

CPC**COOPERATIVE PATENT CLASSIFICATION****C12N**

MICRO-ORGANISMS OR ENZYMES ; COMPOSITIONS THEREOF (biocides, pest repellants or attractants, or plant growth regulators, containing micro-organisms, viruses, microbial fungi, enzymes, fermentates or substances produced by or extracted from micro-organisms or animal material [A01N 63/00](#) ; food compositions [A21](#) , [A23](#) ; medicinal preparations [A61K](#) ; chemical aspects of, or use of materials for, bandages, dressings, absorbent pads or surgical articles [A61L](#) ; fertilisers [C05](#)) ;
PROPAGATING, PRESERVING OR MAINTAINING MICRO-ORGANISMS (preservation of living parts of humans or animals [A01N 1/02](#)) ;
MUTATION OR GENETIC ENGINEERING ; CULTURE MEDIA (micro-biological testing media [C12Q](#))

NOTE

Documents relating to the use of vectors or hosts for the preparation of specific peptides, e.g. enzymes, are classified in subclass [C07K](#) or in group [C12N 9/00](#) according to the peptides, with the appropriate indexing codes.

Attention is drawn to Notes (1) to (3) following the title of Class [C12](#) .

When classifying in this group, classification is also made in group [B01D 15/08](#) insofar as subject matter of general interest relating to chromatography is concerned.

WARNING

The following IPC groups are not used in the CPC scheme. Subject matter covered by these groups is classified in the following CPC groups:

[C12N 1/11](#) covered by [C12N 15/79](#)
[C12N 1/13](#) covered by [C12N 15/79](#)
[C12N 1/15](#) covered by [C12N 15/80](#)
[C12N 1/19](#) covered by [C12N 15/81](#)
[C12N 1/21](#) covered by [C12N 15/74](#)
[C12N 5/02](#) covered by [C12N 5/00](#) , [C12N 5/04](#) to [C12N 5/166](#)
[C12N 5/07](#) - [C12N 5/095](#) covered by [C12N 5/06](#) and subgroups
[C12N 5/18](#) - [C12N 5/28](#) covered by [C12N 5/16](#) and subgroups
[C12N 5/08](#) covered by [C12N 5/06](#) to [C12N 5/06R](#)
[C12N 5/18](#) covered by [C12N 5/16](#)
[C12N 5/20](#) covered by [C12N 5/163](#)
[C12N 5/22](#) covered by [C12N 5/16](#)
[C12N 5/24](#) covered by [C12N 5/163](#)
[C12N 5/26](#) covered by [C12N 5/166](#)
[C12N 5/28](#) covered by [C12N 5/166](#)
[C12N 7/01](#) covered by [C12N 7/00](#)
[C12N 9/70](#) covered by [C07K 14/3153](#)
[C12N 15/05](#) covered by [C12N 5/14](#)
[C12N 15/06](#) covered by [C12N 5/16](#)
[C12N 15/07](#) covered by [C12N 5/16](#)
[C12N 15/08](#) covered by [C12N 5/166](#)
[C12N 15/12](#) covered by [C07K 14/435](#)
[C12N 15/13](#) covered by [C07K 16/00](#)
[C12N 15/14](#) covered by [C07K 14/765](#)
[C12N 15/15](#) covered by [C07K 14/81](#)
[C12N 15/16](#) covered by [C07K 14/575](#)
[C12N 15/17](#) covered by [C07K 14/62](#)

C12N 15/18	covered by	C07K 14/61
C12N 15/19	covered by	C07K 14/52
C12N 15/20	covered by	C07K 14/555
C12N 15/21	covered by	C07K 14/56
C12N 15/22	covered by	C07K 14/565
C12N 15/23	covered by	C07K 14/57
C12N 15/24	covered by	C07K 14/54
C12N 15/25	covered by	C07K 14/545
C12N 15/26	covered by	C07K 14/55
C12N 15/27	covered by	C07K 14/53
C12N 15/28	covered by	C07K 14/525
C12N 15/29	covered by	C07K 14/415
C12N 15/30	covered by	C07K 14/44
C12N 15/31	covered by	C07K 14/195 , C07K 14/005
C12N 15/32	covered by	C07K 14/325
C12N 15/33	covered by	C07K 14/005
C12N 15/34	covered by	C07K 14/01
C12N 15/35	covered by	C07K 14/015
C12N 15/36	covered by	C07K 14/02
C12N 15/37	covered by	C07K 14/025
C12N 15/38	covered by	C07K 14/03
C12N 15/39	covered by	C07K 14/065
C12N 15/40	covered by	C07K 14/08
C12N 15/41	covered by	C07K 14/085
C12N 15/42	covered by	C07K 14/09
C12N 15/43	covered by	C07K 14/105
C12N 15/44	covered by	C07K 14/11
C12N 15/45	covered by	C07K 14/115
C12N 15/46	covered by	C07K 14/14
C12N 15/47	covered by	C07K 14/145
C12N 15/48	covered by	C07K 14/15
C12N 15/49	covered by	C07K 14/155
C12N 15/50	covered by	C07K 14/165
C12N 15/51	covered by	C07K 14/02 , C07K 14/10 , C07K 14/18
C12N 15/53	covered by	C12N 9/02
C12N 15/54	covered by	C12N 9/10
C12N 15/55	covered by	C12N 9/14
C12N 15/56	covered by	C12N 9/24
C12N 15/57	covered by	C12N 9/48
C12N 15/58	covered by	C12N 9/72B
C12N 15/59	covered by	C12N 9/64A
C12N 15/60	covered by	C12N 9/88
C12N 15/61	covered by	C12N 9/90
C12N 15/83	covered by	C12N 15/82
C12N 15/84	covered by	C12N 15/82

Guidance heading:

C12N 1/00

Micro-organisms, e.g. protozoa ; Compositions thereof (medicinal preparations containing material from micro-organisms [A61K 35/66](#) ; preparing medicinal bacterial antigen or antibody compositions, e.g. bacterial vaccines [A61K 39/00](#)) ; Processes of propagating, maintaining or preserving micro-organisms or compositions thereof ; Processes of preparing or isolating a composition containing a micro-organism ; Culture media therefor

C12N 1/005

- . { after treatment of microbial biomass not covered by [C12N 1/02](#) to [C12N 1/08](#) }

C12N 1/02

- . Separating micro-organisms from their culture media

- C12N 1/04 . Preserving or maintaining viable micro-organisms ([immobilised micro-organisms C12N 11/00](#))
- C12N 1/06 . Lysis of micro-organisms
- C12N 1/063 .. { of yeast }
- C12N 1/066 .. { by physical methods }
- C12N 1/08 . Reducing the nucleic acid content
- C12N 1/10 . Protozoa ; Culture media therefor
- C12N 1/12 . Unicellular algae ; Culture media therefor ([culture of multi-cellular plants A01G](#) ; as new plants [A01H 13/00](#))
- C12N 1/14 . Fungi ([culture of mushrooms A01G 1/04](#) ; as new plants per se [A01H 15/00](#) ; { fungi per se [C12R 1/645](#) to [C12R 1/885](#) }) Culture media therefor
- C12N 1/16 .. Yeasts ; Culture media therefor
- C12N 1/18 ... Baker`s yeast ; Brewer`s yeast
- C12N 1/20 . Bacteria { ([bacteria per se C12R 1/01](#) to [C12R 1/64](#)) } ; Culture media therefor
- C12N 1/22 . Processes using, or culture media containing, cellulose or hydrolysates thereof
- C12N 1/24 . Processes using, or culture media containing, waste sulfite liquor
- C12N 1/26 . Processes using, or culture media containing, hydrocarbons ([refining of hydrocarbon oils by using micro-organisms C10G 32/00](#))
- C12N 1/28 .. aliphatic
- C12N 1/30 ... having five or less carbon atoms
- C12N 1/32 . Processes using, or culture media containing, lower alkanols, i.e. C1 to C6
- C12N 1/34 . Processes using foam culture
- C12N 1/36 . Adaptation or attenuation of cells
- C12N 1/38 . Chemical stimulation of growth or activity by addition of chemical compounds which are not essential growth factors ; Stimulation of growth by removal of a chemical compound ([C12N 1/34](#) takes precedence)

C12N 3/00 Spore forming or isolating processes

C12N 5/00 Undifferentiated human, animal or plant cells, e.g. cell lines ; Tissues ; Cultivation or maintenance thereof ; Culture media therefor; ([plant reproduction by tissue culture techniques A01H 4/00](#))

NOTE

In this group, the following words are used with the meanings indicated: - a

"totipotent" cell can differentiate into all somatic lineages (ectoderm, mesoderm, endoderm), the germ line and extra-embryonic tissues such as the placenta; - a "pluripotent" cell is a somatic stem cell which can differentiate into cells of at least two of the three somatic lineages (ectoderm, mesoderm, endoderm); - a "multipotent" cell is restricted to one lineage; - "progenitor" and "precursor" cells are further restricted within the lineage. If not explicitly foreseen, totipotent cells are classified with pluripotent cells. Multipotent cells should not be classified with pluripotent cells. Unless provided for otherwise, committed progenitors are classified with their progeny.

- C12N 5/0006 . { Modification of the membrane of cells, e.g. cell decoration }
- C12N 5/0012 . { Cell encapsulation }
- C12N 5/0018 . { Culture media for cell or tissue culture (media for specific animal cell type [C12N 5/06](#)) }
- C12N 5/0025 .. { Culture media for plant cell or plant tissue culture }
- C12N 5/0031 .. { Serum-free culture media }

WARNING

This group is no longer used for the classification of new documents as from January 1, 2012. The backlog of this group is being continuously reclassified to [C12N 5/0037](#) to [C12N 5/0056](#)

- C12N 5/0037 .. { Serum-free medium, which may still contain naturally-sourced components }
- C12N 5/0043 .. { Medium free of human- or animal-derived components }
- C12N 5/005 .. { Protein-free medium }
- C12N 5/0056 .. { Xeno-free medium }
- C12N 5/0062 . { General methods for three-dimensional culture }
- C12N 5/0068 . { General culture methods using substrates (for specific animal cell type [C12N 5/06](#)) }
- C12N 5/0075 .. { using microcarriers }
- C12N 5/0081 . { Purging biological preparations of unwanted cells }
- C12N 5/0087 .. { Purging against subsets of blood cells, e.g. purging alloreactive T cells }
- C12N 5/0093 .. { Purging against cancer cells }
- C12N 5/04 . Plant cells or tissues { (culture media [C12N 5/0025](#)) }
- C12N 5/06 . Animal cells or tissues; { Human cells or tissues (preservation of living cells or tissues [A01N 1/02](#)) ; Not used, see subgroups }

NOTE

In this group, the following words are used with the meanings indicated:

- a "totipotent" cell can differentiate into all somatic

lineages (ectoderm, mesoderm, endoderm), the germ line and extra-embryonic tissues such as the placenta;
 - a "pluripotent" cell is a somatic stem cell which can differentiate into cells of at least two of the three somatic lineages (ectoderm, mesoderm, endoderm);
 - a "multipotent" cell is restricted to one lineage.
 "Progenitor" and "precursor" cells are further restricted within the lineage. If not explicitly foreseen, totipotent cells are classified with pluripotent cells. Multipotent cells should not be classified with pluripotent cells

C12N 5/0601 .. { Invertebrate cells or tissues, e.g. insect cells; Culture media therefor }
 C12N 5/0602 .. { Vertebrate cells }

