

Nobel Prizes in Physiology & Medicine

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Department of Chemistry, York University

4700 Keele Street, Toronto, ONTARIO M3J 1P3, CANADA

For suggestions, corrections, additional information, and comments please send e-mails to c1000@careerchem.com

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NOBEL PRIZE PHYSIOLOGY AND MEDICINE			
YEAR	NAMES OF SCIENTISTS	NATIONALITY	TYPE OF PHYSIOLOGY/MEDICINE
1901	Behring, Emil Adolf von	German	disease treatment (diphtheria)
1902	Ross, Sir Ronald	British (b. Almara, India)	disease treatment (malaria)
1903	Finsen, Niels Ryberg	Danish	disease treatment (lupus vulgaris)
1904	Pavlov, Ivan Petrovich	Russian	digestion
1905	Koch, Robert	German	disease treatment (TB)
1906	Golgi, Camillo	Italian	nervous system
1906	Cajal, Santiago Ramon y	Spanish	nervous system
1907	Laveran, Charles Louis Alphonse	French	disease treatment (protozoa)
1908	Mechnikov, Ilya Ilyich	Russian	immunity
1908	Ehrlich, Paul	German	immunity
1909	Kocher, Emil Theodor	Swiss	metabolism (thyroid gland)
1910	Kossel, Albrecht	German	proteins/nucleic acids
1911	Gullstrand, Allvar	Swedish	visual system
1912	Carrel, Alexis	French-American	blood vessels
1913	Richet, Charles Robert	French	anaphylaxis
1914	Barany, Robert	Austrian	vestibular apparatus
1915	no prize awarded	N/A	N/A
1916	no prize awarded	N/A	N/A
1917	no prize awarded	N/A	N/A
1918	no prize awarded	N/A	N/A
1919	Bordet, Jules	Belgian	immunity

1920	Krogh, Schack August Steenberger	Danish	blood vessels
1921	no prize awarded	N/A	N/A
1922	Hill, Sir Archibald Vivian Hill	British	metabolism (muscle)
1922	Meyerhof, Otto Fritz	German	metabolism (muscle)
1923	Banting, Sir Frederick Grant	Canadian	insulin
1923	Macleod, John James Richard	Scottish	insulin
1924	Einthoven, Willem	Dutch	techniques (electrocardiogram)
1925	no prize awarded	N/A	N/A
1926	Fibiger, Johannes Andreas Grib	Danish	Spiroptera carcinoma
1927	Wagner-Jauregg, Julius	Austrian	disease treatment (dementia paralytica)
1928	Nicolle, Charles Jules Henri	French	disease treatment (typhus)
1929	Eijkman, Christiaan	Dutch	vitamins
1929	Hopkins, Sir Frederick Gowland	British	vitamins
1930	Landsteiner, Karl	Austrian	human blood groups
1931	Warburg, Otto	German	respiratory enzyme
1932	Sherrington, Sir Charles Scott	British	neurons
1932	Adrian, Lord Edgar Douglas	British	neurons
1933	Morgan, Thomas Hunt	American	genetics (chromosomes)
1934	Whipple, George Hoyt	American	disease treatment (anaemia)
1934	Minot, George Richards	American	disease treatment (anaemia)
1934	Murphy, William Parry	American	disease treatment (anaemia)
1935	Spemann, Hans	German	embryonic development
1936	Dale, Sir Henry Hallet	British	nerve transmission
1936	Loewi, Otto	German	nerve transmission
1937	Szent-Gyorgi, Albert	Hungarian	vitamin C
1938	Heymans, Corneille Jean Francois	French-Belgian	respiration
1939	Domagk, Gerhard	German	antibiotics (prontosil)
1940	no prize awarded	N/A	N/A
1941	no prize awarded	N/A	N/A
1942	no prize awarded	N/A	N/A
1943	Dam, Henrik Carl Peter	Danish	vitamin K
1943	Doisy, Edward Adelbert	American	vitamin K

1944	Erlanger, Joseph	American	nerve fibres
1944	Gasser, Herbert Spencer	American	nerve fibres
1945	Fleming, Sir Alexander	Scottish	antibiotics (penicillin)
1945	Chain, Sir Ernst Boris	German-British	antibiotics (penicillin)
1945	Florey, Lord Howard Walter	Australian	antibiotics (penicillin)
1946	Mueller, Hermann Joseph	American	mutations by x-rays
1947	Cori, Carl Ferdinand	Czech	glycogen metabolism
1947	Cori, Gerty Theresa nee Radnitz	Czech	glycogen metabolism
1947	Houssay, Bernardo Alberto	Argentinian	hormones
1948	Mueller, Paul Hermann	Swiss	DDT as insecticide
1949	Hess, Walter Rudolf	Swiss	nervous system
1949	Moniz, Antonio C. de A.F.E.	Portuguese	leucotomy
1950	Kendall, Edward Calvin	American	hormones (adrenal cortex)
1950	Reichstein, Tadeus	Polish-Swiss	hormones (adrenal cortex)
1950	Hench, Philip Showalter	American	hormones (adrenal cortex)
1951	Theiler, Max	South African-American	disease treatment (yellow fever)
1952	Waksman, Selman Abraham	Ukranian	antibiotics (streptomycin)
1953	Krebs, Sir Hans Adolf	German-British	metabolism (citric acid cycle)
1953	Lipmann, Fritz Albert	German-American	metabolism (coenzyme A)
1954	Enders, John Franklin	American	disease treatment (polio)
1954	Weller, Thomas Huckle	American	disease treatment (polio)
1954	Robbins, Frederick Chapman	American	disease treatment (polio)
1955	Theorell, Axel Hugo Theodor	Swedish	metabolism (oxidation enzymes)
1956	Cournand, Andre Frederic	French-American	circulatory system
1956	Forssmann, Werner	German	circulatory system
1956	Richards, Dickinson Woodruff	American	circulatory system
1957	Bovet, Daniel	Swiss-Italian	vascular and skeletal systems
1958	Lederberg, Joshua	American	genetics (bacteria)
1958	Beadle, George Wells	American	genetics
1958	Tatum, Edward Lawrie	American	genetics
1959	Ochoa, Severo	Spanish	genetics (DNA and RNA synthesis)
1959	Kornberg, Arthur	American	genetics (DNA and RNA synthesis)

