

Year	Event	Discoverer(s)
1590	Mounted two lenses in a tube to produce the first compound microscope	Hans and Zacharias Janssen
1660	Published "Micrographia", containing drawings and detailed observations of biological materials made with the best compound microscope	Robert Hooke
1677	Observed "little animals"	Antony Leeuwenhoek
1796	First scientific Smallpox vaccination	Edward Jenner
1850	Advocated washing hands to stop the spread of disease	Ignaz Semmelweis
1861	Disproved spontaneous generation	Louis Pasteur
1862	Supported Germ Theory of Disease	Louis Pasteur
1867	Practiced antiseptic surgery	Joseph Lister
1876	First proof of Germ Theory of Disease with Bacillus anthracis discovery	Robert Koch
1877	Published his method for fractional sterilization	John Tyndall
1879	Neisseria gonorrhoeae, the first human pathogen identified	Albert Neisser
1880	Finds malarial parasites in erythrocytes of infected individuals	C. L. Alphonse Laveran
1881	Growth of Bacteria on solid media	Robert Koch
1882	Outlined Koch's postulates	Robert Koch
1882	Developed acid-fast Stain	Paul Ehrlich
1882	Mycobacterium tuberculosis isolated	Robert Koch
1883	Independently discovered Corynebacterium diphtheriae	Edward Theodore Klebs and Fredrich Loeffler
1883	Pioneered developments in microscopy such as immersion lenses and apochromatic lenses which reduce chromatic aberration	Carl Zeiss and Ernst Abbe
1884	Developed Gram Stain	Christian Gram
1884	Process of phagocytosis described	Ilya Ilich Metchnikoff
1885	First Rabies vaccination	Louis Pasteur
1885	Discovered cure for syphilis	Paul Ehrlich
1885	E.coli identified	Theodor Escherich
1887	Invented Petri Dish	Julius Richard Petri

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1888	Toxin of <i>Corynebacterium diphtheriae</i> discovered	Emile Roux and Alexandre Yersin
1889	Discovered that bacteria can be agglutinated by serum	A. Charrin and J. Roger
1889	First pure culture of the strict anaerobic pathogen, the <i>Clostridium tetani</i>	Shibasaburo Kitasato
1890	Discovery of diphtheria antitoxin serum	Emil von Behring and Shibasaburo Kitasato
1891	Proposed that antibodies are responsible for immunity	Paul Ehrlich
1892	Discovered virus of tobacco mosaic disease	Dmitri Iosifovich Ivanovski
1892	<i>Clostridium perfringens</i> identified	William Welch and George Nuttall
1893	First account of a zoonotic disease, established that ticks carry <i>Babesia microti</i>	Theobald Smith and F.L. Kilbourne
1894	Endotoxin identified in <i>Vibrio cholerae</i>	Richard Pfeiffer
1894	<i>Yersinia (Pasteurella) pestis</i> isolated	Alexandre Yersin
1897	Killed vaccine against plague	Waldemar Haffkine
1897	Killed vaccine against typhoid fever	Almroth Wright and David Bruce
1899	Recognized viral dependence on cells for reproduction	Martinus Beijerinck
1899	Showed that the malarial parasite undergoes a cycle of development in mosquitoes and that the disease is transmitted by the bite of female mosquitoes	Ronald Ross
1900	Proved that mosquitoes carries the yellow fever agent	Walter Reed
1901	Complement fixation test developed	Jules Bordet and Octave Gengou
1903	<i>Leishmania donovani</i> observed	William Leishman
1905	<i>Treponema pallidum</i> identified	Fritz R. Schaudinn and Erich Hoffmann
1909	Causative agent of Rocky Mountain spotted fever, <i>Rickettsia</i> identified	Howard Ricketts
1909	<i>Trypanosoma cruzi</i> identified	Carlos Chagas
1910	Systematic and scientific studies of dermatophytes, medium for the growth of pathogenic fungi	Raymond Sabouraud