NOTE

Three-dimensional culture, tissue culture or organ culture are classified with the corresponding cells, if not specially provided for

C12N 5/0603 ... { Embryonic cells ([production of embryos](#), [nuclear transfer A01K 67/027](#)) ; Embryoid bodies }

C12N 5/0604 { Whole embryos; Culture medium therefor }

C12N 5/0605 { Cells from extra-embryonic tissues, e.g. placenta, amnion, yolk sac, Wharton's jelly }

C12N 5/0606 { Pluripotent embryonic cells, e.g. embryonic stem cells (ES) (embryonic germ cells [C12N 5/0611](#) , induced pluripotent stem cells [C12N 5/0696](#)) }

C12N 5/0607 ... { Non-embryonic pluripotent stem cells, e.g. MASC } (induced pluripotent stem cells [C12N 5/0696](#))

C12N 5/0608 ... { Germ cells ([production of embryos](#), [nuclear transfer A01K 67/027](#)) ; Not used, see subgroups }

C12N 5/0609 { Oocytes, oogonia ([fertilised oocytes C12N 5/0604](#)) }

C12N 5/061 { Sperm cells, spermatogonia }

C12N 5/0611 { Primordial germ cells, e.g. embryonic germ cells (EG) }

C12N 5/0612 { sorting of gametes, e.g. according to sex or motility }

C12N 5/0613 ... { Cells from endocrine organs ([pancreas C12N 5/0676](#) , [gonads C12N 5/0681](#)) }

C12N 5/0614 { Adrenal gland }

C12N 5/0615 { Pineal gland }

C12N 5/0616 { Pituitary gland }

C12N 5/0617 { Thyroid and parathyroid glands }

C12N 5/0618 ... { Cells of the nervous system }

C12N 5/0619 { Neurons }

C12N 5/062 { Sensory transducers, e.g. photoreceptors; Sensory neurons, e.g. for hearing, taste, smell, pH, touch, temperature, pain }

C12N 5/0621 { Eye cells, e.g. cornea, iris pigmented cells ([photoreceptors C12N 5/062](#)) }

C12N 5/0622 { Glial cells, e.g. astrocytes, oligodendrocytes; Schwann cells }

C12N 5/0623 { Stem cells }

C12N 5/0625	...	{ Epidermal cells, skin cells; Cells of the oral mucosa }
C12N 5/0626	....	{ Melanocytes }
C12N 5/0627	....	{ Hair cells }
C12N 5/0628	.....	{ Hair stem cells; Hair progenitors (mesenchymal stem cells from hair follicles C12N 5/0666) }
C12N 5/0629	....	{ Keratinocytes; Whole skin }
C12N 5/063	.....	{ Kereatinocyte stem cells; Keratinocyte progenitors }
C12N 5/0631	....	{ Mammary cells }
C12N 5/0632	....	{ Cells of the oral mucosa }
C12N 5/0633	....	{ Cells of secretory glands, e.g. parotid gland, salivary glands, sweat glands, lacrymal glands }
C12N 5/0634	...	{ Cells from the blood or the immune system }

NOTE

Committed progenitors are classified with their progeny

C12N 5/0635	....	{ B lymphocytes }
C12N 5/0636	....	{ T lymphocytes }
C12N 5/0637	.....	{ Immunosuppressive T lymphocytes, e.g. regulatory T cells (Treg) }
C12N 5/0638	.....	{ Cytotoxic T lymphocytes (CTL), lymphokine activated killer cells (LAK) }
C12N 5/0639	....	{ Dendritic cells, e.g. Langherhans cells in the epidermis }
C12N 5/064	.....	{ Immunosuppressive dendritic cells }
C12N 5/0641	....	{ Erythrocytes }
C12N 5/0642	....	{ Granulocytes, e.g. basopils, eosinophils, neutrophils, mast cells }
C12N 5/0643	....	{ Osteoclasts }
C12N 5/0644	....	{ Platelets; Megakaryocytes }
C12N 5/0645	....	{ Macrophages, e.g. Kuepfer cells in the liver; Monocytes }
C12N 5/0646	....	{ Natural killers cells (NK), NKT cells }
C12N 5/0647	....	{ Haematopoietic stem cells; Uncommitted or multipotent progenitors }
C12N 5/0648	....	{ Splenocytes }
C12N 5/065	....	{ Thymocytes }
C12N 5/0651	....	{ Lymph nodes }
C12N 5/0652	...	{ Cells of skeletal and connective tissues; Mesenchyme }
C12N 5/0653	....	{ Adipocytes; Adipose tissue }
C12N 5/0654	....	{ Osteocytes, Osteoblasts, Odontocytes; Bones, Teeth }
C12N 5/0655	....	{ Chondrocytes; Cartilage }
C12N 5/0656	....	{ Adult fibroblasts }
C12N 5/0657	....	{ Cardiomyocytes; Heart cells }
C12N 5/0658	....	{ Skeletal muscle cells, e.g. myocytes, myotubes, myoblasts }
C12N 5/0659	.....	{ Satellite cells }
C12N 5/066	....	{ Tenocytes; Tendons, Ligaments }
C12N 5/0661	....	{ Smooth muscle cells }
C12N 5/0662	....	{ Stem cells }

C12N 5/0663	.....	{ Bone marrow mesenchymal stem cells (BM-MS) }
C12N 5/0664	.....	{ Dental pulp stem cells, Dental follicle stem cells }
C12N 5/0665	.....	{ Blood-borne mesenchymal stem cells, e.g. from umbilical cord blood }
C12N 5/0666	.....	{ Mesenchymal stem cells from hair follicles }
C12N 5/0667	.....	{ Adipose-derived stem cells (ADSC); Adipose stromal stem cells }
C12N 5/0668	.....	{ Mesenchymal stem cells from other natural sources }
C12N 5/0669	....	{ Bone marrow stromal cells; Whole bone marrow (isolated stem cells from bone marrow C12N 5/0647 , C12N 5/0663) }
C12N 5/067	...	{ Hepatocytes }
C12N 5/0671	....	{ Three-dimensional culture, tissue culture or organ culture; Encapsulated cells }
C12N 5/0672	....	{ Stem cells; Progenitor cells; Precursor cells; Oval cells }
C12N 5/0673	...	{ Cells from bone marrow stroma }
C12N 5/0675	....	{ Mesenchymal stem cells }
C12N 5/0676	...	{ Pancreatic cells }
C12N 5/0677	....	{ Three-dimensional culture, tissue culture or organ culture; Encapsulated cells }
C12N 5/0678	....	{ Stem cells; Progenitor cells; Precursor cells }
C12N 5/0679	...	{ Cells of the gastro-intestinal tract }
C12N 5/068	....	{ Stem cells; Progenitors }
C12N 5/0681	...	{ Cells of the genital tract; Non-germinal cells from gonads; Not used, see subgroups }
C12N 5/0682	....	{ Cells of the female genital tract, e.g. endometrium; Non-germinal cells from ovaries, e.g. ovarian follicle cells (oocytes C12N 5/0609) }
C12N 5/0683	....	{ Cells of the male genital tract, e.g. prostate, epididymis; Non-germinal cells from testis, e.g. Leydig cells, Sertoli cells (spermatogonia C12N 5/061) }
C12N 5/0684	...	{ Cells of the urinary tract or kidneys }
C12N 5/0685	....	{ Bladder epithelial cells }
C12N 5/0686	....	{ Kidney cells }
C12N 5/0687	....	{ Renal stem cells; Renal progenitors }
C12N 5/0688	...	{ Cells from the lungs or the respiratory tract }
C12N 5/0689	....	{ Stem cells; Progenitors }
C12N 5/069	...	{ Vascular Endothelial cells }
C12N 5/0691	....	{ Vascular smooth muscle cells; 3D culture thereof, e.g. models of blood vessels }
C12N 5/0692	....	{ Stem cells; Progenitor cells; Precursor cells }
C12N 5/0693	...	{ Tumour cells; Cancer cells }
C12N 5/0694	....	{ Cells of blood, e.g. leukemia cells, myeloma cells }
C12N 5/0695	....	{ Stem cells; Progenitor cells; Precursor cells }
C12N 5/0696	...	{ Artificially induced pluripotent stem cells, e.g. iPS }
C12N 5/0697	..	{ Artificial constructs associating cells of different lineages, e.g. tissue equivalents (blood vessels C12N 5/0691) }
C12N 5/0698	...	{ Skin equivalents }
C12N 5/10	.	Cells modified by introduction of foreign genetic material { Not used, see subgroups }

- C12N 5/12 . . . Fused cells, e.g. hybridomas
- C12N 5/14 Plant cells
- C12N 5/16 Animal cells
- C12N 5/163 { one of the fusion partners being a B or a T lymphocyte }
- C12N 5/166 { resulting from interspecies fusion }

C12N 7/00 **Viruses ; Bacteriophages ; Compositions thereof ; Preparation or purification thereof** (preparing medicinal viral antigen or antibody composition, e.g. virus vaccines, [A61K 39/00](#))

WARNING

From March 15, 2012 groups [C12N 7/02](#) - [C12N 7/08](#) and subgroups thereof are no longer used for the classification of new documents. The documents in these (sub)groups are being reclassified to the corresponding codes in the range M12N710-M12N795.

- C12N 7/02 . Recovery or purification
- C12N 7/025 . . { Packaging cell lines, e.g. transcomplementing cell lines, for production of virus }
- C12N 7/04 . Inactivation or attenuation ; Producing viral sub-units
- C12N 7/045 . . { Pseudoviral particles; Non infectious pseudovirions, e.g. genetically engineered }
- C12N 7/06 . . { Inactivation or attenuation } by chemical treatment
- C12N 7/08 . . { Inactivation or attenuation } by serial passage of virus

C12N 9/00 **Enzymes ; Proenzymes ; Compositions thereof** (preparations containing enzymes for cleaning teeth [A61K 8/66](#) , [A61Q 11/00](#) ; medicinal preparations containing enzymes or pro-enzymes [A61K 38/43](#) ; enzyme containing detergent compositions [C11D](#) ; { enzymes with nucleic acid structure, e.g. ribozymes, [C12N 15/113](#) }) ; **Processes for preparing, activating, inhibiting, separating or purifying enzymes** (preparation of malt [C12C 1/00](#))

NOTE

Enzymes are generally categorized below according to the "Nomenclature and Classification of Enzymes" of the International Commission on Enzymes. Where appropriate, this designation appears in the groups below in parenthesis.