1960	Burnet, Sir Frank Macfarlane	Australian	immunity
1960	Medawar, Sir Peter Brian	British (b. Rio de Janeiro, Brazil)	immunity
1961	Bekesy, Georg von	Hungarian-American	cochlea
1962	Crick, Francis Harry Compton	British	molecular biology (DNA structure)
1962	Watson, James Dewey	American	molecular biology (DNA structure)
1962	Wilkins, Maurice Hugh Frederick	New Zealander	molecular biology (DNA structure)
1963	Eccles, Sir John Carew	Australian	nerve membrane mechanisms
1963	Hodgkin, Sir Alan Lloyd	British	nerve membrane mechanisms
1963	Huxley, Sir Andrew Fielding	British	nerve membrane mechanisms
1964	Bloch, Konrad	German	metabolism (cholesterol)
1964	Lynen, Feodor	German	metabolism (cholesterol)
1965	Jacob, Francois	French	genetics (enzyme synthesis)
1965	Lwoff, Andre	French	genetics (enzyme synthesis)
1965	Monod, Jacques	French	genetics (enzyme synthesis)
1966	Rous, Francis Peyton	American	disease treatment (viruses)
1966	Huggins, Charles Brenton	Canadian-American	disease treatment (prostatic cancer)
1967	Granit, Ragnar	Finnish-Swedish	visual system
1967	Hartline, Haldan Keffer	American	visual system
1967	Wald, George	American	visual system
1968	Holley, Robert W.	American	genetics (protein synthesis)
1968	Khorana, Har Gobind	Indian	genetics (protein synthesis)
1968	Nirenberg, Marshall W.	American	genetics (protein synthesis)
1969	Delbrueck, Max	German-American	genetics (viruses)
1969	Hershey, Alfred Day	American	genetics (viruses)
1969	Luria, Salvador Edward	Italian-American	genetics (viruses)
1970	Katz, Sir Bernard	German-British	nervous system
1970	Euler, Ulf Svante von	Swedish	nervous system
1970	Axelrod, Julius	American	nervous system
1971	Sutherland, Earl Wilbure Jr.	American	molecular biology (hormones)
1972	Edelman, Gerald M.	American	molecular biology (antibodies)
1972	Porter, Rodney R.	British	molecular biology (antibodies)
1973	Frisch, Karl von	Austrian	social behaviour

1973	Lorenz, Konrad Zacharias	Austrian	social behaviour
1973	Tinbergen, Nikolaas	Dutch	social behaviour
1974	Claude, Albert	Belgian	metabolism (cells)
1974	de Duve, Christian	Belgian (b. Surrey, England)	metabolism (cells)
1974	Palade, George Emil	Romanian-American	metabolism (cells)
1975	Baltimore, David	American	genetics (viruses, tumors)
1975	Dulbecco, Renato	Italian-American	genetics (viruses, tumors)
1975	Temin, Howard Martin	American	genetics (viruses, tumors)
1976	Blumberg, Baruch S.	American	disease treatment (infectious)
1976	Gajdusek, Daniel Carleton	American	disease treatment (infectious)
1977	Guillemin, Roger Charles Louis	French-American	hormones (peptide)
1977	Schally, Andrew Victor	Polish-American	hormones (peptide)
1977	Yalow, Rosalyn	American	hormones (peptide)
1978	Arber, Werner	Swiss	genetics (restriction enzymes)
1978	Nathans, Daniel	American	genetics (restriction enzymes)
1978	Smith, Hamilton O.	American	genetics (restriction enzymes)
1979	Cormack, Alan M.	South African-American	techniques (tomography)
1979	Hounsfield, Sir Godfrey N.	British	techniques (tomography)
1980	Benacerraf, Baruj	Venezuelan-American	genetics (cell surface)
1980	Dausset, Jean	French	genetics (cell surface)
1980	Snell, George Davis	American	genetics (cell surface)
1981	Sperry, Roger Wolcott	American	nervous system (cerebral hemispheres)
1981	Hubel, David Hunter	Canadian-American	visual system
1981	Wiesel, Torsten N.	Swedish	visual system
1982	Bergstroem, Sune K.	Swedish	molecular biology (prostaglandins)
1982	Samuelsson, Bengt I.	Swedish	molecular biology (prostaglandins)
1982	Vane, Sir John R.	British	molecular biology (prostaglandins)
1983	McClintock, Barbara	American	genetics
1984	Jerne, Niels Kai	Danish (b. Londong, England)	immunity (monoclonal antibodies)
1984	Koehler, Georges J.F.	German	immunity (monoclonal antibodies)
1984	Milstein, Cesar	Argentinian-British	immunity (monoclonal antibodies)
1985	Brown, Michael Stuart	American	metabolism (cholesterol)

