



Biology Researchers and Invention

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SrNo	Researcher	Invention
1	Alexander Fleming	Penicillin was discovered February 14, 1929 6 August 1881 – 11 March 1955
2	Howard Martin Temin	American virologists, worked on virus Retrovirus After receiving the Nobel Prize in 1975
3	Adolf Engler and Karl A.E. Prantl	Proposed that monocots are more primitive than dicots. Propose Phylogenetic system of classification with-Hutchinson who had been the first to use phylogenetic principles
4	T.O. Diener	discovered Free infectious RNA
5	Takhatjan	Gave phylogenetic classification of plant kingdom of Floa Armenia
6	Huxley	Father of Neotaxonomy The term " New Systematics" was introduced 1940
7	A.V. Leeuwenhoek	first saw and described a live cell. Bacteria were discovered. he is commonly known as "the Father of Microbiology"
8	William Bertram Turill	Proposed three phase of taxonomy, alpha, beta and omega Mathematical classification of leaf shapes.
9	Carolus Linnaeus	Sweden First great taxonomist Father of taxonomy <i>Systema Naturae</i> Tenth edition was published in - 1758 He proposed An artificial system of classification Binomial nomenclature, Scientific classification
10	Theophrastus	Father of botany. First to use Artificial system of classification
11	Zinder and Lederberg	Discovered a new type of gene transfer mediated by a virus. They called this process transduction.
12	Herbert F. Copeland	Four kingdom classification was proposed
13	W.N. Staley	Tobacco mosaic virus/ virus was crystallized for the first time ,also showed that TMV remains active even after crystallization.
14	Aristotle	Known as 'Father of Zoology' Author of book "Scala Naturae" First to discover Fertilization
15	Jean-Baptiste Lamarck	Book "Philosophie Zoologique" published in 1809 Proposed the idea of fixity of species
16	Bentham and Hooker	Natural classification



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17	Robert Harding Whittaker	Latest classification of biological kingdom 5-kingdom classification in 1969
18	Ernst Haeckel	The scientist who created the group Protista for both unicellular plants and animals Coined many terms in biology, including anthropogeny, ecology, phylum, phylogeny, stem cell, and Protista , plastid The biogenetic law of "Ontogeny repeats phylogeny"
19	Comte de Buffon	Written encyclopedic " <i>Histoire Naturelle</i> " The book having binomial nomenclature for the first time
20	Camp and Gilly	The term "biosystematics" was coined in 1943
21	Ernst Mayr	A species was defined as a "species are groups of interbreeding natural populations that are reproductively isolated from other such groups." Was awarded the Balzan Prize in 1983, the International Prize for Biology in 1994, and the Crafoord Prize in 1999. three prizes, regarded as triple crown of biology Also known as Darwin of 20th century
22	John Ray	Scientist who developed 'key' for identification of animals Coined the term species
23	Paul Ehrlich	gave 'rivet popper hypothesis'
24	Sir J.C. Bose	Proposed a Pulsation theory of ascent of sap Is mechanism for the ascent of sap in 1927
25	Engelmann	Discovery of Action spectrum of photosynthesis was in 1883
26	Daniel Israel Arnon	The process of photophosphorylation was discovered
27	Otto Heinrich Warburg.	A decrease in photosynthetic rate with increased availability of oxygen is called .- Warburg effect
28	Hatch and Slack	discovered alternate method of carbon fixation C4 - cycle
29	Peter Dennis Mitchell,	awarded the 1978 Nobel Prize for Chemistry for his discovery of the Chemiosmotic mechanism or Chemiosmosis of ATP synthesis
30	Melvin Calvin	Scientist awarded Nobel Prize in 1960 for tracing the path of carbon in photosynthesis
31	Frederick Frost Blackman	Blackman proposed the limiting factors determines the rate of photosynthesis in 1905
32	Jan Ingenhousz	Who discovered that green plant parts and light are essential for photosynthesis
33	Ernst Munch	Put forward Pressure Flow Hypothesis or Mass flow hypothesis in 1930.
34	Katherine Esau	books <i>Plant Anatomy</i> and <i>Anatomy of Seed Plants</i>