- C12N 9/0002 . { Antibodies with enzymatic activity; e.g. abzymes }
- C12N 9/0004 . { Oxidoreductases (1.) }
- C12N 9/0006 . . [N: acting on CH-OH groups as donors (1.1)]
- C12N 9/0008 . . { acting on the aldehyde or oxo group of donors (1.2) }
- C12N 9/001 . . { acting on the CH-CH group of donors (1.3) }
- C12N 9/0012 . . { acting on nitrogen containing compounds as donors (1.4, 1.5, 1.6, 1.7) }
- C12N 9/0014 . . . { acting on the CH-NH₂ group of donors (1.4) }
- C12N 9/0016 { with NAD or NADP as acceptor (1.4.1) }
- C12N 9/0018 { Phenylalanine dehydrogenase (1.4.1.20) }

C12N 9/002	....	{ with a cytochrome as acceptor (1.4.2) }
C12N 9/0022	....	{ with oxygen as acceptor (1.4.3) }
C12N 9/0024	.....	{ D-Amino acid oxidase (1.4.3.3) }
C12N 9/0026	...	{ acting on CH-NH groups of donors (1.5) }
C12N 9/0028	....	{ with NAD or NADP as acceptor (1.5.1) }
C12N 9/003	.....	{ Dihydrofolate reductase (DHFR) (1.5.1.3) }
C12N 9/0032	....	{ with oxygen as acceptor (1.5.3) }
C12N 9/0034	.....	{ Sarcosine oxidase (1.5.3.1) }
C12N 9/0036	...	{ acting on NADH or NADPH (1.6) }
C12N 9/0038	....	{ with a heme protein as acceptor (1.6.2) }
C12N 9/004	.....	{ Cytochrome-b5 reductase (1.6.2.2) }
C12N 9/0042	.....	{ NADPH-cytochrome P450 reductase (1.6.2.4) }
C12N 9/0044	...	{ acting on other nitrogen compounds as donors (1.7) }
C12N 9/0046	....	{ with oxygen as acceptor (1.7.3) }
C12N 9/0048	.....	{ Uricase (1.7.3.3) }
C12N 9/0051	..	{ acting on a sulfur group of donors (1.8) }
C12N 9/0053	..	{ acting on a heme group of donors (1.9) }
C12N 9/0055	..	{ acting on diphenols and related substances as donors (1.10) }
C12N 9/0057	...	{ with oxygen as acceptor (1.10.3) }
C12N 9/0059	....	{ Catechol oxidase (1.10.3.1), i.e. tyrosinase }
C12N 9/0061	....	{ Laccase (1.10.3.2) }
C12N 9/0063	....	{ Ascorbate oxidase (1.10.3.3) }
C12N 9/0065	..	{ acting on hydrogen peroxide as acceptor (1.11) }
C12N 9/0067	..	{ acting on hydrogen as donor (1.12) }
C12N 9/0069	..	{ acting on single donors with incorporation of molecular oxygen, i.e. oxygenases (1.13) }
C12N 9/0071	..	{ acting on paired donors with incorporation of molecular oxygen (1.14) }
C12N 9/0073	...	{ with NADH or NADPH as one donor, and incorporation of one atom of oxygen 1.14.13 }
C12N 9/0075	.....	{ Nitric-oxide synthase (1.14.13.39) }
C12N 9/0077	...	{ with a reduced iron-sulfur protein as one donor (1.14.15) }
C12N 9/0079	.....	{ Steroid 11 beta monooxygenase (P-450 protein) (1.14.15.4) }
C12N 9/0081	.....	{ Cholesterol monooxygenase (cytochrome P 450 _{sc}) (1.14.15.6) }
C12N 9/0083	...	{ Miscellaneous (1.14.99) }
C12N 9/0085	.....	{ Steroid 17 alpha-monooxygenase (1.14.99.9) }
C12N 9/0087	.....	{ Steroid 21-monooxygenase (1.14.99.10) }
C12N 9/0089	..	{ acting on superoxide as acceptor (1.15) }
C12N 9/0091	..	{ oxidizing metal ions (1.16) }
C12N 9/0093	..	{ acting on CH or CH ₂ groups (1.17) }
C12N 9/0095	..	{ acting on iron-sulfur proteins as donor (1.18) }
C12N 9/0097	..	{ acting on reduced flavodoxin as donor (1.19) }
C12N 9/10	.	Transferases (2.) (ribonucleases 9/22)

C12N 9/1003	..	{ transferring one-carbon groups (2.1) }
C12N 9/1007	...	{ Methyltransferases (general) (2.1.1.) }
C12N 9/1011	....	{ Catechol O-methyltransferase (2.1.1.6) }
C12N 9/1014	...	{ Hydroxymethyl-, formyl-transferases (2.1.2) }
C12N 9/1018	...	{ Carboxy- and carbamoyl transferases (2.1.3) }
C12N 9/1022	..	{ transferring aldehyde or ketonic groups (2.2) }
C12N 9/1025	..	{ Acyltransferases (2.3) }
C12N 9/1029	...	{ transferring groups other than amino-acyl groups (2.3.1) }
C12N 9/1033	....	{ Chloramphenicol O-acetyltransferase (2.3.1.28) }
C12N 9/1037	....	{ Naringenin-chalcone synthase (2.3.1.74), i.e. chalcone synthase }
C12N 9/104	...	{ Aminoacyltransferases (2.3.2) }
C12N 9/1044	....	{ Protein-glutamine gamma-glutamyltransferase (2.3.2.13), i.e. transglutaminase or factor XIII }
C12N 9/1048	..	{ Glycosyltransferases (2.4) }
C12N 9/1051	...	{ Hexosyltransferases (2.4.1) }
C12N 9/1055	....	{ Levansucrase (2.4.1.10) }
C12N 9/1059	....	{ Cellulose synthases (2.4.1.12; 2.4.1.29) }
C12N 9/1062	....	{ Sucrose synthase (2.4.1.13) }
C12N 9/1066	....	{ Sucrose phosphate synthase (2.4.1.14) }
C12N 9/107	....	{ 1,4-Alpha-glucan branching enzyme (2.4.1.18) }
C12N 9/1074	....	{ Cyclomaltodextrin glucanotransferase (2.4.1.19) }
C12N 9/1077	...	{ Pentosyltransferases (2.4.2) }
C12N 9/1081	...	{ transferring other glycosyl groups (2.4.99) }
C12N 9/1085	..	{ transferring alkyl or aryl groups other than methyl groups (2.5) }
C12N 9/1088	...	{ Glutathione transferase (2.5.1.18) }
C12N 9/1092	...	{ 3-Phosphoshikimate 1-carboxyvinyltransferase (2.5.1.19), i.e. 5-enolpyruvylshikimate-3-phosphate synthase }
C12N 9/1096	..	{ transferring nitrogenous groups (2.6) }
C12N 9/12	..	transferring phosphorus containing groups, e.g. kinases (2.7)
C12N 9/1205	...	{ Phosphotransferases with an alcohol group as acceptor (2.7.1), e.g. protein kinases }
C12N 9/1211	....	{ Thymidine kinase (2.7.1.21) }
C12N 9/1217	...	{ Phosphotransferases with a carboxyl group as acceptor (2.7.2) }
C12N 9/1223	...	{ Phosphotransferases with a nitrogenous group as acceptor (2.7.3) }
C12N 9/1229	...	{ Phosphotransferases with a phosphate group as acceptor (2.7.4) }
C12N 9/1235	...	{ Diphosphotransferases (2.7.6) }
C12N 9/1241	...	{ Nucleotidyltransferases (2.7.7) }
C12N 9/1247	....	{ DNA-directed RNA polymerase (2.7.7.6) }
C12N 9/1252	....	{ DNA-directed DNA polymerase (2.7.7.7), i.e. DNA replicase }
C12N 9/1258	....	{ Polyribonucleotide nucleotidyltransferase (2.7.7.8), i.e. polynucleotide phosphorylase }
C12N 9/1264	....	{ DNA nucleotidylexotransferase (2.7.7.31), i.e. terminal nucleotidyl transferase }
C12N 9/127	....	{ RNA-directed RNA polymerase (2.7.7.48), i.e. RNA replicase }

C12N 9/1276	....	{ RNA-directed DNA polymerase (2.7.7.49), i.e. reverse transcriptase or telomerase }
C12N 9/1282	....	{ RNA uridylyltransferase (2.7.7.52) }
C12N 9/1288	...	{ Transferases for other substituted phosphate groups (2.7.8) }
C12N 9/1294	...	{ Phosphotransferases with paired acceptors (2.7.9) }
C12N 9/13	..	{ transferring sulfur containing groups (2.8) }
C12N 9/14	.	Hydrolases (3)
C12N 9/16	..	acting on ester bonds (3.1)
C12N 9/18	...	Carboxylic ester hydrolases { (3.1.1) }
C12N 9/20	....	Triglyceride splitting, e.g. by means of lipase
C12N 9/22	...	Ribonucleases { RNAses, DNAses (catalytic nucleic acids C12N 15/113) }
C12N 9/24	..	acting on glycosyl compounds (3.2)
C12N 9/2402	...	{ hydrolysing O- and S- glycosyl compounds (3.2.1) }
C12N 9/2405	....	{ Glucanases }
C12N 9/2408	.....	{ acting on alpha -1,4-glucosidic bonds }
C12N 9/2411	.....	{ Amylases }
C12N 9/2414	.....	{ Alpha-amylase (3.2.1.1.) }
C12N 9/2417	.....	{ from microbiological source }
C12N 9/242	.....	{ Fungal source }
C12N 9/2422	.....	{ from plant source }
C12N 9/2425	.....	{ Beta-amylase (3.2.1.2) }
C12N 9/2428	.....	{ Glucan 1,4-alpha-glucosidase (3.2.1.3), i.e. glucoamylase }
C12N 9/2431	.....	{ Beta-fructofuranosidase (3.2.1.26), i.e. invertase }
C12N 9/2434	.....	{ acting on beta-1,4-glucosidic bonds }
C12N 9/2437	.....	{ Cellulases (3.2.1.4; 3.2.1.74; 3.2.1.91; 3.2.1.150) }
C12N 9/244	.....	{ Endo-1,3(4)-beta-glucanase (3.2.1.6) }
C12N 9/2442	.....	{ Chitinase (3.2.1.14) }
C12N 9/2445	.....	{ Beta-glucosidase (3.2.1.21) }
C12N 9/2448	.....	{ Licheninase (3.2.1.73) }
C12N 9/2451	.....	{ acting on alpha-1,6-glucosidic bonds }
C12N 9/2454	.....	{ Dextranase (3.2.1.11) }
C12N 9/2457	.....	{ Pullulanase (3.2.1.41) }
C12N 9/246	.....	{ Isoamylase (3.2.1.68) }
C12N 9/2462	....	{ Lysozyme (3.2.1.17) }
C12N 9/2465	....	{ acting on alpha-galactose-glycoside bonds, e.g. alpha-galactosidase (3.2.1.22) }
C12N 9/2468	....	{ acting on beta-galactose-glycoside bonds, e.g. carrageenases (3.2.1.83; 3.2.1.157) ; beta-agarase (3.2.1.81) }
C12N 9/2471	.....	{ Beta-galactosidase (3.2.1.23), i.e. exo-(1-->4)-beta-D-galactanase }
C12N 9/2474	....	{ Hyaluronoglucosaminidase (3.2.1.35), i.e. hyaluronidase }
C12N 9/2477	....	{ Hemicellulases not provided in a preceding group }
C12N 9/248	.....	{ Xylanases }