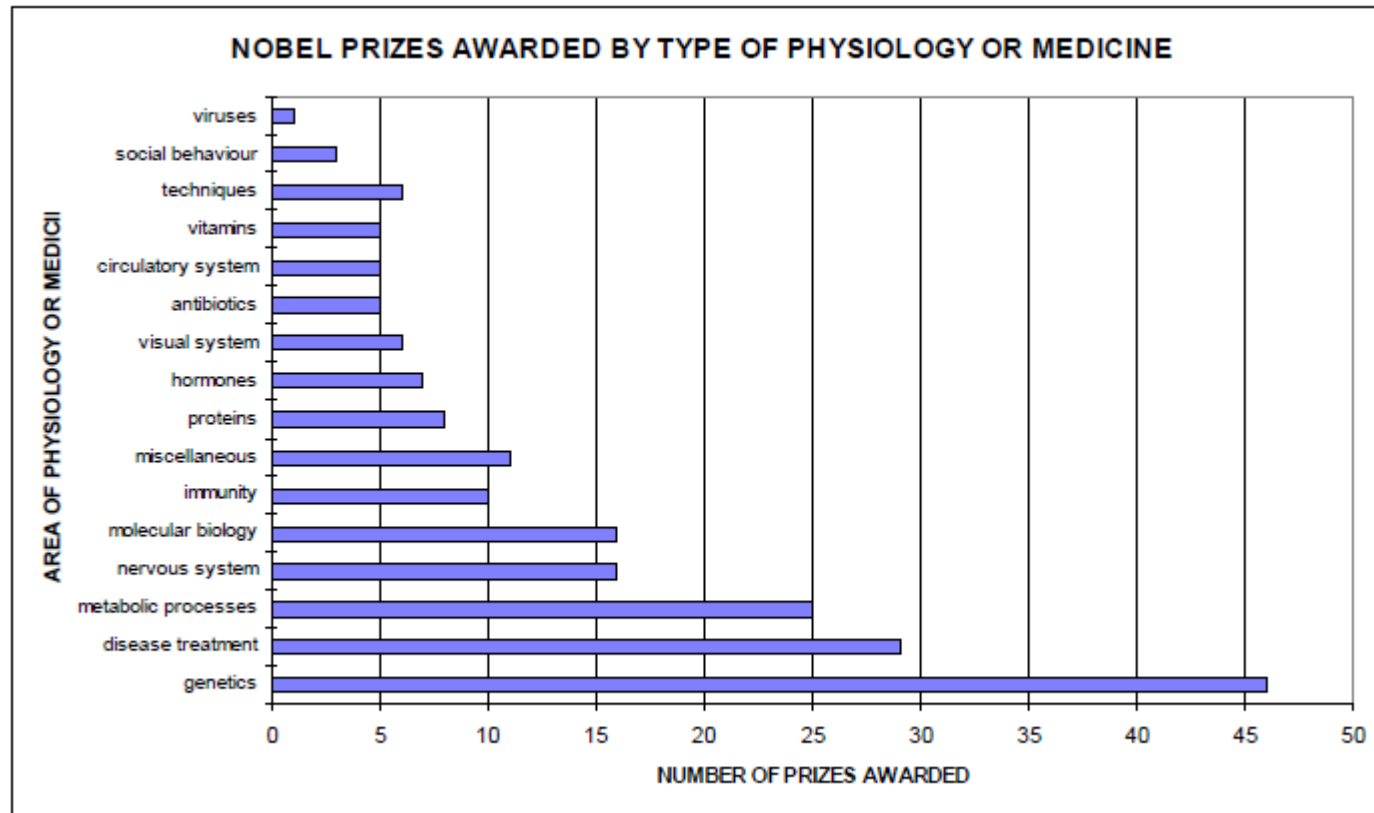
1985	Goldstein, Joseph L.	American	metabolism (cholesterol)
1986	Cohen, Seymour Stanley	American	metabolism (growth factors)
1986	Levi-Montalcini, Rita	Italian-American	metabolism (growth factors)
1987	Tonegawa, Susumu	Japanese	genetics (antibodies)
1988	Black, Sir James W.	British	drug treatment
1988	Elion, Gertrude B.	American	drug treatment
1988	Hitchings, George H.	American	drug treatment
1989	Bishop, J. Michael	American	genetics (retroviral oncogenes)
1989	Varmus, Harold E.	American	genetics (retroviral oncogenes)
1990	Murray, Joseph E.	American	disease treatment (organ transplant)
1990	Thomas, E. Donnall	American	disease treatment (organ transplant)
1991	Neher, Erwin	German	molecular biology (ion channels)
1991	Sakmann, Bert	German	molecular biology (ion channels)
1992	Fischer, Edmond H.	Austrian (b. Shanghai, China)	molecular biology (protein phosphorylation)
1992	Krebs, Edwin G.	American	molecular biology (protein phosphorylation)
1993	Roberts, Richard J.	British	genetics (split genes)
1993	Sharp, Phillip	American	genetics (split genes)
1994	Gilman, Alfred Goodman	American	proteins (signal transduction)
1994	Rodbell, Martin	American	proteins (signal transduction)
1995	Lewis, Edward B.	American	genetics (embryonic development)
1995	Nuesslein-Volhard, Christiane	German	genetics (embryonic development)
1995	Wieschaus, Eric F.	American	genetics (embryonic development)
1996	Doherty, Peter C.	Australian	immunity (defense)
1996	Zinkernagel, Rolf M.	Swiss	immunity (defense)
1997	Prusiner, Stanley B.	American	proteins (prions)
1998	Furchgott, Robert F.	American	metabolism (nitrous oxide)
1998	Ignarro, Louis J.	American	metabolism (nitrous oxide)
1998	Murad, Ferid	American	metabolism (nitrous oxide)
1999	Blobel, Guenter	German-American	protein transport
2000	Carlsson, Arvid	Swedish	genetics
2000	Kandel, Eric R.	Austrian	genetics
2000	Greengard, Paul	American	genetics

2001	Hartwell, Leland H.	American	genetics
2001	Hunt, R. Timothy	British	genetics
2001	Nurse, Sir Paul M.	British	genetics
2002	Brenner, Sydney	South African-British	genetics (cell death)
2002	Horvitz, Howard Robert	American	genetics (cell death)
2002	Sulston, John E.	British	genetics (cell death)
2003	Lauterbur, Paul C.	American	magnetic resonance imaging
2003	Mansfield, Sir Peter	British	magnetic resonance imaging
2004	Buck, Linda	American	olfactory system/molecular biology
2004	Axel, Richard	American	olfactory system/molecular biology
2005	Marshall, Barry J.	Australian	Helicobacter pylori bacterium
2005	Warren, J. Robin	Australian	Helicobacter pylori bacterium
2006	Fire, Andrew Z.	American	RNA interference
2006	Mello, Craig C.	American	RNA interference
2007	Capecchi, Mario R.	Italian-American	gene modifications in mice using stem cells
2007	Evans, Sir Martin J.	British	gene modifications in mice using stem cells
2007	Smithies, Oliver	British	gene modifications in mice using stem cells
2008	Hausen, Harald zur	German	identification of human papilloma virus
2008	Barre-Sinoussi, Françoise	French	identification of HIV virus
2008	Montagnier, Luc	French	identification of HIV virus
2009	Greider, Carol Widney	American	telomeres
2009	Blackburn, Elizabeth Helen	Australian-American	telomeres
2009	Szostak, Jack William	British-American	telomeres
2010	Edwards, Robert G.	British	in vitro fertilization
2011	Beutler, Bruce Alan	American	Activation of innate immunity
2011	Hoffmann, Jules A.	French	Activation of innate immunity
2011	Steinman, Ralph M.	Canadian-American	Activation of innate immunity
2012	Gurdon, Sir John Bertrand	British	discovery that mature cells can be reprogrammed to become pluripotent
2012	Yamanaka, Shinya	Japanese	discovery that mature cells can be reprogrammed to become pluripotent
2013	Rothman, James E.	American	Discoveries of machinery regulating vesicle

