vivian Hill	UK	Production of heat in the muscle
1923	Frederick Grant Banting John James Rickard Macleod	Canada Scotland	Discovery of insulin
1924	Willem Einthoven	Netherlands	Mechanism of electrocardiogram
1925	Not Awarded		
1926	Johannes Andreas Grib Fibiger	Denmark	Discovery of Spiroptera carcinoma
1927	Julius Wanger Jauregg	Austria	Discovery of therapeutic value of malaria inoculation in the treatment of dementia paralytica
1928	Charles Jules Henri Nicolle	France	Work on typhus
1929	Christiaan Eijkman	Netherlands	Discovery of antineuritic vitamin

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1930	Karl Landsteiner	Austria	Discovery of blood groups
1931	Otto Heinrich Warburg	Germany	Discovery of the nature and mode of action of respiratory enzyme
1932	Sir Charles Scott Sherrington Edgar Douglas Adrian	UK UK	Discoveries regarding functions of neurons
1933	Thomas Hunt Morgan	USA	Role played by chromosome in heredity
1934	George Hoyt Whipple George Richard Minot William Parry Murphy	USA USA USA	Liver therapy in cases of anaemia
1935	Hans Spemann	Germany	Discovery of organizer effect in embryonic development
1936	Sir Henry Hallett Dale Otto Loewi	UK Germany	Chemical transmission of nerve impulses
1937	Albert von Szent G Nagyrapolt	Hungary	Biological combustion processes
1938	Corneille Jean Francois Heymans	Belgium	Role played by the sinus and aortic mechanisms in regulation of respiration
1939	Gerhard Domagk	Poland	Discovery of antibacterial effects of prontosil
1940	Not Awarded		
1941			
1942			
1943	Henrik Carl Peter Dam Edward Adelbert Doisy	Denmark USA	Discovery of vitamin K Discovery of chemical nature of vitamin K
1944	Joseph Erlanger Herbert Spencer Gasser	USA USA	Highly differentiated function of single nerve fibres
1945	Sir Alexander Fleming Ernst Boris Chain Sir Howard Walter Florey	UK Germany Australia	Discovery of penicillin and its curative effect
1946	Hermann Joseph Muller	USA	Production of mutations by means of X ray irradiation
1947	Carl Ferdinand Cori Gerty Theresa Cori nee Radnitz Bernardo Alberto Houssay	Czechoslovakia Czechoslovakia Argentina	Discovery of course of catalytic conversion of glycogen Metabolism of sugar
1948	Paul Hermann Muller	Switzerland	High efficiency of DDT as a contact poison against arthropods
1949	Walter Rudolf Hess Antonio C de Abreu F E Moniz	Switzerland Portugal	Functional organization of interbrain Therapeutic value of leucotomy

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1950	Edward Calvin Kendall Tadeus Reichstein Philip Showalter Hench	USA Poland USA	Hormones of adrenal cortex, their structure and biological effects
1951	Max Theiler	South Africa	Yellow fever and how to combat it
1952	Selman Abraham Waksman	Ukraine	Discovery of streptomycin
1953	Hans Adolf Krebs Fritz Albert Lipmann	Germany Germany	Discovery of co-enzyme A and its importance for intermediary metabolism
1954	John Franklin Enders Thomas Huckle Weller Frederick Chapman Robbins	USA USA USA	Discovery of the ability of poliomyelitis viruses to grow in cultures of various types of tissue
1955	Axel Hugo Theodor Theorell	Sweden	Nature and mode of action of oxidation enzymes
1956	Andre Frederic Cournand Werner Forssmann Dickinson W Richards	France Germany USA	Discovery concerning heart catheterization and pathological changes in circulatory system
1957	Daniel Bovet	Switzerland	Action of synthetic compounds on vascular systems and the skeletal muscles
1958	George Wells Beadle Edward Lawrie Tatum	USA USA	Discovery that genes act by regulating definite chemical events
1959	Severo Ochoa Arthur Kornberg	Spain USA	Discovery of mechanisms in biological synthesis of ribonucleic acid and deoxyribonucleic acid
1960	Sir Frank Macfarlane Burnet Peter Brian Medawar	Australia Brazil	Discovery of acquired immunological tolerance
1961	Georg von Bekesy	Hungary	physical mechanism of stimulation within the cochlea
1962	Francis Harry Compton Crick James Dewey Watson Maurice Hugh Frederick Wilkins	UK USA New Zealand	Discoveries concerning molecular structure of nucleic acids and its significance for information transfer in living material
1963	Sir John Carew Eccles Alan Lloyd Hodgkin Andrew Fielding Huxley	Australia UK UK	Discoveries concerning the ionic mechanisms involved in excitation and inhibition in the peripheral and central positions of the nerve cell membrane
1964	Konrad Bloch Feodor Lynen	Poland Germany	mechanism and regulation of cholesterol, fatty acid metabolism
1965	Francois Jacob Andre Lwoff Jacques Monod	France France France	Discoveries concerning genetic control of enzyme and virus synthesis