C12N 9/2482	.....	{ Endo-1,4-beta-xylanase (3.2.1.8) }
C12N 9/2485	.....	{ Xylan endo-1,3-beta-xylosidase (3.2.1.32), i.e. endo-1,3-beta-xylanase }
C12N 9/2488	.....	{ Mannanases }
C12N 9/2491	.....	{ Beta-mannosidase (3.2.1.25), i.e. mannanase }
C12N 9/2494	.....	{ Mannan endo-1,4-beta-mannosidase (3.2.1.78), i.e. endo-beta-mannanase }
C12N 9/2497	...	{ hydrolysing N- glycosyl compounds (3.2.2) }
C12N 9/26	...	acting on alpha -1, 4-glucosidic bonds, e.g. hyaluronidase, invertase, amylase
C12N 9/38	...	acting on beta-galactose-glycoside bonds, e.g. beta-galactosidase
C12N 9/42	...	acting on beta-1, 4-glucosidic bonds, e.g. cellulase
C12N 9/44	...	acting on alpha-1, 6-glucosidic bonds, e.g. isoamylase, pullulanase
C12N 9/48	..	acting on peptide bonds (3.4)
C12N 9/485	...	{ Exopeptidases (3.4.11-3.4.19) }
C12N 9/50	...	Proteinases { Endopeptidases (3.4.21-3.4.25) }
C12N 9/503	....	{ derived from viruses }
C12N 9/506	.....	{ derived from RNA viruses }
C12N 9/52	....	derived from bacteria
C12N 9/54	.....	bacteria being Bacillus
C12N 9/58	....	derived from fungi
C12N 9/60	.....	from yeast
C12N 9/62	.....	from Aspergillus
C12N 9/63	....	{ derived from plants }
C12N 9/64	....	derived from animal tissue
C12N 9/6402	.....	{ from non-mammals }
C12N 9/6405	.....	{ not being snakes }
C12N 9/6408	.....	{ Serine endopeptidases (3.4.21) }
C12N 9/641	.....	{ Cysteine endopeptidases (3.4.22) }
C12N 9/6413	.....	{ Aspartic endopeptidases (3.4.23) }
C12N 9/6416	.....	{ Metalloendopeptidases (3.4.24) }
C12N 9/6418	.....	{ from snakes }
C12N 9/6421	.....	{ from mammals }
C12N 9/6424	.....	{ Serine endopeptidases (3.4.21) }
C12N 9/6427	.....	{ Chymotrypsins (3.4.21.1; 3.4.21.2) ; Trypsin (3.4.21.4) }
C12N 9/6429	.....	{ Thrombin (3.4.21.5) }
C12N 9/6432	.....	{ Coagulation factor Xa (3.4.21.6) }
C12N 9/6435	.....	{ Plasmin (3.4.21.7), i.e. fibrinolysin }
C12N 9/6437	.....	{ Coagulation factor VIIa (3.4.21.21) }
C12N 9/644	.....	{ Coagulation factor IXa (3.4.21.22) }
C12N 9/6443	.....	{ Coagulation factor XIa (3.4.21.27) }
C12N 9/6445	.....	{ Kallikreins (3.4.21.34; 3.4.21.35) }
C12N 9/6448	.....	{ Elastases, e.g. pancreatic elastase (3.4.21.36); leukocyte elastase (3.4.31.37) }

C12N 9/6451	.....	{ Coagulation factor XIIIa (3.4.21.38) }
C12N 9/6454	.....	{ Dibasic site splicing serine proteases, e.g. kexin (3.4.21.61); furin (3.4.21.75) and other proprotein convertases }
C12N 9/6456	.....	{ Plasminogen activators }
C12N 9/6459	.....	{ t-plasminogen activator (3.4.21.68), i.e. tPA }
C12N 9/6462	.....	{ u-Plasminogen activator (3.4.21.73), i.e. urokinase }
C12N 9/6464	.....	{ Protein C (3.4.21.69) }
C12N 9/6467	.....	{ Granzymes, e.g. granzyme A (3.4.21.78); granzyme B (3.4.21.79) }
C12N 9/647	.....	{ Blood coagulation factors not provided for in a preceding group or according to more than one of the proceeding groups }
C12N 9/6472	.....	{ Cysteine endopeptidases (3.4.22) }
C12N 9/6475	.....	{ Interleukin 1-beta convertase-like enzymes (3.4.22.10; 3.4.22.36; 3.4.22.63) }
C12N 9/6478	.....	{ Aspartic endopeptidases (3.4.23) }
C12N 9/6481	.....	{ Pepsins (3.4.23.1; 3.4.23.2; 3.4.23.3) }
C12N 9/6483	.....	{ Chymosin (3.4.23.4), i.e. rennin }
C12N 9/6486	.....	{ Renin (3.4.23.15) }
C12N 9/6489	.....	{ Metalloendopeptidases (3.4.24) }
C12N 9/6491	.....	{ Matrix metalloproteases (MMP's), e.g. interstitial collagenase (3.4.24.7); Stromelysins (3.4.24.17; 3.2.1.22) ; Matrilysin (3.4.24.23) }
C12N 9/6494	.....	{ Neprilysin (3.4.24.11), i.e. enkephalinase or neutral-endopeptidase 24.11 }
C12N 9/6497	.....	{ Endothelin-converting enzyme (3.4.24.71) }
C12N 9/78	..	acting on carbon to nitrogen bonds other than peptide bonds (3.5)
C12N 9/80	...	acting on amide bonds in linear amides { (3.5.1) }
C12N 9/82	....	Asparaginase { (3.5.1.1) }
C12N 9/84	....	Penicillin amidase { (3.5.1.11) }
C12N 9/86	...	acting on amide bonds in cyclic amides, e.g. penicillinase { (3.5.2) }
C12N 9/88	.	Lyases (4.)
C12N 9/90	.	Isomerases (5.)
C12N 9/92	..	Glucose isomerase { (5.3.1.5; 5.3.1.9; 5.3.1.18) }
C12N 9/93	.	{ Ligases (6) }
C12N 9/94	.	Pancreatin
C12N 9/96	.	Stabilising an enzyme by forming an adduct or a composition ; Forming enzyme conjugates
C12N 9/98	.	Preparation of granular or free-flowing enzyme compositions (C12N 9/96 takes precedence)
C12N 9/99	.	Enzyme inactivation by chemical treatment

C12N 11/00 **Carrier-bound or immobilised enzymes ; Carrier-bound or immobilised microbial cells ; Preparation thereof**

- C12N 11/02 . Enzymes or microbial cells being immobilised on or in an organic carrier
- C12N 11/04 . . entrapped within the carrier, e.g. gel, hollow fibre
- C12N 11/06 . . attached to the carrier via a bridging agent
- C12N 11/08 . . carrier being a synthetic polymer
- C12N 11/10 . . carrier being a carbohydrate
- C12N 11/12 . . . Cellulose or derivative thereof
- C12N 11/14 . Enzymes or microbial cells being immobilised on or in an inorganic carrier
- C12N 11/16 . Enzymes or microbial cells being immobilised on or in a biological cell
- C12N 11/18 . Multi-enzyme systems

C12N 13/00 **Treatment of micro-organisms or enzymes with electrical or wave energy, e.g. magnetism, sonic waves**

C12N 15/00 **Mutation or genetic engineering ; DNA or RNA concerning genetic engineering, vectors, e.g. plasmids, or their isolation, preparation or purification ; Use of hosts therefor (mutants or genetically engineered micro-organisms, per se [C12N 1/00](#) , [C12N 5/00](#) , [C12N 7/00](#) ; new plants per se [A01H](#) ; plant reproduction by tissue culture techniques [A01H 4/00](#) ; new animals per se [A01K 67/00](#) ; use of medicinal preparations containing genetic material which is inserted into cells of the living body to treat genetic diseases, gene therapy [A61K 48/00](#))**

- C12N 15/01 . Preparation of mutants without inserting foreign genetic material therein ; Screening processes therefor
- C12N 15/02 . Preparation of hybrid cells by fusion of two or more cells, e.g. protoplast fusion { ([monoclonal antibodies C07K 16/00](#) ; [apparatus for cell fusion C12M](#)) }
- C12N 15/03 . . Bacteria
- C12N 15/04 . . Fungi
- C12N 15/09 . Recombinant DNA-technology
- C12N 15/10 . . Processes for the isolation, preparation or purification of DNA or RNA ([chemical preparation of DNA or RNA C07H 21/00](#) ; [preparation of non-structural polynucleotides from micro-organisms or with enzymes C12P 19/34](#))

NOTE

After the symbol [C12N 15/10](#) to [C12N 15/10 D](#), and separated therefrom by a + sign, it is desirable to add the indexing codes selected from groups [C12Q 2500/00](#) to [M12Q 599/00](#) , relating to relevant technical features of the invention. When more than one indexing code is selected, the different codes are separated by a + sign. Example : [C12N 15/1037](#) + 537/125 + 521/537

- C12N 15/1003 . . . { [Extracting or separating nucleic acids from biological samples, e.g. pure separation or isolation methods; Conditions, buffers or apparatuses therefor](#) }

C12N 15/1006	....	{ by means of a solid support carrier, e.g. particles, polymers }
C12N 15/101	.....	{ by chromatography, e.g. electrophoresis, ion-exchange, reverse phase }
C12N 15/1013	.....	{ by using magnetic beads }
C12N 15/1017	....	{ by filtration, e.g. using filters, frits, membranes }
C12N 15/102	...	{ Mutagenizing nucleic acids }
C12N 15/1024	....	{ In vivo mutagenesis using high mutation rate "mutator" host strains by inserting genetic material, e.g. encoding an error prone polymerase, disrupting a gene for mismatch repair }
C12N 15/1027	....	{ by DNA shuffling, e.g. RSR, STEP, RPR }
C12N 15/1031	....	{ mutagenesis by gene assembly, e.g. assembly by oligonucleotide extension PCR }
C12N 15/1034	...	{ Isolating an individual clone by screening libraries }
C12N 15/1037	....	{ Screening libraries presented on the surface of microorganisms, e.g. phage display, E. coli display }
C12N 15/1041	....	{ Ribosome/Polysome display, e.g. SPERT, ARM }
C12N 15/1044	....	{ Preparation or screening of libraries displayed on scaffold proteins } s
C12N 15/1048	....	{ SELEX }
C12N 15/1051	....	{ Gene trapping, e.g. exon-, intron-, IRES-, signal sequence-trap cloning, trap vectors }
C12N 15/1055	....	{ Protein x Protein interaction, e.g. two hybrid selection }
C12N 15/1058	....	{ Directional evolution of libraries, e.g. evolution of libraries is achieved by mutagenesis and screening or selection of mixed population of organisms }
C12N 15/1062	....	{ mRNA-Display, e.g. polypeptide and encoding template are connected covalently }
C12N 15/1065	....	{ Preparation or screening of tagged libraries, e.g. tagged microorganisms by STM-mutagenesis, tagged polynucleotides, gene tags }
C12N 15/1068	....	{ Template (nucleic acid) mediated chemical library synthesis, e.g. chemical and enzymatical DNA-templated organic molecule synthesis, libraries prepared by non ribosomal polypeptide synthesis (NRPS), DNA/RNA-polymerase mediated polypeptide synthesis }
C12N 15/1072	....	{ Differential gene expression library synthesis, e.g. subtracted libraries, differential screening }
C12N 15/1075	....	{ by coupling phenotype to genotype, not provided for in other groups of this subclass }
C12N 15/1079	....	{ Screening libraries by altering the phenotype or phenotypic trait of the host (reporter assays C12N 15/1086) }
C12N 15/1082	....	{ Preparation or screening gene libraries by chromosomal integration of polynucleotide sequences, HR-, site-specific-recombination, transposons, viral vectors }
C12N 15/1086	....	{ Preparation or screening of expression libraries, e.g. reporter assays }
C12N 15/1089	....	{ Design, preparation, screening or analysis of libraries using computer algorithms }
C12N 15/1093	....	{ General methods of preparing gene libraries, not provided for in other subgroups }
C12N 15/1096	...	{ cDNA Synthesis; Subtracted cDNA library construction, e.g. RT, RT-PCR }
C12N 15/11	..	DNA or RNA fragments ; Modified forms thereof (DNA or RNA not used in recombinant technology , C07H 21/00) ; { Non-coding nucleic acids having a biological activity }