			traffic – cell transport
2013	Scheckman, Randy W.	American	Discoveries of machinery regulating vesicle traffic – cell transport
2013	Südhof, Thomas C.	German	Discoveries of machinery regulating vesicle traffic – cell transport
2014	O'Keefe, John	American-British	for their discoveries of nerve cells in the brain that enable a sense of place and navigation
2014	Moser, May-Britt	Norwegian	for their discoveries of nerve cells in the brain that enable a sense of place and navigation
2014	Moser, Edvard	Norwegian	for their discoveries of nerve cells in the brain that enable a sense of place and navigation
2015	Campbell, William Cecil	Irish-American	Discovery of ivermectin (river blindness treatment)
2015	Omura, Satoshi	Japanese	Discovery of ivermectin (river blindness treatment)
2015	Tu, Youyou	Chinese	Discovery of artemisinin (malaria treatment)
2016	Yoshinori Ohsumi	Japanese	Mechanisms of autophagy
2017	Hall, Jeffrey C.	American	discoveries of molecular mechanisms controlling the circadian rhythm
2017	Rosbash, Michael	American	discoveries of molecular mechanisms controlling the circadian rhythm
2017	Young, Michael W.	American	discoveries of molecular mechanisms controlling the circadian rhythm
2018	Allison, James P.	American	for their discovery of cancer therapy by inhibition of negative immune regulation
2018	Honjo, Tasuku	Japanese	for their discovery of cancer therapy by inhibition of negative immune regulation
2019	Peter J. Ratcliffe	British	for their discoveries of how cells sense and adapt to oxygen availability
2019	William G. Kaelin Jr.	American	for their discoveries of how cells sense and adapt to oxygen availability
2019	Gregg L. Semenza	American	for their discoveries of how cells sense and adapt to oxygen availability
2020	Harvey J. Alter	American	for the discovery of hepatitis C virus
2020	Michael Houghton	British	for the discovery of hepatitis C virus
2020	Charles M. Rice	American	for the discovery of hepatitis C virus
2021	David Julius	American	for the discovery of receptors for temperature and touch
2021	Ardem Patapoutian	American-Lebanese	for the discovery of receptors for temperature and touch
2022	Svante Paabo	Swedish	for discoveries concerning the genomes of extinct hominins and human evolution

NUMBER OF PRIZES AWARDED BY TYPE OF MEDICINE	
AREA OF PHYSIOLOGY/MEDICINE	NUMBER OF PRIZES
antibiotics	5
circulatory system	5
disease treatment	29
genetics	47
hormones	7
immunity	11

metabolic processes	25
miscellaneous	11
molecular biology	16
nervous system	17
proteins	8
social behaviour	3
techniques	6
viruses	2
visual system	6
vitamins	5



PRIZE YEAR	NOBEL PHYSIOLOGISTS/MEDICINE	SUPERVISOR	Ph.D./MD	UNIVERSITY	DATES	Age at Prize
1932	Adrian, Lord Edgar Douglas	Keith Lucas	1911	Cambridge (BA)	1889 - 1977	43
2018	Allison, James P.	G. Barrie Kitto	1973	U Texas (Austin)	1948 -	70
1978	Arber, Werner	Jean Weigle	1958	Cal Tech	1929 -	49
2020	Harvey J. Alter	Baruch S. Blumberg	1960 (MD)	Rochester; Natl. Inst. Health (post-doc)	1935 -	85
2004	Axel, Richard		1970	Johns Hopkins (MD)	1946 -	58
1970	Axelrod, Julius	H. George Mandel	1955	Washington (at St. Louis)	1912 - 2004	58
1975	Baltimore, David	Richard Franklin	1964	Rockefeller	1938 -	37
1923	Banting, Sir Frederick Grant	John James Rickard Macleod	1916	Toronto (MD)	1891 - 1941	32
1914	Barany, Robert	Gussenbauer	1900	Vienna (MD)	1876 - 1936	38
2008	Barre-Sinoussi, Françoise	Jean Claude Chermann	1974	Institut Pasteur	1947 -	61
1958	Beadle, George Wells	R.A. Emerson; L.W. Sharp	1931	Cornell	1903 - 1989	55
1901	Behring, Emil Adolf von	C. Binz (Bonn); Robert Koch (Berlin)	1880	Army Med. Coll. Berlin (MD)	1854 - 1917	47
1961	Bekesy, Georg von	Karl Tangl	1923	Budapest	1899 - 1972	62
1980	Benacerraf, Baruj	Elvin Kabat (Columbia Coll. Phys. Surg.)	1945	Med. Coll. Virginia (MD)	1920 -	60
1982	Bergstroem, Sune K.		1944	Karolinska Inst.	1916 -	66
2011	Beutler, Bruce Alan	Anthony Cerami (Rockefeller)	1981 (MD)	Chicago	1957 -	54
1989	Bishop, John Michael	Elmer Pfefferkorn; Leon Levintow (NIH)	1962	Harvard Med. School. (MD)	1936 -	53
1988	Black, Sir James W.	R.C. Garry	1940s	St. Andrews	1924 -	64
2009	Blackburn, Elizabeth H.	Fred Sanger	1975	Cambridge	1948 -	61
1999	Blobel, Guenter	Dr. van R. Potter; George Palade (Rockefeller)	1967	Wisconsin	1936 -	63
1964	Bloch, Konrad	Hans T. Clarke	1938	Columbia	1912 - 2000	52
1976	Blumberg, Baruch Samuel	Alex G. Ogston (Oxford)	1951; Ph.D. 1957	Columbia Coll. Phys. Surg.; Oxford (Ph.D.)	1925 -	51
1919	Bordet, Jules Jean Baptiste Vincent		1892	Brussels (MD)	1870 - 1961	49
1957	Bovet, Daniel	Emile Guyenot	1929	Geneva	1907 - 1992	50
2002	Brenner, Sydney	Anthony C. Allison	1954	Oxford	1927 -	75
1985	Brown, Michael Stuart	Earl R. Stadtman	1966	Pennsylvania (MD)	1941 -	44