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1966	Peyton Rous	USA	Discovery of tumour inducing viruses
	Charles Brenton Huggins	Canada	Discovery of hormonal treatment of prostatic cancer
1967	Ragnar Granit	Finland	Primary physiological and chemical visual processes in the eye
	Haldan Keffer Hartline	USA	
	George Wald	USA	
1968	Robert W Holley	USA	Interpretation of genetic code and its function in protein synthesis
	Har Gobind Khorana	India	
	Marshall W Nirenberg	USA	
1969	Max Delbruck	Germany	Replication mechanism and genetic structure of viruses
	Alfred D Hershey	USA	
	Salvador E Luria	Italy	
1970	Sir Bernard Katz	Germany	Humoral transmitters in the nerve terminals and mechanism for their storage, release and inactivation
	Ulf von Euler	Sweden	
	Julius Axelrod	USA	
1971	Earl W Sutherland Jr	USA	Mechanisms of the action of hormones
1972	Gerald M Edelman	USA	Chemical structure of antibodies
	Rodney R Porter	UK	
1973	Karl von Frisch	Austria	Organization and elicitation of individual and social behaviour patterns
	Konrad Lorenz	Austria	
	Nikolas Tinbergen	Netherlands	
1974	Albert Claude	Belgium	Structural and functional organization of the cell
	Christian de Duve	UK	
	George E Palade	Romania	
1975	David Baltimore	USA	Interaction between tumour viruses and the genetic material of the cell
	Renato Dulbecco	Italy	
	Howard Martin Temin	USA	
1976	Baruch S Blumberg	USA	New mechanisms for the origin and dissemination of infectious diseases
	D Carleton Gajdusek	USA	
1977	Roger Guillemin	France	Peptide hormone production of the brain
	Andrew V Schally	Poland	Development of radioimmunoassays of peptide hormones
	Rosalyn Yalow	USA	
1978	Werner Arber	Switzerland	Restriction enzymes and their application to problems of molecular genetics
	Daniel Nathans	USA	
	Hamilton O Smith	USA	

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1979	Allan M Cormack Godfrey N Hounsfield	South Africa UK	Development of computer assisted tomography
1980	Baruj Benacerraf Jean Dausset George D Snell	Venezuela France USA	Genetically determined structures on the cell surface that regulate immunological reactions
1981	Roger W Sperry David H Hubel Torsten N Wiesel	USA Canada Sweden	Functional specialization of cerebral hemispheres Information processing in visual system
1982	Sune K Bergstrom Bengt I Samuelsson John R Vane	Sweden Sweden UK	Prostaglandins and related biologically active substances
1983	Barbara McClintock	USA	Discovery of mobile genetic elements
1984	Niels K Jerne Georges JF Kohler Cesar Milstein	UK Germany Argentina	Specificity in development and control of immune system and the discovery of principle for production of monoclonal antibodies
1985	Michael S Brown Joseph L Goldstein	USA USA	Regulation of cholesterol metabolism
1986	Stanley Cohen Rita Levi Montalcini	USA Italy	Discoveries of growth factors
1987	Susumu Tonegawa	Japan	Genetic principle of generation of antibody diversity
1988	Sir James W Black Gertrude B Elion George H Hitchings	Scotland USA USA	Principles of drug treatment
1989	J Michael Bishop Harold E Varmus	USA USA	Cellular origin of retroviral oncogenes
1990	Joseph E Murray E Donnall Thomas	USA USA	Organ and cell transplantation in treatment of human disease
1991	Erwin Neher Bert Sakmann	Germany Germany	Function of single ion channels in cells
1992	Edmond H Fischer Edwin G Krebs	USA USA	Discovery concerning reversible protein phosphorylation as a biological regulatory mechanism
1993	Richard J Roberts Phillip A Sharp	UK USA	Discoveries of split genes