NOTE

Documents relating to DNA or its corresponding RNA and their use in recombinant DNA technology or the preparation of specific peptides, e.g. enzymes, are classified in subclass [C07K](#) or in group [C12N 9/00](#) according to the peptides, with the appropriate indexing codes relating to their use in recombinant technology. Groups [C12N 15/11](#) to [C12N 15/117](#) cover also the use of non-coding nucleic acids as active ingredients in medicinal preparations. The [C12N 2300/00](#) ICO scheme has to be applied to these groups. When documents classifiable in one or more subgroups disclose general principles of the technology applicable to the whole field, classification is also made in group [C12N 15/11](#) M

C12N 15/111	...	{ General methods applicable to biologically active non-coding nucleic acids }
C12N 15/113	...	Non-coding nucleic acids modulating the expression of genes, e.g. antisense oligonucleotides; { Antisense DNA or RNA; Triplex- forming oligonucleotides; Catalytic nucleic acids, e.g. ribozymes; Nucleic acids used in co-suppression or gene silencing (when used in plants C12N 15/8218) }
C12N 15/1131	....	{ against viruses }
C12N 15/1132	.....	{ against retroviridae, e.g. HIV }
C12N 15/1133	.....	{ against herpesviridae, e.g. HSV }
C12N 15/1135	....	{ against oncogenes or tumor suppressor genes }
C12N 15/1136	....	{ against growth factors, growth regulators, cytokines, lymphokines or hormones }
C12N 15/1137	....	{ against enzymes (viral enzymes C12N 15/1131 ; receptors C12N 15/1138) }
C12N 15/1138	....	{ against receptors or cell surface proteins }
C12N 15/115	...	Aptamers, i.e. nucleic acids binding a target molecule specifically and with high affinity without hybridising therewith; { Nucleic acids binding to non-nucleic acids, e.g. aptamers }

NOTE

Aptamers fused to compounds which are already classified in groups [C12N 15/11](#) to [C12N 15/117](#) , are classified with the corresponding compound

C12N 15/117	...	Nucleic acids having immunomodulatory properties, e.g. containing CpG-motifs
C12N 15/52	...	Genes encoding for enzymes or proenzymes

NOTE

In this group genes encoding for proenzymes are classified with the corresponding genes encoding enzymes.

C12N 15/62	...	DNA sequences coding for fusion proteins
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NOTE

In this group, the following term is used with the meaning indicated:

- "fusion" means the fusion of two different proteins.

- C12N 15/625 { containing a sequence coding for a signal sequence }
- C12N 15/63 . . Introduction of foreign genetic material using vectors ; Vectors ; Use of hosts therefor ; Regulation of expression
- C12N 15/635 . . . { Externally inducible repressor mediated regulation of gene expression, e.g. tetR inducible by tetracycline }
- C12N 15/64 . . . General methods for preparing the vector, for introducing it into the cell or for selecting the vector-containing host
- C12N 15/65 . . . using markers (enzymes used as markers [C12N 15/52](#))
- C12N 15/66 . . . General methods for inserting a gene into a vector to form a recombinant vector using cleavage and ligation ; Use of non-functional linkers or adaptors, e.g. linkers containing the sequence for a restriction endonuclease

NOTE

In this group, the following expression is used with the meaning indicated:

- "non-functional linkers" means DNA sequences which are used to link DNA sequences and which have no known function of structural gene or regulating function.

- C12N 15/67 . . . General methods for enhancing the expression
- C12N 15/68 Stabilisation of the vector
- C12N 15/69 Increasing the copy number of the vector
- C12N 15/70 . . . Vectors or expression systems specially adapted for E. coli

NOTE

This group covers the use of E. coli as host.

Shuttle vectors also replicating in E. coli are classified according to the other host.

- C12N 15/71 Expression systems using regulatory sequences derived from the trp-operon
- C12N 15/72 Expression systems using regulatory sequences derived from the lac-operon
- C12N 15/73 Expression systems using phage (lambda) regulatory sequences
- C12N 15/74 . . . Vectors or expression systems specially adapted for prokaryotic hosts other than E. coli, e.g. Lactobacillus, Micromonospora

NOTE

This group covers the use of prokaryotes as hosts.

- C12N 15/743 { for Agrobacterium; Rhizobium; Bradyrhizobium }
- C12N 15/746 { for lactic acid bacteria (Streptococcus; Lactococcus; Lactobacillus; Pediococcus; Enterococcus; Leuconostoc; Propionibacterium; Bifidobacterium; Sporolactobacillus) }
- C12N 15/75 for Bacillus

C12N 15/76	....	for Actinomyces ; for Streptomyces
C12N 15/77	....	for Corynebacterium ; for Brevibacterium
C12N 15/78	....	for Pseudomonas
C12N 15/79	...	Vectors or expression systems specially adapted for eukaryotic hosts

NOTE

This group covers the use of eukaryotes as hosts.

C12N 15/80	....	for fungi
C12N 15/81	.....	for yeasts
C12N 15/815	.....	{ for yeasts other than Saccharomyces }
C12N 15/82	....	for plant cells, { e.g. plant artificial chromosomes (PACs) }

NOTE

Documents are being continuously reclassified into this new classification scheme. See Warning notes below

C12N 15/8201	.....	{ Methods for introducing genetic material into plant cells, e.g. DNA, RNA, stable or transient incorporation, tissue culture methods adapted for transformation }
C12N 15/8202	.....	{ by biological means, e.g. cell mediated or natural vector }
C12N 15/8203	.....	{ Virus mediated transformation }
C12N 15/8205	.....	{ Agrobacterium mediated transformation }
C12N 15/8206	.....	{ by physical or chemical, i.e. non-biological, means, e.g. electroporation, PEG mediated }
C12N 15/8207	.....	{ by mechanical means, e.g. microinjection, particle bombardment, silicon whiskers }
C12N 15/8209	.....	{ Selection, visualisation of transformants, reporter constructs, e.g. antibiotic resistance markers }

NOTE

Standard selectable markers such as neomycin phosphotransferase (NPT) are not systematically classified in [C12N 15/8209](#)

C12N 15/821	{ Non-antibiotic resistance markers, e.g. morphogenetic, metabolic markers }
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WARNING

Incomplete, see also [C12N 15/8209](#)

C12N 15/8212	{ Colour markers, e.g. beta-glucuronidase (GUS), green fluorescent protein (GFP), carotenoid }
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WARNING

Incomplete, see also [C12N 15/8209](#)

C12N 15/8213	{ Targeted insertion of genes into the plant genome by homologous recombination }
C12N 15/8214	.....	{ Plastid transformation }
C12N 15/8216	.....	{ Methods for controlling, regulating or enhancing expression of transgenes in plant cells }
C12N 15/8217	.....	{ Gene switch }

WARNING

Incomplete, see also [C12N 15/8216](#)

C12N 15/8218	{ Antisense, co-suppression, viral induced gene silencing (VIGS), post-transcriptional induced gene silencing (PTGS) }
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WARNING

Incomplete, see also [C12N 15/8216](#)

C12N 15/822	{ Reducing position variability, e.g. by the use of scaffold attachment region/matrix attachment region (SAR/MAR); Use of SAR/MAR to regulate gene expression }
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WARNING

Incomplete, see also [C12N 15/8216](#)

C12N 15/8221	{ Transit peptides }
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WARNING

Incomplete, see also [C12N 15/8216](#)

C12N 15/8222	{ Developmentally regulated expression systems, tissue, organ specific, temporal or spatial regulation }
C12N 15/8223	.....	{ Vegetative tissue-specific promoters }

WARNING

Incomplete, see also [C12N 15/8222](#)

C12N 15/8225	{ Leaf-specific, e.g. including petioles, stomata }
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WARNING

Incomplete, see also [C12N 15/8222](#)

C12N 15/8226	{ Stem-specific, e.g. including tubers, beets }
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WARNING

Incomplete, see also [C12N 15/8222](#)

C12N 15/8227	{ Root-specific }
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WARNINGIncomplete, see also [C12N 15/8222](#)

C12N 15/8229 { Meristem-specific, e.g. nodal, apical }

WARNINGIncomplete, see also [C12N 15/8222](#)

C12N 15/823 { Reproductive tissue-specific promoters }

WARNINGIncomplete, see also [C12N 15/8222](#)

C12N 15/8231 { Male-specific, e.g. anther, tapetum, pollen }

WARNINGIncomplete, see also [C12N 15/8222](#)

C12N 15/8233 { Female-specific, e.g. pistil, ovule }

WARNINGIncomplete, see also [C12N 15/8222](#)

C12N 15/8234 { Seed-specific, e.g. embryo, endosperm }

WARNINGIncomplete, see also [C12N 15/8222](#)

C12N 15/8235 { Fruit-specific }

WARNINGIncomplete, see also [C12N 15/8222](#)

C12N 15/8237 { Externally regulated expression systems }

C12N 15/8238 { chemically inducible, e.g. tetracycline }

WARNINGIncomplete, see also [C12N 15/8237](#)

C12N 15/8239 { pathogen inducible }

WARNINGIncomplete, see also [C12N 15/8237](#)

C12N 15/8241 { Phenotypically and genetically modified plants via recombinant DNA }

		technology }
C12N 15/8242	.....	{ with non-agronomic quality (output) traits, e.g. for industrial processing; Value added, non-agronomic traits }
C12N 15/8243	.....	{ involving biosynthetic or metabolic pathways, i.e. metabolic engineering, e.g. nicotine, caffeine }
C12N 15/8245	.....	{ involving modified carbohydrate or sugar alcohol metabolism, e.g. starch biosynthesis }
C12N 15/8246	.....	{ Non-starch polysaccharides, e.g. cellulose, fructans, levans }

WARNING

Incomplete, see also [C12N 15/8245](#)

C12N 15/8247	.....	{ involving modified lipid metabolism, e.g. seed oil composition }
C12N 15/8249	.....	{ involving ethylene biosynthesis, senescence or fruit development, e.g. modified tomato ripening, cut flower shelf-life }
C12N 15/825	.....	{ involving pigment biosynthesis }

NOTE

Transgenic plants with altered flower morphology are also classified in this group

C12N 15/8251	.....	{ Amino acid content, e.g. synthetic storage proteins, altering amino acid biosynthesis }
C12N 15/8253	.....	{ Methionine or cysteine }

WARNING

Incomplete, see also [C12N 15/8251](#)

C12N 15/8254	{ Tryptophan or lysine }
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WARNING

Incomplete, see also [C12N 15/8251](#)

C12N 15/8255	{ involving lignin biosynthesis }
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WARNING

Incomplete, see also [C12N 15/8243](#)

C12N 15/8257	{ for the production of primary gene products, e.g. pharmaceutical products, interferon }
C12N 15/8258	.....	{ for the production of oral vaccines (antigens) or immunoglobulins }
C12N 15/8259	.....	{ Phytoremediation }

WARNING

Incomplete, see also [C12N 15/8242](#)

C12N 15/8261 { with agronomic (input) traits, e.g. crop yield }
 C12N 15/8262 { involving plant development (not used) }
 C12N 15/8263 { Ablation; Apoptosis }

WARNING

Incomplete, see also [C12N 15/8261](#)

C12N 15/8265 { Transgene containment, e.g. gene dispersal }

WARNING

Incomplete, see also [C12N 15/8261](#)

C12N 15/8266 { Abscission; Dehiscence; Senescence }

WARNING

Incomplete, see also [C12N 15/8261](#)

C12N 15/8267 { Seed dormancy, germination or sprouting }

WARNING

Incomplete, see also [C12N 15/8261](#)

C12N 15/8269 { Photosynthesis }

WARNING

Incomplete, see also [C12N 15/8261](#)