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35	Hans Krebs	Invented urea cycle and tricarboxylic acid (TCA) cycle or citric acid cycle is named after him as Kreb cycle
36	Marshall and Warren	2005 Nobel Prize was awarded discovery of Bacterium Helicobacter pylori causing peptic ulcer.
37	Edward Jenner	Father of Immunology - The term vaccine was introduced
38	James Phipps and Ali Marvow	pioneer of smallpox vaccine
39	Louis Pasteur	Louis Pasteur and Émile Roux, developed the first rabies vaccination in 1885 The theory that life only comes from the reproduction of preexisting life. This was proven by Louis Pasteur in 1862. Swan-Necked Flask Experiment in the early 1860s to prove that particles in the air (germ theory).
39	Henry Charlton Bastian	The term biogenesis was coined
40	August Weismann	Proposed theory of "continuity of germplasm"
41	Miller and Urey	Oparin - haldane's view on the origin of life was first experimentally proved by experimental proof that organic compounds formed the basis of evolution
42	Karl Ernst von Baer	Introduced von Baer's law to explain the details of embryo development
43	Hardy – Weinberg	Genetic equilibrium - Which initiated study in population genetics and related fields
44	Darwin	Theory of pangensis " Origin of Species is wrote in 1859 Reproductive fitness Origin of species
45	Sewall Wright	introduced Concept of genetic drift
46	Father Saurez	One of the greatest advocates of the theory of special creation was -
47	Thomas Robert Malthus.	Famous book of Population Gave the principle that population tends to multiply more rapidly than food supply – He gave a statement "Human population grows in geometric ratio while food materials increases in arithmetic proportion
48	Oparin-Haldane	The chemical evolution of life
49	Hugo de Vries	Used Evening Primrose (Oenothera Lamarckian) for Mutation theory basically suggesting a form of saltationism.



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		Mendel's work was got republished in 'Flora' by - De vries
50	Lederberg	replica plating experiment to show the genetic basis of adaptation
51	Van Helmont	Supported theory of spontaneous creation
52	Birbal Sahni	Famous Paleontologists/ palaeobotanist of India Who worked on Fossil plants
53	Thomas Hunt Morgan	Gave Mutation theory based on work over <i>Oenothera lamarckiana</i> was awarded Nobel prize for contribution of the role that the chromosome plays in heredity Scientist who was awarded Nobel prize for finding genes to be linearly arranged on chromosomes Described the phenomenon of linkage and crossing over
54	Oparin and Sidney Fox	Coacervates were experimentally produced
55	Theodosius Dobzhansky	Wrote the book " Genetics and Origin of Species" in 1937 his 1973 essay "nothing in biology makes sense except in the light of evolution"
56	Francesco Redi	founder of experimental biology, he disapproved abiogenesis for the first time
57	Herbert Spencer	first used the phrase 'Survival of fittest'
58	Joel Asaph Allen	Given Allen's rule -predicts that endothermic animals with the same body volume should have different surface areas that will either aid or impede their heat dissipation. Warm blooded animals of cold climate have small extremities.
59	Gause	Gave Law related to Competitive exclusion
60	W. W. Garner and H. A. Allard	discovered photoperiodism
61	Moore	The term phytochrome was introduced by -
62	Nawaschin	Who discovered double fertilization in <i>Lilium and Fritillaria</i> - (1898)
63	J.B. Farmer and J.E.S. Moor	Coined the term meiosis in 1905
64	Rudolf Ludwig Carl Virchow	Proposed the famous generalization " all cells are derived from pre-existing cells". "Omnis cellula e cellula" He coined scientific terms, chromatin
65	Howard and Pelc	Discovered Cell cycle