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1994	Alfred G Gilman Martin Rodbell	USA USA	Discovery of G proteins and the role of these proteins in signal transduction in cells
1995	Edward B Lewis Christiane Nusslein Volhard Eric F Wieschaus	USA Germany USA	Discoveries concerning the genetic control of early embryonic development
1996	Peter C Doherty Rolf M Zinkernagel	Australia Switzerland	Discoveries concerning specificity of cell mediated immune defence
1997	Stanley B Prusiner	USA	Discovery of Prions – a new biological principle of infection
1998	Robert F Furchgott Louis J Ignarro Ferid Murad	USA USA USA	Discoveries concerning nitric oxide as a signalling molecule in cardiovascular system
1999	Gunter Blobel	Poland	Discovery that proteins have intrinsic signals that govern their transport and localisation in the cell
2000	Arvid Carlsson Paul Greengard Eric R Kandel	Sweden USA Austria	Discoveries concerning signal transduction in nervous system
2001	Leland H Hartwell Tim Hunt Sir Paul M Nurse	USA UK UK	Discovery of key regulators of the cell cycle
2002	Sydney Brenner H Robert Horvitz John E Sulston	South Africa USA UK	Genetic regulation of organ development and programmed cell death
2003	Paul C Lauterbur Sir Peter Mansfield	USA UK	Discoveries concerning magnetic resonance imaging
2004	Richard Axel Linda B Buck	USA USA	Discovery of odorant receptors and the organization of olfactory system
2005	Barry J Marshall J Robin Warren	Australia Australia	Discovery of bacterium Helicobacter pylori
2006	Andrew Z Fire Craig C Mello	USA USA	Discovery of RNA interference
2007	Mario R Capecchi Sir Martin J Evans Oliver Smithies	Italy UK UK	Principles of introducing specific gene modifications in mice by the use of embryonic stem cells
2008	Harald zur Hausen	Germany	Discovery of human papilloma viruses causing cervical cancer

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2009	Elizabeth H Blackburn Carol W Greider Jack W Szostak	Australia USA UK	Discovery of how chromosomes are protected by telomeres and enzyme telomerase
2010	Robert G Edwards	UK	Development of vitro fertilization
2011	Bruce A Beutler Jules A Hoffmann Ralph M Steinman	USA Luxembourg Canada	Activation of innate immunity Discovery of dendritic cell and its role in adaptive immunity
2012	Sir John B Gurdon Shinya Yamanaka	UK Japan	Discovery that mature cells can be reprogrammed to become pluripotent
2013	James E Rothman Randy W Schekman Tomas C Sudhof	USA USA Germany	Discovery of machinery regulating vesicle traffic
2014	John O' Keefe May Britt Moser Edvard I Moser	USA Norway Norway	Discovery of cells that constitute a positioning system in brain
2015	William C Campbell Satoshi Omura Tu Youyou	Ireland Japan China	Therapy against infections caused by roundworm parasites Therapy against malaria
2016	Yoshinori Ohsumi	Japan	Mechanisms for autophagy
2017	Jeffrey C Hall Michael Rosbash Michael W Young	USA USA USA	Molecular mechanisms controlling the circadian rhythm
2018	James P Allison Tasuku Honjo	USA Japan	Cancer therapy by inhibition of negative immune regulation
2019	William G Kaelin Jr. Sir Peter J Ratcliffe Gregg L Semenza	USA UK USA	Discoveries of how cells sense and adapt to oxygen availability
2020	Harvey J Alter Michael Houghton Charles M Rice	USA UK USA	Discovery of Hepatitis C virus