C12N 15/827 { Flower development or morphology, e.g. flowering promoting factor (FPF) }

WARNING

Incomplete, see also [C12N 15/8261](#)

C12N 15/8271 { for stress resistance, e.g. heavy metal resistance }
 C12N 15/8273 { for drought, cold, salt resistance }

WARNING

Incomplete, see also [C12N 15/8271](#)

C12N 15/8274 { for herbicide resistance }
 C12N 15/8275 { Glyphosate }

WARNING

		Incomplete, see also C12N 15/8274
C12N 15/8277	.....	{ Phosphinotricin }
		<u>WARNING</u>
		Incomplete, see also C12N 15/8274
C12N 15/8278	.....	{ Sulfonylurea }
		<u>WARNING</u>
		Incomplete, see also C12N 15/8274
C12N 15/8279	.....	{ for biotic stress resistance, pathogen resistance, disease resistance }
C12N 15/8281	.....	{ for bacterial resistance }
		<u>WARNING</u>
		Incomplete, see also C12N 15/8279
C12N 15/8282	.....	{ for fungal resistance }
		<u>WARNING</u>
		Incomplete, see also C12N 15/8279
C12N 15/8283	.....	{ for virus resistance }
C12N 15/8285	.....	{ for nematode resistance }
C12N 15/8286	.....	{ for insect resistance }
C12N 15/8287	.....	{ for fertility modification, e.g. apomixis }
C12N 15/8289	.....	{ Male sterility }
		<u>WARNING</u>
		Incomplete, see also C12N 15/8287
C12N 15/829	.....	{ Female sterility }
		<u>WARNING</u>
		Incomplete, see also C12N 15/8287
C12N 15/8291	.....	{ Hormone-influenced development }
		<u>WARNING</u>
		Incomplete, see also C12N 15/8261
C12N 15/8293	.....	{ Absciscic acid (ABA) }

WARNINGIncomplete, see also [C12N 15/8261](#)

C12N 15/8294 { Auxins }

WARNINGIncomplete, see also [C12N 15/8261](#)

C12N 15/8295 { Cytokinins }

WARNINGIncomplete, see also [C12N 15/8261](#)

C12N 15/8297 { Gibberellins; GA3 }

WARNINGIncomplete, see also [C12N 15/8261](#)

C12N 15/8298 { Brassinosteroids }

WARNINGIncomplete, see also [C12N 15/8261](#)

C12N 15/85 for animal cells

C12N 15/8509 { for producing genetically modified animals, e.g. transgenic }

NOTEThe purpose of the modified animal is indicated using the codes under [A01K 2267/00](#)

C12N 15/86 Viral vectors

WARNINGFrom March 15, 2012 groups [C12N 15/861](#) - [C12N 15/869](#) and subgroups thereof are no longer used for the classification of new documents. The documents in these (sub)groups are being reclassified to the corresponding codes in the range M12N710-M12N795

C12N 15/861 Adenoviral vectors

C12N 15/8613 { Chimaeric vector systems comprising heterologous sequences for production of another viral vector }

C12N 15/8616 { Special methods for targeting systems }

C12N 15/863 Poxviral vectors, { e.g. entomopoxvirus }

C12N 15/8633 { Avian poxviral vectors }

C12N 15/8636 { Vaccina virus vectors }

C12N 15/864	.....	Parvoviral vectors, { e.g. parvovirus, densovirus }
C12N 15/8645	.....	{ Adeno-associated virus }
C12N 15/866	.....	Baculoviral vectors
C12N 15/867	.....	Retroviral vectors
C12N 15/8673	.....	{ Special methods for packaging systems }
C12N 15/8676	.....	{ Special methods for targeting systems }
C12N 15/869	.....	Herpesviral vectors
C12N 15/8695	.....	{ Herpes simplex virus-based vectors }
C12N 15/87	..	Introduction of foreign genetic material using processes not otherwise provided for, e.g. co-transformation
C12N 15/873	...	Techniques for producing new embryos, e.g. nuclear transfer, manipulation of totipotent cells or production of chimeric embryos
C12N 15/877	....	Techniques for producing new mammalian cloned embryos
C12N 15/8771	.....	{ Bovine embryos }
C12N 15/8772	.....	{ Caprine embryos }
C12N 15/8773	.....	{ Ovine embryos }
C12N 15/8775	.....	{ Murine embryos }
C12N 15/8776	.....	{ Primate embryos }
C12N 15/8777	.....	{ Rabbit embryos }
C12N 15/8778	.....	{ Swine embryos }
C12N 15/88	...	using micro-encapsulation, e.g. using { amphiphile } liposome vesicle
C12N 15/89	...	using micro-injection
C12N 15/895	....	{ using biolistic methods }
C12N 15/90	...	Stable introduction of foreign DNA into chromosome
C12N 15/902	....	{ using homologous recombination }
C12N 15/905	.....	{ in yeasts }
C12N 15/907	.....	{ in mammalian cells }

Guidance heading:

C12N 2009/00 **Enzymes ; Proenzymes ; Compositions thereof** (preparations containing enzymes for cleaning teeth [A61K 8/66](#) , [A61Q 11/00](#) ; medicinal preparations containing enzymes or pro-enzymes [A61K 38/43](#) ; enzyme containing detergent compositions [C11D](#) ; { enzymes with nucleic acid structure, e.g. ribozymes, [C12N 15/113](#) }) ; **Processes for preparing, activating, inhibiting, separating or purifying enzymes** (preparation of malt [C12C 1/00](#))

NOTE

Enzymes are generally categorized below according to the "Nomenclature and Classification of Enzymes" of the International Commission on Enzymes. Where appropriate, this designation appears in the groups below in parenthesis.

C12N 2009/02 . Oxidoreductases (1.)

C12N 2015/00 **Mutation or genetic engineering ; DNA or RNA concerning genetic engineering,**

vectors, e.g. plasmids, or their isolation, preparation or purification ; Use of hosts therefor (mutants or genetically engineered micro-organisms, per se [C12N 1/00](#) , [C12N 5/00](#) , [C12N 7/00](#) ; new plants per se [A01H](#) ; plant reproduction by tissue culture techniques [A01H 4/00](#) ; new animals per se [A01K 67/00](#) ; use of medicinal preparations containing genetic material which is inserted into cells of the living body to treat genetic diseases, gene therapy [A61K 48/00](#))

- C12N 2015/09 . Recombinant DNA-technology
- C12N 2015/63 . . Introduction of foreign genetic material using vectors ; Vectors ; Use of hosts therefor ; Regulation of expression
- C12N 2015/79 . . . Vectors or expression systems specially adapted for eukaryotic hosts

NOTE

This group covers the use of eukaryotes as hosts.

- C12N 2015/85 for animal cells
- C12N 2015/8509 { for producing genetically modified animals, e.g. transgenic }

NOTE

The purpose of the modified animal is indicated using the codes under [A01K 2267/00](#)

- C12N 2015/8518 { expressing industrially exogenous proteins, e.g. for pharmaceutical use, human insulin, blood factors, immunoglobulins, pseudoparticles }
- C12N 2015/8527 { for producing animal models, e.g. for tests or diseases }
- C12N 2015/8536 { Animal models for genetic diseases }
- C12N 2015/8545 { for Alzheimer"s disease }
- C12N 2015/8554 { Invertebrates models for Alzheimer"s disease }
- C12N 2015/8563 { for autoimmune diseases, e.g. Insulin-dependent diabetes mellitus }
- C12N 2015/8572 { Animal models for proliferative diseases, e.g. comprising an oncogene }
- C12N 2015/8581 { Animal models for infectious diseases, e.g. AIDS }
- C12N 2015/859 { Animal models comprising reporter system for screening tests }

Guidance heading:

C12N 2303/00 Indexing codes associated with general methodologies in the field of biologically active non-coding nucleic acids

NOTE

Indexing codes of group [C12N 2303/00](#) are only used in combination with group [C12N 15/111](#)

Guidance heading:

C12N 2310/00**Structure or type of the nucleic acid**

- C12N 2310/10 . Type of nucleic acid
- C12N 2310/11 .. Antisense
- C12N 2310/111 ... spanning the whole gene, or a large part of it
- C12N 2310/113 ... targeting other non-coding nucleic acids, e.g. antagomirs
- C12N 2310/12 .. catalytic nucleic acids, e.g. ribozymes
- C12N 2310/121 ... Hammerhead
- C12N 2310/122 ... Hairpin
- C12N 2310/123 ... Hepatitis delta
- C12N 2310/124 ... based on group I or II introns
- C12N 2310/1241 Tetrahymena
- C12N 2310/126 ... involving RNase P
- C12N 2310/127 ... DNazymes
- C12N 2310/128 ... processing or releasing ribozyme
- C12N 2310/13 .. Decoys
- C12N 2310/14 .. interfering N.A.
- C12N 2310/141 ... MicroRNAs, miRNAs
- C12N 2310/15 .. Nucleic acids forming more than 2 strands, e.g. TFOs
- C12N 2310/151 ... more than 3 strands, e.g. tetrads, H-DNA
- C12N 2310/152 ... on a single-stranded target, e.g. fold-back TFOs
- C12N 2310/153 ... with the aid of a protein, e.g. recombinase
- C12N 2310/16 .. Aptamers
- C12N 2310/17 .. Immunomodulatory nucleic acids
- C12N 2310/18 .. acting by a non-sequence specific mechanism ([other than 310/16 or 310/17](#))
- C12N 2310/30 . Chemical structure
- C12N 2310/31 .. of the backbone
- C12N 2310/311 ... Phosphotriesters
- C12N 2310/312 ... Phosphonates
- C12N 2310/3125 Methylphosphonates
- C12N 2310/313 ... Phosphorodithioates
- C12N 2310/314 ... Phosphoramidates
- C12N 2310/3145 with the nitrogen in 3' or 5'-position
- C12N 2310/315 ... Phosphorothioates
- C12N 2310/316 ... Phosphonothioates
- C12N 2310/317 ... with an inverted bond, e.g. a cap structure
- C12N 2310/318 ... where the PO₂ is completely replaced, e.g. MMI or formacetal
- C12N 2310/3181 Peptide nucleic acid, PNA
- C12N 2310/3183 Diol linkers, e.g. glycols or propanediols
- C12N 2310/319 ... linked by 2'-5' linkages, i.e. having a free 3'-position
- C12N 2310/32 .. of the sugar