		(NIH)				
2004	Buck, Linda	Richard Axel (Columbia)	1980	Texas (Southwestern Med. Center); Columbia	1947 -	57
1960	Burnet, Sir Frank Macfarlane	J. D. Ledingham	1923	Melbourne (MD)	1899 - 1985	61
1906	Cajal, Santiago Ramon y	Aureliano Maestre de San Juan	1873; 1883	Saragossa (Lic.); Madrid (MD)	1852 - 1934	54
2007	Capecchi, Mario R.	James D. Watson	1967	Harvard	1937 -	70
2015	Campbell, William Cecil	Arlie C. Todd	1957	Wisconsin	1930 -	85
2000	Carlsson, Arvid	Gunnar Ahlgren	1951	Lund (MD)	1923 -	77
1912	Carrel, Alexis	Henry D. Dakin (Rockefeller); G.N. Stewart (Chicago)	1900	Lyons	1873 - 1944	39
1945	Chain, Sir Ernst Boris	Sir F.G. Hopkins	1935	Cambridge	1906 - 1979	39
1974	Claude, Albert	Albert Fischer (KWI-Berlin)	1928	Liege (MD)	1899 - 1983	75
1986	Cohen, Seymour Stanley	Howard B. Lewis	1948	Michigan	1922 -	64
1947	Cori, Carl Ferdinand	Hans Eppinger (Vienna); Otto Loewi (Graz)	1920	Charles University, Prague	1896 - 1984	51
1947	Cori, Gerty Theresa nee Radnitz	Wilhelm Knopfmacher	1920	Charles University, Prague	1896 - 1957	51
1979	Cormack, Alan M.	Otto Frisch; Norman Ramsey, Richard Wilson (Harvard)	1949	Cambridge	1924 - 1998	55
1956	Cournand, Andre Frederic	D.W. Richards (Columbia)	1930	Sorbonne (MD)	1895 - 1988	61
1962	Crick, Francis Harry Compton	Max F. Perutz	1954	Cambridge	1916 - 2004	46
1936	Dale, Sir Henry Hallet	Starling (UC London); P. Ehrlich (Frankfurt); G. Barger (Wellcome)	1909	Cambridge (MD)	1875 - 1968	61
1943	Dam, Henrik Carl Peter	Paul Karrer (Zurich)	1934	Copenhagen	1895 - 1976	48
1980	Dausset, Jean	Marcel Bessis	1940s	Paris (MD)	1916 -	64
1974	de Duve, Christian Rene	J.P. Bouckaert;	1941	Louvain (MD)	1917 - 2013	57

		Hugo Theorell (Stockholm); C.F. Cori, Earl Sutherland (Washington)				
1969	Delbrueck, Max	Max Born (Goettingen); G. Gamow (Goettingen); W. Pauli (Zurich); N. Bohr (Copenhagen); L. Meitner (Berlin)	1930	Goettingen	1906 - 1981	63
1996	Doherty, Peter C.		1970	Edinburgh	1940 -	56
1943	Doisy, Edward Adelbert	Otto Folin	1920	Harvard	1893 - 1986	50
1939	Domagk, Gerhard	Georg Hoppe-Seyler (Kiel)	1921	Kiel (MD)	1895 - 1964	44
1975	Dulbecco, Renato	Giuseppe Levi	1936	Turin (MD)	1914 -	61
1963	Eccles, Sir John Carew	Sir Charles Sherrington	1929	Oxford	1903 - 1997	60
1972	Edelman, Gerald M.	Henry G. Kunkel	1960	Rockefeller Inst.	1929 -	43
2010	Edwards, Robert G.	Alan Beatty Conrad H. Waddington	1955	Edinburgh	1925 -	85
1908	Ehrlich, Paul	Karl Weigert	1878	Leipzig	1854 - 1915	54
1929	Eijkman, Christiaan	T. Place	1883	Amsterdam	1858 - 1930	71
1924	Einthoven, Willem	F.C. Donders	1885	Utrecht	1860 - 1927	64
1988	Elion, Gertrude Belle	Hitchings, George H. (Wellcome Res. Labs, NY)	1941	NYU (MSc)	1919 - 1999	69
1954	Enders, John Franklin		1930	Harvard	1897 - 1985	57
1944	Erlanger, Joseph	William Henry Howell	1899	Johns Hopkins (MD)	1874 - 1965	70
1970	Euler, Ulf Svante von	G. Liljestrand; Sir Henry H. Dale	1930	Karolinska Inst. (MD)	1905 - 1983	65

		(London); Gustav Embden (Frankfurt)				
2007	Evans, Sir Martin J.		1969	UC London	1941 -	66
1926	Fibiger, Johannes Andreas Grib	C.J. Salomonsen	1895	Copenhagen	1867 - 1928	59
1903	Finsen, Niels Ryberg		1882	Copenhagen (MD)	1860 - 1904	43
2006	Fire, Andrew Zachary	Phillip A. Sharp	1983	MIT		
1992	Fischer, Edmond H.	Kurt H. Meyer	1940s	Munich	1920 -	72
1945	Fleming, Sir Alexander	Sir Almroth Wright	1908	St. Mary's Medical School, London (BS)	1881 - 1955	64
1945	Florey, Lord Howard Walter		1927	Cambridge	1898 - 1968	47
1956	Forssmann, Werner	Georg Klemperer; Rudolph Fick	1929	Berlin (MD)	1904 - 1979	52
1973	Frisch, Karl von	Richard Hertwig (Munich)	1910	Vienna	1886 - 1982	87
1998	Furchgott, Robert F.	Eric Ponder	1940	Northwestern	1940 -	58
1976	Gajdusek, Daniel Carleton	Victor Weisskopf; John T. Edsall (Harvard); L. Pauling, F. Kirkwood (Cal Tech)	1946	Rochester; Harvard (MD)	1923 -	53
1944	Gasser, Herbert Spencer	Joseph Erlanger; A.V. Hill, H.H. Dale (Cambridge)	1915	Johns Hopkins (1915)	1888 - 1963	56
1994	Gilman, Alfred Goodman	Ted Rall; Marshall W. Nirenberg (NIH)	1969	Western Reserve	1941 -	53
1985	Goldstein, Joseph Leonard	Marshall W. Nirenberg (NIH)	1966	Texas at Dallas (MD)	1940 -	45
1906	Golgi, Camillo	Mantegazza; Bizzozero; Oehl	1865	Pavia (MD)	1843 - 1926	63
1967	Granit, Ragnar Arthur	Carl Tigerstedt; Sir Charles Sherrington (Oxford)	1927	Helsingfors (MD)	1900 - 1991	67
2000	Greengard, Paul	Frank Brink; Sidney Colowick; (PD with E.C. Slater at	1953	Johns Hopkins	1925 -	75