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66	Oscar Hertwig	Discovered Meiosis
67	Hayes and Lederberg	Discovered Plasmids
68	Christian de Duve	The discoverer of lysosome
69	Robert Brown	In 1811, discovered – Nucleus Microtubules were discovered
70	Robert Hook	coined the term cell in – 1665 Author of historically significant book Micrographia
71	Schleiden and Schwann	proposed cell theory in 1838 – 39
72	Singer SJ, Nicolson GL	Put forward Fluid mosaic model of cell membrane
73	Metchnikoff	Put forward phagocytosis theory.
74	Keith R. Porter, Albert Claude, Brody Meskers and Ernest F. Fullam	Ribosomes were first seen
75	Benda	Gave name mitochondria
76	Waldeyer	Coined the term chromosome
77	Singer and Nicolson's	Proposed fluid mosaic model “extrinsic proteins are loosely associated with intrinsic proteins and can be easily separated”
78	Walther Flemming	Coined the term chromatin
79	Dr. Joachim Hämmerling	proved the existence of morphogenetic demonstrated that the nucleus contains the genetic information and controls development
80	Knoll and Ruska	constructed the first scanning electron microscope (SEM)
81	Karel Purkinje	Coined term protoplasm
82	George Beadle and Edward Tatum	proposed that genes control production of enzymes
83	Francis Crick	Proposed central dogma
84	Seymour Benzer	Coined the terms cistron, recon and muton-
85	Hershey and Chase	Experiment that proved DNA to be genetic material of bacteriophage
86	Friedrich Miescher	Discovered Nucleic acids
87	Jacob and Monod	operon model of gene regulation and organisation of procaryotes was proposed Nobel Prize for operon model
88	Nirenberg and Mathaei	Whose experiments cracked DNA and discovered triplet nature of genetic code



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89	Holley	Proposed Clover leaf model of tRNA in 1968.
90	Francis Crick	Who proposed Wobble hypothesis
91	Hargobind Khorana	Discovery of DNA ligase. Who deduced code for amino acids from Serine and leucine was awarded Nobel Prize
92	Taylor	Pea chromosome replication to be semiconservative
93	Johannsen	Coined the terms phenotype and genotype gene
94	Hershey and Chase	Experiments on Viral DNA
95	Holley, Nirenberg and Khorana	Discovered Genetic code
96	Meselson and Stahl	Experimental proof of semiconservative replication of DNA -
97	Watson , Crick and Wilkins	Shared the Nobel Prize for DNA structure in 1962
98	Matthew Meselson and Franklin Stahl	Invented the technique of density gradient centrifugation and used this to prove that DNA is replicated semi-conservatively
99	George Gamow	Triplet code, solving the problem of genetic coding gave rise to important models of biological degeneracy
100	Frederick Griffith	demonstrated bacterial transformation, whereby a bacterium distinctly changes its form and function.
101	Rosalind Franklin	contributions to the understanding of the molecular structures of DNA, RNA, viruses,
102	Beadle and Tatum	Genes carry information for making proteins
103	Jacob and Monod	operon concept
104	Howard Martin Temin	Nobel Prize for Reverse transcription shared with Renato Dulbecco and David Baltimore.
105	Severo Ochoa	Who was awarded Nobel prize for in vitro synthesis of polyribonucleotides in 1959
106	Avery, MacLeod and McCarty	Found out DNA transforming principle of Pneumococcus
107	Landsteiner	Blood groups
108	Alfred Russel Wallace	Theory of Organic evolution
109	Barbara Mc Clintock	is famous for her work on – Maize; Nobel Prize for discovering "mobile genetic elements" or jumping gene/transposable DNA elements 1983
110	Mary Lyon	Lyon's hypothesis is connected with - Number of barr bodies
111	Walter Sutton	Discovered chromosomal basis of heredity
112	Henking	X-chromosome or X-body was first observed (1891)
113	C.B. Bridges	in 1922 proposed the Genic Balance Theory for sex determination



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114	H. J. Muller	Nobel prize for X-rays induce sex-linked recessive lethal mutations – 1927
115	Reginald Punnett and Edith Saunders	discovered genetic linkage
116	E.O.Wilson	the father of sociobiology" and "the father of biodiversity"
117	Gregor Johann Mendal	known as the "father of modern genetics" Austrian monk work was rediscovered in – 1900 btCarl Correns from Germany
118	Karl Lohmann	Discovered ATP
119	Fischer	Key and lock hypothesis of enzyme action
120	Buchner	Biocatalysts were found accidentally in Yeast extract by
121	Arber and Nathans	Nobel Prize in 1978 for working on enzymes
122	Eduard Adolf Strasburger	Given modern laws of plant cytology: "New cell nuclei can only arise from the division of other nuclei." and originated the terms cytoplasm and nucleoplasm.