C12N 2310/321	...	2'-O-R Modification
C12N 2310/322	...	2'-R Modification
C12N 2310/323	...	modified ring structure
C12N 2310/3231	....	having an additional ring, e.g. LNA, ENA
C12N 2310/3233	....	Morpholino-type ring
C12N 2310/3235	....	having the O of the ribose replaced by another atom
C12N 2310/33	..	of the base
C12N 2310/331	...	Universal or degenerate base
C12N 2310/332	...	Abasic residue
C12N 2310/333	...	Modified A
C12N 2310/334	...	Modified C
C12N 2310/3341	....	5-Methylcytosine
C12N 2310/335	...	Modified T or U
C12N 2310/336	...	Modified G
C12N 2310/337	...	in alpha-anomeric form
C12N 2310/34	..	Spatial arrangement of the modifications
C12N 2310/341	...	Gapmers, i.e. of the type ===-----
C12N 2310/342	...	Hemimers, i.e. of the type =====
C12N 2310/343	...	having patterns, e.g. =====
C12N 2310/344	...	Position-specific modifications, e.g. on every purine, at the 3'-end
C12N 2310/345	...	having at least two different backbone modifications
C12N 2310/346	...	having a combination of backbone and sugar modifications
C12N 2310/35	..	Nature of the modification
C12N 2310/351	...	Conjugate
C12N 2310/3511	....	intercalating or cleaving agent
C12N 2310/3513	....	Protein ; Peptide
C12N 2310/3515	....	Lipophilic moiety, e.g. cholesterol
C12N 2310/3517	....	Marker ; Tag
C12N 2310/3519	....	Fusion with another nucleic acid
C12N 2310/352	...	linked to the nucleic acid via a carbon atom
C12N 2310/3521	....	Methyl
C12N 2310/3523	....	Allyl
C12N 2310/3525	....	MOE, methoxyethoxy
C12N 2310/3527	....	Other alkyl chain
C12N 2310/3529	....	Aromatic substituent
C12N 2310/353	...	linked to the nucleic acid via an atom other than carbon
C12N 2310/3531	...	Hydrogen
C12N 2310/3533	...	Halogen
C12N 2310/3535	...	Nitrogen
C12N 2310/50	.	Physical structure
C12N 2310/51	..	in polymeric form, e.g. multimers, concatemers

- C12N 2310/52 . . . branched
- C12N 2310/53 . . . partially self-complementary or closed
- C12N 2310/531 Stem-loop ; Hairpin
- C12N 2310/532 Closed or circular
- C12N 2310/533 having a mismatch or nick in at least one of the strands

C12N 2320/00 Applications ; Uses

- C12N 2320/10 . . in screening processes
- C12N 2320/11 . . . for the determination of target sites, i.e. of active nucleic acids
- C12N 2320/12 . . . in functional genomics, i.e. for the determination of gene function
- C12N 2320/13 . . . in a process of directed evolution, e.g. SELEX, acquiring a new function
- C12N 2320/30 . . Special therapeutic applications
- C12N 2320/31 . . . Combination therapy
- C12N 2320/32 . . . Special delivery means, e.g. tissue-specific
- C12N 2320/33 . . . Alteration of splicing
- C12N 2320/34 . . . Allele or polymorphism specific uses
- C12N 2320/35 . . . based on a specific dosage / administration regimen
- C12N 2320/50 . . Methods for regulating/modulating their activity
- C12N 2320/51 . . . modulating the chemical stability, e.g. nuclease-resistance
- C12N 2320/52 . . . modulating the physical stability, e.g. GC-content
- C12N 2320/53 . . . reducing unwanted side-effects

C12N 2330/00 Production

- C12N 2330/10 . . naturally occurring
- C12N 2330/30 . . chemically synthesised
- C12N 2330/31 . . . Libraries, arrays
- C12N 2330/50 . . Biochemical production, i.e. in a transformed host cell
- C12N 2330/51 . . . Specially adapted vectors

C12N 2500/00 Specific components of cell culture medium

- C12N 2500/02 . . Atmosphere, e.g. low oxygen conditions
- C12N 2500/05 . . Inorganic components
- C12N 2500/10 . . . Metals ; Metal chelators ([cobalamine C12N 2500/38](#))
- C12N 2500/12 Light metals, i.e. alkali, alkaline earth, Be, Al, Mg
- C12N 2500/14 Calcium ; Ca chelators ; Calcitonin
- C12N 2500/16 Magnesium ; Mg chelators

C12N 2500/20	... Transition metals
C12N 2500/22	.... Zinc ; Zn chelators (insulin-zinc complexes C12N 2501/33)
C12N 2500/24	.... Iron ; Fe chelators ; Transferrin
C12N 2500/25	..... Insulin-transferrin ; Insulin-transferrin-selenium
C12N 2500/30	. Organic components (metal chelators C12N 2500/10 ; calcitonin C12N 2500/14 ; transferrin C12N 2500/24)
C12N 2500/32	.. Amino acids
C12N 2500/33	... other than alpha-amino carboxylic acids, e.g. beta-amino acids, taurine
C12N 2500/34	.. Sugars
C12N 2500/35	.. Polyols, e.g. glycerin, inositol
C12N 2500/36	.. Lipids
C12N 2500/38	.. Vitamins
C12N 2500/40	.. Nucleotides, nucleosides, bases (cyclic nucleotides C12N 2501/01 , anti-neoplastic drugs C12N 2501/06)
C12N 2500/42	.. Organic phosphate, e.g. beta glycerophosphate
C12N 2500/44	.. Thiols, e.g. mercaptoethanol
C12N 2500/46	.. Amines, e.g. putrescine
C12N 2500/50	. Soluble polymers, e.g. polyethyleneglycol (PEG)
C12N 2500/60	. Buffer, e.g. pH regulation, osmotic pressure
C12N 2500/62	.. DMSO
C12N 2500/70	. Undefined extracts (conditioned medium C12N 2502/00)
C12N 2500/72	.. from bacteria
C12N 2500/74	.. from fungi, e.g. yeasts
C12N 2500/76	.. from plants
C12N 2500/78	.. from protozoa
C12N 2500/80	.. from animals
C12N 2500/82	... from invertebrates
C12N 2500/84	... from mammals
C12N 2500/90	. Serum-free medium, which may still contain naturally-sourced components
C12N 2500/92	.. Medium free of human- or animal-derived components
C12N 2500/95	.. Protein-free medium and culture conditions
C12N 2500/98	. Xeno-free medium and culture conditions
C12N 2500/99	. Serum-free medium

WARNING

This group is no longer used for the classification of new documents as from January 1, 2012. The backlog of this group is being continuously reclassified to [C12N 2500/90](#) to [C12N 2500/98](#)

C12N 2501/00**Active agents used in cell culture processes, e.g. differentiation****NOTE**

Whenever possible, indexation is done by signalling pathway and not by chemical structure, e.g. the group of a protein covers not only peptide analogs of it and the corresponding nucleic acids, as in C07K14, but also antibodies, anti-idiotypic antibodies, non-peptide ligands of the receptor, the receptor itself, antibodies against the receptor or inhibitors of the conversion enzyme which processes the protein precursor. Unless otherwise provided for, ligands and substrates take precedence over receptors and enzymes.

- C12N 2501/01 . Modulators of cAMP or cGMP, e.g. non-hydrolysable analogs, phosphodiesterase inhibitors, cholera toxin
- C12N 2501/02 . Compounds of the arachidonic acid pathway, e.g. prostaglandins, leukotrienes
- C12N 2501/03 . Compounds acting on the NO pathway, e.g. nitrososarginine
- C12N 2501/04 . Immunosuppressors, e.g. cyclosporin, tacrolimus
- C12N 2501/05 . Adjuvants
- C12N 2501/051 .. Lipid A (MPA, MPL)
- C12N 2501/052 .. Lipopolysaccharides (LPS)
- C12N 2501/054 .. Muramyle peptides
- C12N 2501/056 .. Immunostimulating oligonucleotides, e.g. CpG
- C12N 2501/06 . Anti-neoplastic drugs, anti-retroviral drugs, e.g. azacytidine, cyclophosphamide
- C12N 2501/065 . Modulators of histone acetylation
- C12N 2501/07 . Heat shock proteins
- C12N 2501/10 . Growth factors
- C12N 2501/105 .. Insulin-like growth factors (IGF)
- C12N 2501/11 .. Epidermal growth factor (EGF)
- C12N 2501/113 .. Acidic fibroblast growth factor (aFGF, FGF-1)
- C12N 2501/115 .. Basic fibroblast growth factor (bFGF, FGF-2)
- C12N 2501/117 .. Keratinocyte growth factors (KGF-1, i.e. FGF-7; KGF-2, i.e. FGF-12)
- C12N 2501/119 .. Other fibroblast growth factors, e.g. FGF-4, FGF-8, FGF-10
- C12N 2501/12 .. Hepatocyte growth factor (HGF)
- C12N 2501/125 .. Stem cell factor (SCF), c-kit ligand (KL)
- C12N 2501/13 .. Nerve growth factor (NGF) ; Brain-derived neurotrophic factor (BDNF) ; Ciliary neurotrophic factor (CNTF) ; Glial-derived neurotrophic factor (GDNF) ; Neurotrophins (NT) ; Neuregulins
- C12N 2501/135 .. Platelet-derived growth factor (PDGF)
- C12N 2501/14 .. Erythropoietin (EPO)

C12N 2501/145	..	Thrombopoietin (TPO)
C12N 2501/148	..	Transforming growth factor alpha (TGF-a)
C12N 2501/15	..	Transforming growth factor beta (TGF-?)
C12N 2501/155	..	Bone morphogenic proteins (BMP) ; Osteogenins ; Osteogenic factor ; Bone inducing factor
C12N 2501/16	..	Activin ; Inhibin ; Mullerian inhibiting substance
C12N 2501/165	..	Vascular endothelial growth factor (VEGF)
C12N 2501/17	..	Angiopoietin
C12N 2501/175	..	Cardiotrophin
C12N 2501/18	..	Liver cell growth factor (LCGF , Gly-His-Lys)
C12N 2501/185	..	Osteoprotegerin ; Osteoclast differentiation factor (ODF , RANKL)
C12N 2501/19	..	Growth and differentiation factors (GDF)
C12N 2501/195	..	Heregulin, neu differentiation factor
C12N 2501/20	.	Cytokines ; Chemokines
C12N 2501/21	..	Chemokines, e.g. MIP-1, MIP-2, RANTES, MCP, PF-4
C12N 2501/22	..	Colony stimulating factors (G-CSF , GM-CSF)
C12N 2501/23	..	Interleukins (IL)
C12N 2501/2301	...	Interleukin-1 (IL-1)
C12N 2501/2302	...	Interleukin-2 (IL-2)
C12N 2501/2303	...	Interleukin-3 (IL-3)
C12N 2501/2304	...	Interleukin-4 (IL-4)
C12N 2501/2305	...	Interleukin-5 (IL-5)
C12N 2501/2306	...	Interleukin-6 (IL-6)
C12N 2501/2307	...	Interleukin-7 (IL-7)
C12N 2501/2308	...	Interleukin-8 (IL-8)
C12N 2501/2309	...	Interleukin-9 (IL-9)
C12N 2501/231	...	Interleukin-10 (IL-10)
C12N 2501/2311	...	Interleukin-11 (IL-11)
C12N 2501/2312	...	Interleukin-12 (IL-12)
C12N 2501/2313	...	Interleukin-13 (IL-13)
C12N 2501/2314	...	Interleukin-14 (IL-14)
C12N 2501/2315	...	Interleukin-15 (IL-15)
C12N 2501/2316	...	Interleukin-16 (IL-16)
C12N 2501/2317	...	Interleukin-17 (IL-17)
C12N 2501/2318	...	Interleukin-18 (IL-18)
C12N 2501/2319	...	Interleukin-19 (IL-19)
C12N 2501/232	...	Interleukin-20 (IL-20)
C12N 2501/2321	...	Interleukin-21 (IL-21)
C12N 2501/2322	...	Interleukin-22 (IL-22)
C12N 2501/2323	...	Interleukin-23 (IL-23)
C12N 2501/2324	...	Interleukin-24 (IL-24)
C12N 2501/2325	...	Interleukin-25 (IL-25)