		Cambridge)				
2009	Greider, Carol Widney	Elizabeth Blackburn	1987	UC Berkeley	1961 -	48
1977	Guillemin, Roger Charles Lewis	Hans Selye (McGill)	1949; 1953	Lyons (MD); McGill (Ph.D.)	1924 -	53
1911	Gullstrand, Allvar		1890	Stockholm	1862 - 1930	49
2012	Gurdon, Sir John Bertrand	Michael Fischberg	1961	Oxford	1933 -	79
2017	Hall, Jeffrey C.	Lawrence Sandler	1971	U Washington (Seattle)	1945 -	72
1967	Hartline, Haldan Keffer	E.K. Marshall; A. Pfund (Hopkins); W. Heisenberg (Leipzig); A. Sommerfeld (Munich)	1927	Johns Hopkins (MD)	1903 - 1983	64
2001	Hartwell, Leland H.	Boris Magasanik; Renato Dulbecco (Salk Inst.)	1964	MIT	1939 -	62
2008	Hausen, Harald zur	Werner Henle, Gertrude Henle	1961	Dusseldorf (MD)	1936 -	72
1950	Hench, Philip Showalter	Friedrich von Müller (Freiburg)	1920	Pittsburgh	1896 - 1965	54
1969	Hershey, Alfred Day		1934	Michigan State	1908 - 1997	61
1949	Hess, Walter Rudolf	Gaule; Verworm (Bonn)	1906	Zurich (MD)	1881 - 1973	68
1938	Heymans, Corneille Jean Francois	E. Gley (Coll. France); M. Arthus (Lausanne); H.H. Meyer (Vienna); E.H. Starling (UC London); C.F. Wiggers (Western Reserve)	1920	Ghent	1892 - 1968	46
1922	Hill, Sir Archibald Vivian Hill	Sir Walter Morley Fletcher	1907	Cambridge (MA)	1886 - 1977	36
1988	Hitchings, George H.	Otto Folin	1933	Harvard	1905 -	83
1963	Hodgkin, Sir Alan Lloyd	A.V. Hill; H.S. Gasser	1937	Cambridge	1914 - 1998	49

		(Rockefeller)				
2011	Hoffmann, Jules A.	Pierre Joly	1969	Strasbourg	1941 -	70
1968	Holley, Robert W.	Alfred T. Blomquist	1947	Cornell	1922 - 1993	46
2018	Honjo, Tasuku	Yasutomi Nishizuka	1975	Kyoto	1942 -	76
1929	Hopkins, Sir Frederick Gowland	Sir Thomas Stevenson (mentor)	1893	Guy's Hospital, London (MD)	1861 - 1947	68
2002	Horvitz, Howard Robert	James Watson; Walter Gilbert	1974	Harvard	1947 -	55
2020	Houghton, Michael		1977	London (Kings College)	1949 -	71
1979	Hounsfield, Sir Godfrey Newbold		1940s	City & Guilds; Faraday House Elec. Eng. (London)		1919 -
1947	Houssay, Bernardo Alberto		1911	Buenos Aires	1887 - 1971	60
1981	Hubel, David Hunter	S.W. Kuffler (Johns Hopkins)	1951	McGill (MD); Johns Hopkins	1926 -	55
1966	Huggins, Charles Brenton	Frederick A. Collier (PD Michigan)	1924	Harvard	1901 - 1997	65
2001	Hunt, Sir Richard Timothy	Asher Korner; Irving London	1968	Cambridge	1943 -	58
1963	Huxley, Sir Andrew Fielding	Alan Lloyd Hodgkin	1939	Cambridge	1917 -	46
1998	Ignarro, Louis J.	Frederick E. Shideman	1966	Minnesota	1941 -	57
1965	Jacob, Francois	A. Lwoff (Pasteur Inst.)	1947	Sorbonne	1920 -	45
1984	Jerne, Niels Kai	Max Delbrück (Cal Tech)	1951	Copenhagen; Cal Tech	1911 - 1994	73
2021	Julius, David	Jeremy Thorner, Randy Schekman	1984	UC Berkeley	1955 -	66
2019	Kaelin, William G. Jr.	David M. Livingston (Dana-Farber)	1982	Duke (MD)	1957 -	62
2000	Kandel, Eric R.	Harry Grundfest (Columbia)	1956	NYU (MD)	1929 -	71
1970	Katz, Sir Bernard	Archibald V. Hill	1938	UC London	1911 -	59
1950	Kendall, Edward Calvin	Henry C. Sherman	1910	Columbia	1886 - 1972	64
1968	Khorana, Har Gobind	Roger J.S. Beer; V. Prelog (ETH-Zurich); A.R. Todd (Cambridge)	1948	Liverpool	1922 -	46

1905	Koch, Robert	Rudolf C. Virchow (Berlin)	1866	Goettingen (MD)	1843 - 1910	62
1909	Kocher, Emil Theodor	Albert Luecke	1865	Berne	1841 - 1917	68
1984	Koehler, Georges J.F.	Fritz Melchers; C. Milstein (Lab. Mol. Biol. UK)	1974	Freiburg	1946 - 1995	38
1959	Kornberg, Arthur	NYC (S. Ochoa); Washington (C. and G. Cori)	1941	Rochester (MD)	1918 -	41
1910	Kossel, Albrecht	Felix Hoppe-Seyler	1878	Rostock (MD)	1853 - 1927	57
1992	Krebs, Edwin G.	Carl and Gerty Cori (post-doc)	1943	Washington at St. Louis (MD)	1918 -	74
1953	Krebs, Sir Hans Adolf	Otto H. Warburg (KWI)	1926	Hamburg (MD)	1900 - 1981	53
1920	Krogh, Schack August Steenberger	Christian Bohr	1903	Copenhagen	1874 - 1949	46
1930	Landsteiner, Karl	A. Hantzsch (Zurich); E. Fischer (Wuerzburg); E. Bamberger (Munich)	1891	Vienna (MD)	1868 - 1943	62
2003	Lauterbur, Paul C.	John A. Pople	1962	Pittsburgh	1929 - 2007	74
1907	Laveran, Charles Louis Alphonse		1867	Strasbourg	1845 - 1922	62
1958	Lederberg, Joshua	E.L. Tatum	1948	Yale	1925 -	33
1986	Levi-Montalcini, Rita	Giuseppe Levi; Viktor Hamburger	1936	Turin (MD)	1909 -	77
1995	Lewis, Edward B.	Alfred Sturtevant	1942	Cal Tech	1918 - 2004	77
1953	Lipmann, Fritz Albert	Otto Meyerhof	1927	Berlin	1899 - 1986	54
1936	Loewi, Otto	Ostwald Schmiedeberg	1896	Strasbourg	1873 - 1961	63
1973	Lorenz, Konrad Zacharias	Ferdinand Hochstetter; Jan Versluys (zoology); Karl Buehler (psychology)	1935	Vienna (MD 1928, PhD)	1903 - 1989	70
1969	Luria, Salvador Edward	Giuseppe Levi	1935	Turin (MD); Radium Inst.	1912 -	57