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1911	Experimental proof of an infectious etiologic agent of cancer	Francis Peyton Rous
1915	First discovery of bacteriophage	Frederick Twort
1917	Coined the name "bacteriophage"	Felix d'Herelle
1919	Blood agar used as a medium to study the hemolytic reactions for the genus Streptococcus	James Brown
1924	BCG to immunize against tuberculosis	Albert Calmette and Camille Guerin
1926	Distinguishes between bacteria and viruses, establishing virology as a separate area of study	Thomas Rivers
1928	Discovered transformation in bacteria and establishes the foundation of molecular genetics	Frederick Griffith
1928	Discovered Penicillin	Alexander Fleming
1931	Constructed the first electron microscope	Ernst Ruska
1931	Devise a technique of cultivating viruses in eggs	Alice Woodruff and Ernest Goodpasture
1933	Described a method of producing streptococcal antigens and sera for use in precipitin tests	Rebecca Lancefield
1934	First typing of a strain of bacteria with bacteriophage	Alice Evans
1938	Vaccine against yellow fever	Max Theiler
1940	Isolate the antibiotic from Fleming's mold cultures and demonstrate that it can cure infections	Howard Florey and Ernest Chain
1940	Bacterial product recognized to mediate resistance to an antibacterial agent (Penicillin) in E.coli	Ernest Chain and E.P. Abraham
1940	Discovered actinomycin, the first antibiotic obtained pure from an actinomycete	Selman Waksman and H. Boyd Woodruff
1941	Demonstrated that penicillin is non-toxic to human	Charles Fletcher
1941	Viral hemagglutination described	George Hirst
1942	Birth of immunofluorescence	Albert H. Coons, H.J. Creech, R.N. Jones, and E. Berliner
1942	Identify adjuvants that can significantly boost antibody production	Jules Freund and Katherine McDermott
1944	First to demonstrate successful treatment of tuberculosis with streptomycin	W. H. Feldman and H. C. Hinshaw

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1949	Technique to grow polio virus in test tube cultures of human tissues	John Franklin Enders, Thomas H. Weller, and Frederick Chapman Robbins
1952	Used the term plasmid to describe extranuclear genetic elements that replicate autonomously	Joshua Lederberg
1952	Transduction discovered in Salmonella typhimurium	Joshua Lederberg and Norton Zinder
1953	Killed polio vaccine	Jonas Salk
1953	First useful fungal antibiotic, NYSTATIN developed	Elizabeth Lee Hazen and Rachel Fuller Brown
1957	Interferon discovered	Alick Isaacs and Jean Lindemann
1957	Proposed that a slow virus is responsible for the wasting disease kuru	D. Carleton Gajdusek
1958	Antibody labeling agent, fluorescein isothiocyanate (FITC) developed. Beginning of RIA and ELISA	Joseph H. Burkhalter and Robert Seiwald
1959	Transferable drug resistance discovered in Shigella	O. Sawada
1963	Described the "Australia Antigen" (hepatitis B antigen)	Baruch Blumberg
1963	Vaccine against Hepatitis B	Baruch Blumberg and Irving Millman
1966	Established standards for antibiotic susceptibility testing based on disc diffusion procedure	William Kirby and Alfred Bauer
1967	Viroids discovered	Theodor O. Diener
1968	Limulus lysate assay for endotoxin detection	Levin and Bang
1969	DNA hybridization used to classify members of family Enterobacteriaceae	Don Brenner
1970	Restriction endonucleases, important tool in genetic engineering discovered	Hamilton Smith and Kent W. Wilcox
1970	Independently discovered reverse transcriptase in RNA viruses	Howard Temin and David Baltimore
1972	Recombinant DNA molecule from viral and bacterial DNA constructed	Paul Berg
1975	Sexual reproduction in the fungus described	Kyung and Kwon-Chung

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1975	Monoclonal antibodies by Hybridoma technique	Georg Köhler and César Milstein
1976	Proto-oncogenes identified	J. Michael Bishop and Harold Varmus
1976	Plasmodium falciparum cultivated in vitro	William Trager and Jim Jensen
1977	Developed a method to sequence DNA	W. Gilbert and F. Sanger
1979	Smallpox (variola) is declared officially eliminated	-
1982	Prions discovered	Stanley Prusiner
1983	Polymerase Chain Reaction invented	Kary Mullis
1983	Discovery of the immunodeficiency virus (HIV)	Luc Montagnier and Robert Gallo
1984	Helicobacter pylori identified	Barry Marshall
1985	First anti-retroviral AZT discovered	Robert Gallo, Dani Bolognesi, Sam Broder
1995	First microbial genomic sequence published (Haemophilus influenzae)	TIGR