				Paris; Columbia		
1965	Lwoff, Andre	Felix Mesnil; Otto Meyerhof (Heidelberg)	1927; 1932	Pasteur Inst. (MD, PhD)	1902 -	63
1964	Lynen, Feodor	Heinrich Wieland	1937	Munich	1911 - 2000	53
1923	Macleod, John James Richard	Max August Siegfried	1898	Aberdeen (MD)/Leipzig/Cambridge	1876 - 1935	47
2003	Mansfield, Sir Peter	Jack G. Powles	1962	London	1933 -	70
2005	Marshall, Barry J.	J. Robin Warren (Roy. Perth Hosp.)	1974	Western Australia (MB)	1951 -	54
1983	McClintock, Barbara	Claude B. Hutchison	1927	Cornell	1902 - 1992	81
1908	Mechnikov, Ilya Ilyich	Karl Leuckhart (Giessen); von Siebold (Munich)	1860s	Naples	1845 -1916	63
1960	Medawar, Sir Peter Brian	John Zachary Young	1947	Oxford	1915 - 1987	45
2006	Mello, Craig Cameron	Victor R. Ambros	1990	Harvard		
1922	Meyerhof, Otto Fritz	Otto Warburg	1909	Heidelberg (MD)	1884 - 1951	38
1984	Milstein, Cesar	Stoppani; Malcolm Dixon	1957; 1960	Buenos Aires; Cambridge	1927 - 2002	57
1934	Minot, George Richards	W.S. Thayer, W.H. Howell (Johns Hopkins)	1912	Harvard (MD)	1885 - 1950	49
1949	Moniz, Antonio C. de A.F.E.		1900s	Coimbra; Bordeaux; Paris	1874 - 1955	75
1965	Monod, Jacques Lucien	Edouard Chatton (Strasbourg); Boris Ephrussi (Paris); T.H. Morgan (Cal Tech); Georges Teissier (Sorbonne)	1931	Sorbonne	1910 - 1976	55
2008	Montagnier, Luc	Pierre Gavaudan		Paris	1932 -	76
1933	Morgan, Thomas Hunt	Hans Driesch, Curt Herbst (Naples)	1890	Johns Hopkins	1866 - 1945	67
2014	Moser, Edvard I.	Per Andersen; O'Keefe, J. (post-	1995	Oslo; UC London	1962 -	52

		doc advisor)				
2014	Moser, May-Britt	Per Andersen; O'Keefe, J. (post- doc advisor)	1995	Oslo; UC London	1963 -	51
1946	Mueller, Hermann Joseph	Edmund Beecher Wilson	1915	Columbia	1890 - 1967	56
1948	Mueller, Paul Hermann	Carl Fichter	1925	Basel	1899 - 1965	49
1998	Murad, Ferid	Earl Sutherland, Jr.	1965	Western Reserve	1936 -	62
1934	Murphy, William Parry	Henry A. Christian (Peter Bent Brigham Hosp.)	1922	Harvard (MD)	1892 - 1987	42
1990	Murray, Joseph E.		1943	Harvard (MD)	1919 -	71
1978	Nathans, Daniel	Fritz Lipmann (Rockefeller Inst.)	1954	Washington (MD)	1928 - 1999	50
1991	Neher, Erwin	Dieter Lux	1967	MPI-Psychiatrie, Munich	1944 -	47
1928	Nicolle, Charles Jules Henri	A. Gombault; Emile Roux	1893	Pasteur Inst. (MD)	1866 - 1936	62
1968	Nirenberg, Marshall W.	James Hogg	1957	Michigan	1907 - 2008	61
1995	Nuesslein-Volhard, Christiane	Heinz Schaller	1973	Tuebingen	1942 -	53
2001	Nurse, Sir Paul M.	Tony Simms; Murdoch Mitchison (Edinburgh)	1973	East Anglia	1949 -	52
2014	O'Keefe, John	Ronald Melzack	1967	McGill	1939 -	75
1959	Ochoa, Severo	Otto Meyerhof (KWI)	1929	Madrid (MD)	1905 - 1993	54
2016	Ohsumi, Yoshinori	Kazutomo Imahori; Gerald M. Edelman	1975	Tokyo; Rockefeller	1945 -	71
2015	Omura, Satoshi	Max Tishler (Wesleyan)	1970	Tokyo	1935 -	80
2022	Paabo, Svante	Per A. Peterson	1986	Uppsala	1955	67
1974	Palade, George Emil	Albert Claude (Rockefeller)	1940	Bucharest (MD)	1912 -	62
2021	Patapoutian, Ardem	Barbara J. Wold	1996	Cal Tech	1967 -	54
1904	Pavlov, Ivan Petrovich	S.P. Botkin	1883	St. Petersburg/Breslau/Leipzi g	1849 - 1936	55
1972	Porter, Rodney R.	Frederick Sanger	1948	Cambridge	1917 - 1985	55

1997	Prusiner, Stanley B.	Britton Chance	1968	Pennsylvania (MD)	1942 -	55
2019	Ratcliffe, Sir Peter J.		1987	Cambridge (MD)	1954-	65
1950	Reichstein, Tadeus	Hermann Staudinger; L. Ruzicka	1922	ETH-Zurich	1897 - 1996	53
2020	Rice, Charles M.	James H. Strauss	1981	Cal Tech	1952 -	68
1956	Richards, Dickinson Woodruff	H.H. Dale (Natl. Inst. Med. Res.); Harvard (L.J. Henderson)	1923	Columbia Coll. Phys. Surg. (MD)	1895 - 1973	61
1913	Richet, Charles Robert	Charles Philippe Robin	1869; 1878	Paris (MD, DSc 1878)	1850 - 1935	63
1954	Robbins, Frederick Chapman	John F. Enders (Child. Hosp. Med. Center)	1940	Harvard (MD)	1916 -	38
1993	Roberts, Richard John	William David Ollis	1968	Sheffield	1943 -	50
1994	Rodbell, Martin	Herbert E. Carter (Illinois)	1954	Washington	1925 - 1998	69
2017	Rosbash, Michael	Sheldon Penman	1970	MIT	1944 -	73
1902	Ross, Sir Ronald		1870s	St. Bartholomew's Hosp., London	1857 - 1932	45
2013	Rothman, James E.	Eugene P. Kennedy	1976	Harvard Med. School	1950 -	63
1966	Rous, Francis Peyton	Simon Flexner (Rockefeller)	1905	Johns Hopkins (MD)	1879 - 1970	87
1991	Sakmann, Bert	Otto D. Creutzfeldt; Bernard Katz (UC London)	1960s	Munich (MD)	1942 -	49
1982	Samuelsson, Bengt I.	Elias J. Corey (Harvard)	1961	Karolinska Inst.	1934 -	48
1977	Schally, Andrew Victor	Murray Saffran	1957	McGill; Natl. Inst. Med. Res. London	1926 -	51
2013	Schekman, Randy W.	Arthur Kornberg	1974	Stanford	1948 -	65
2019	Semenza, Gregg Leonard	Elias Schwartz	1984	Pennsylvania	1956 -	63
1993	Sharp, Phillip A.	Victor Bloomfield	1969	Illinois	1944 -	49
1932	Sherrington, Sir Charles Scott	Michael Foster (Cambridge)	1879	Roy. Coll. Surg. London (MD)	1857 - 1952	75

1978	Smith, Hamilton O.	Myron Levine (Michigan)	1956	Johns Hopkins (MD)	1931 -	47
2007	Smithies, Oliver	A. G. Ogston	1951	Oxford	1925 -	82
1980	Snell, George Davis	Castle; Herman Muller	1928	Harvard (MS)	1903 -	77
1935	Spemann, Hans	Theodor Boveri; Julius Sachs; W. Roentgen	1895	Wuerzburg	1869 - 1941	66
1981	Sperry, Roger Wolcott	Paul A. Weiss; Karl S. Lashley (Harvard)	1941	Chicago	1913 - 1994	68
2011	Steinman, Ralph M.	Zanvil A. Cohn (Rockefeller)	1968 (MD)	Harvard	1943 - 2011	68
2013	Südhof, Thomas C.	Victor P. Whittaker	1982 (MD) 1982 (PhD)	Göttingen	1955 -	58
2002	Sulston, John E.	Reese, Colin Bernard	1966	Cambridge	1942 -	60
1971	Sutherland, Earl Wilbure Jr.	Carl F. Cori	1942	Washington (at St. Louis) (MD)	1915 - 1974	56
1937	Szent-Gyorgi, Albert	Sir F. G. Hopkins (Cambridge)	1911	Budapest	1893 - 1986	44
2009	Szostak, Jack William	Raymond Wu	1977	Cornell	1952 -	57
1958	Tatum, Edward Lawrie	Edwin B. Fred; William Harold Peterson	1935	Wisconsin; Utrecht; Stanford	1909 - 1975	49
1975	Temin, Howard Martin	Renato Dulbecco	1959	Cal Tech	1934 - 1994	41
1951	Theiler, Max		1922	London Sch. Tropical Medicine	1899 - 1972	52
1955	Theorell, Axel Hugo Theodor	Albert Calmette	1930	Pasteur Inst. (MD)	1903 - 1982	52
1990	Thomas, E. Donnall	Clement Finch	1946	Harvard (MD)	1920 -	70
1973	Tinbergen, Nikolaas	C.J. van der Klaauw; Konrad Lorenz (Vienna)	1932	Leiden	1907 - 1988	66
1987	Tonegawa, Susumu	Masaki Hayashi; Renato Dulbecco (Salk Inst.)	1978	UC San Diego	1939 -	48

2015	Tu, Youyou		1955	Beijing Med. Univ.	1930 -	85
1982	Vane, Sir John R.	Geoffrey Dawes	1953	Oxford	1927 - 2004	55
1989	Varmus, Harold E.	Michael Bishop (UC San Francisco)	1966	Columbia Coll. Phys. Surg. (MD)	1939 -	50
1927	Wagner-Jauregg, Julius	Salomon Stricker	1880	Vienna	1857 - 1940	70
1952	Waksman, Selman Abraham	Thornton Brainsford Robertson	1918	UC Berkeley	1888 - 1973	64
1967	Wald, George	Otto Warburg (Berlin)	1932	Columbia	1906 - 1997	61
1931	Warburg, Otto	Emil Fischer	1906;1911	Berlin; Heidelberg (MD)	1883 - 1970	48
2005	Warren, J. Robin	No supervisor	1961	Adelaide (MB)	1937 -	68
1962	Watson, James Dewey	Salvador E. Luria	1950	Indiana	1928 -	34
1954	Weller, Thomas Huckle	John F. Enders	1940	Harvard (MD)	1915 -	39
1934	Whipple, George Hoyt	William H. Welch	1905	Johns Hopkins (MD)	1878 - 1976	56
1995	Wieschaus, Eric F.	Walter Gehring; Rolf Noethiger (Zurich)	1974	Yale	1947 -	48
1981	Wiesel, Torsten Nils	Carl Gustaf Bernhard; S.W. Kuffler (Johns Hopkins)	1954	Karolinska Inst. (MD)	1924 -	57
1962	Wilkins, Maurice Hugh Frederick	Sir John T. Randall	1940	Birmingham	1916 - 2004	46
1977	Yalow, Rosalyn nee Sussman	Jerrold Zacharias; Solomon Berson (Bronx Vet. Admin. Hosp.)	1945	CUNY (Hunter College)	1921 -	56
2012	Yamanaka, Shinya	Katsuyuki Miura	1993	Osaka	1962 -	50
2017	Young, Michael W.	Burke Judd	1975	U Texas (Austin)	1949 -	68
1996	Zinkernagel, Rolf M.	Peter C. Doherty; F. Dixon (Scripps)	1975	Basel (MD 1968); ANU	1944 -	52

Note: Bolded names are those that are still alive at the time of this writing.

TOP 5 UNIVERSITY RANKING		
23	Harvard	U.S.
19	Cambridge	U.K.
13	Johns Hopkins	U.S.
10	Columbia Coll. Phys. Surg.	U.S.
9	Oxford	U.K.
7	Berlin	Germany
7	Munich	Germany
7	Vienna	Austria

NATIONALITY DEMOGRAPHICS	NUMBER OF PRIZES
American	101
American imports	23
German	24
British	32
British imports	6
French	13
Austrian	7
Swiss	6
Australian	7
Danish	5
Italian	5
Belgian	3
Canadian	4
Dutch	3
South African	3
Spanish	2
Swedish	3
Scottish	2
Russian	2
Hungarian	2

Czechs	2
Argentinian	2
Polish	2
Norwegian	2
Finnish	1
Indian	1
Ukranian	1
Venezuelan	1
Japanese	5
New Zealander	1
Portuguese	1
Romanian	1
Luxembourg	1
Chinese	1
Irish	1
TOTAL	276

CANADIAN-BORN MEDICINE NOBEL LAUREATES				
PRIZE YEAR	NAME	PLACE OF BIRTH	EDUCATION	
1923	Banting, Sir Frederick Grant	b. Alliston, Ontario	MD 1916, University of Toronto	went to Toronto
1966	Huggins, Charles Brenton	b. Halifax, Nova Scotia	MD 1924 Harvard	went to Chicago
1981	Hubel, David Hunter	b. Windsor, Ontario	MD 1951 McGill	went to Johns Hopkins; Harvard
2011	Steinman, Ralph M.	b. Montreal, Quebec	BSc 1963 McGill MD 1968 Harvard	went to Rockefeller Inst.