C12N 2501/2326	...	Interleukin-26 (IL-26)
C12N 2501/2327	...	Interleukin-27 (IL-27)
C12N 2501/2328	...	Interleukin-28 (IL-28)
C12N 2501/2329	...	Interleukin-29 (IL-29)
C12N 2501/233	...	Interleukin-30 (IL-30)
C12N 2501/2331	...	Interleukin-31 (IL-31)
C12N 2501/2332	...	Interleukin-32 (IL-32)
C12N 2501/2333	...	Interleukin-33 (IL-33)
C12N 2501/2334	...	Interleukin-34 (IL-34)
C12N 2501/2335	...	Interleukin-35 (IL-35)
C12N 2501/235	...	Leukemia inhibitory factor (LIF)
C12N 2501/237	..	Oncostatin M (OSM)
C12N 2501/24	..	Interferons (IFN)
C12N 2501/25	..	Tumour necrosing factors (TNF)
C12N 2501/26	..	Flt-3 ligand (CD135L , flk-2 ligand)
C12N 2501/30	.	Hormones (derived from pro-opiomelanocortin, pro-enkephalin or pro-dynorphin C12N 2501/85)
C12N 2501/305	..	Growth hormone (GH), aka. somatotropin
C12N 2501/31	..	Pituitary sex hormones, e.g. follicle-stimulating hormone (FSH), luteinising hormone (LH) ; Chorionic gonadotropins
C12N 2501/315	..	Prolactin
C12N 2501/32	..	Angiotensins (AT), angiotensinogen
C12N 2501/33	..	Insulin (together with transferrin C12N 2500/25 ; Insulin-like growth factors C12N 2501/105)
C12N 2501/335	..	Glucagon ; Glucagon-like peptide (GLP) ; Exendin
C12N 2501/34	..	Calcitonin ; Calcitonin-gene related peptide (CGRO) ; Amylin
C12N 2501/345	..	Gastrin ; Cholecystokinins (CCK)
C12N 2501/35	..	Vasoactive intestinal peptide (VIP) ; Pituitary adenylate cyclase activating polypeptide (PACAP)
C12N 2501/355	..	Leptin
C12N 2501/36	..	Somatostatin
C12N 2501/365	..	Endothelin
C12N 2501/37	..	Parathyroid hormone (PTH)
C12N 2501/375	..	Thyroid stimulating hormone (TSH)
C12N 2501/38	..	with nuclear receptors
C12N 2501/385	...	of the family of the retinoic acid recptor, e.g. RAR, RXR ; Peroxisome proliferator-activated receptor (PPAR)
C12N 2501/39	...	Steroid hormones
C12N 2501/392	....	Sexual steroids
C12N 2501/395	...	Thyroid hormones
C12N 2501/40	.	Regulators of development
C12N 2501/405	..	Cell cycle regulated proteins, e.g. cyclins, cyclin-dependant kinases

C12N 2501/41	.. Hedgehog proteins ; Cyclopamine (inhibitor)
C12N 2501/415	.. Wnt ; Frizzled
C12N 2501/42	.. Notch ; Delta ; Jagged ; Serrate
C12N 2501/48	.. Regulators of apoptosis
C12N 2501/50	. Cell markers ; Cell surface determinants
C12N 2501/505	.. CD4 ; CD8
C12N 2501/51	.. B7 molecules, e.g. CD80, CD86, CD28 (ligand), CD152 (ligand)
C12N 2501/515	.. CD3, T-cell receptor complex
C12N 2501/52	.. CD40, CD40-ligand (CD154)
C12N 2501/53	.. CD2
C12N 2501/58	.. Adhesion molecules, e.g. ICAM, VCAM, CD18 (ligand), CD11 (ligand), CD49 (ligand)
C12N 2501/585	.. Integrins
C12N 2501/59	.. Lectins
C12N 2501/599	.. with CD designations not provided for elsewhere
C12N 2501/60	. Transcription factors
C12N 2501/602	.. Sox-2
C12N 2501/603	.. Oct-3/4
C12N 2501/604	.. Klf-4
C12N 2501/605	.. Nanog
C12N 2501/606	.. c-Myc
C12N 2501/608	.. Lin28
C12N 2501/65	. Micro-RNA
C12N 2501/70	. Enzymes
C12N 2501/71	.. Oxidoreductases (EC 1.)
C12N 2501/72	.. Transferases (EC 2.) (acetylation of histones C12N 2501/065)
C12N 2501/724	... Glycosyltransferases (EC 2.4.)
C12N 2501/727	... Kinases (EC 2.7.)
C12N 2501/73	.. Hydrolases (EC 3.)
C12N 2501/734	... Proteases (EC 3.4.)
C12N 2501/80	. Neurotransmitters ; Neurohormones
C12N 2501/805	.. Acetylcholine
C12N 2501/81	.. Adrenaline
C12N 2501/815	.. Dopamine
C12N 2501/82	.. Histamine
C12N 2501/825	.. Serotonine (5-HT) ; Melatonine
C12N 2501/83	.. Tachykinins, e.g. substance P
C12N 2501/835	.. Neuropeptide Y (NPY) ; Peptide YY (PYY)
C12N 2501/84	.. Excitatory amino acids

- C12N 2501/845 . . . Gamma amino butyric acid (GABA)
- C12N 2501/85 . . Hormones derived from pro-opiomelanocortin, pro-enkephalin or pro-dynorphin
- C12N 2501/855 . . . Corticotropin (ACTH)
- C12N 2501/86 . . . Melanocyte-stimulating hormone (MSH)
- C12N 2501/90 . . Polysaccharides
- C12N 2501/905 . . . Hyaluronic acid
- C12N 2501/91 . . . Heparin
- C12N 2501/998 . . Proteins not provided for elsewhere

NOTE

Classification by pathway does not apply.

- C12N 2501/999 . . Small molecules not provided for elsewhere

NOTE

Classification by pathway does not apply.

C12N 2502/00 Coculture with ; Conditioned medium produced by

- C12N 2502/02 . . embryonic cells
- C12N 2502/025 . . . extra-embryonic cells, e.g. amniotic epithelium, placental cells, Wharton's jelly
- C12N 2502/03 . . non-embryonic pluripotent stem cells
- C12N 2502/04 . . germ cells
- C12N 2502/07 . . endocrine cells
- C12N 2502/072 . . . adrenal cells
- C12N 2502/074 . . . pinealocytes
- C12N 2502/076 . . . pituitary cells
- C12N 2502/078 . . . thyroid, parathyroid cells
- C12N 2502/08 . . cells of the nervous system
- C12N 2502/081 . . . neurons
- C12N 2502/083 . . . sensory transducers
- C12N 2502/085 . . . eye cells
- C12N 2502/086 . . . glial cells
- C12N 2502/088 . . . neural stem cells
- C12N 2502/09 . . epidermal cells, skin cells, oral mucosa cells
- C12N 2502/091 . . . melanocytes
- C12N 2502/092 . . . hair cells

C12N 2502/094	..	keratinocytes
C12N 2502/095	..	mammary cells
C12N 2502/097	..	oral mucosa cells
C12N 2502/098	..	cells of secretory glands, e.g. parotid gland, salivary glands, sweat glands, lacrymal glands
C12N 2502/11	.	blood or immune system cells
C12N 2502/1107	..	B cells
C12N 2502/1114	..	T cells
C12N 2502/1121	..	Dendritic cells
C12N 2502/1128	..	Erythrocytes
C12N 2502/1135	..	Granulocytes
C12N 2502/1142	..	Osteoclasts
C12N 2502/115	..	Platelets, megakaryocytes
C12N 2502/1157	..	Monocytes, macrophages
C12N 2502/1164	..	NK cells
C12N 2502/1171	..	Haematopoietic stem cells
C12N 2502/1178	..	Spleen cells
C12N 2502/1185	..	Thymus cells
C12N 2502/1192	..	Lymphatic cells
C12N 2502/13	.	connective tissue cells ; generic mesenchyme cells, e.g. so-called "embryonic fibroblasts"
C12N 2502/1305	..	Adipocytes
C12N 2502/1311	..	Osteocytes, osteoblasts, odontoblasts
C12N 2502/1317	..	Chondrocytes
C12N 2502/1323	..	Adult fibroblasts
C12N 2502/1329	..	Cardiomyocytes
C12N 2502/1335	..	Skeletal muscle cells, myocytes, myoblasts, myotubes
C12N 2502/1341	..	Tenocytes, cells from tendons and ligaments
C12N 2502/1347	..	Smooth muscle cells
C12N 2502/1352	..	Mesenchymal stem cells
C12N 2502/1358	...	Bone marrow mesenchymal stem cells (BM-MSC)
C12N 2502/1364	...	Dental pulp stem cells, dental follicle stem cells
C12N 2502/137	...	Blood-borne mesenchymal stem cells, e.g. Msc from umbilical cord blood
C12N 2502/1376	...	Mesenchymal stem cells from hair follicles
C12N 2502/1382	...	Adipose-derived stem cells (ADSC), adipose stromal stem cells
C12N 2502/1388	...	Mesenchymal stem cells from other natural sources
C12N 2502/1394	..	Bone marrow stromal cells ; whole marrow
C12N 2502/14	.	hepatocytes
C12N 2502/16	.	fibroblasts

WARNING

This group is no longer used for the classification of new documents as from January 1, 2012. The backlog of this group is being continuously reclassified to subgroups of [C12N 2502/13](#)

[C12N 2502/21](#) . bone marrow stromal cells

WARNING

This group is no longer used for the classification of new documents as from January 1, 2012. The backlog of this group is being continuously reclassified to subgroups of [C12N 2502/13](#)

[C12N 2502/22](#) . pancreatic cells

[C12N 2502/23](#) . Gastro-intestinal tract cells

[C12N 2502/24](#) . Genital tract cells, non-germinal cells from gonads

[C12N 2502/243](#) . . Cells of the female genital tract , non-germinal ovarian cells

[C12N 2502/246](#) . . Cells of the male genital tract, non-germinal testis cells

[C12N 2502/25](#) . Urinary tract cells, renal cells

[C12N 2502/253](#) . . Bladder cells

[C12N 2502/256](#) . . Renal cells

[C12N 2502/27](#) . Lung cells, respiratory tract cells

[C12N 2502/28](#) . Vascular endothelial cells

[C12N 2502/30](#) . tumour cells

[C12N 2502/45](#) . Artificially induced pluripotent stem cells

[C12N 2502/50](#) . invertebrate cells

[C12N 2502/70](#) . Non-animal cells

[C12N 2502/99](#) . genetically modified cells

NOTE

Use M12N501 to index the expressed products.

[C12N 2503/00](#) Use of cells in diagnostics

NOTE

When testing involves a protein, a receptor, an enzyme or a nucleic acid merely expressed by a cell [M07K 203/00](#) , [M07K 205/00](#) , [M12N 203/00](#) or [M12N 205/00](#) .

[C12N 2503/02](#) . Drug screening

[C12N 2503/04](#) . Screening or testing on artificial tissues

[C12N 2503/06](#) . . Screening or testing on artificial skin

[C12N 2506/00](#) Differentiation of animal cells from one lineage to another ; Differentiation of pluripotent cells

NOTE

This scheme indexes the starting point of a differentiation process and is used in combination with classification in [C12N 5/06](#) for the end product. Differentiation of a restricted progenitor cell into its expected progeny is not indexed. Differentiation of totipotent cells and dedifferentiation are always indexed.

[C12N 2506/02](#) . from embryonic cells

[C12N 2506/025](#) . . from extra-embryonic cells, e.g. trophoblast, placenta

[C12N 2506/03](#) . from non-embryonic pluripotent stem cells

[C12N 2506/04](#) . from germ cells

[C12N 2506/07](#) . from endocrine cells

[C12N 2506/072](#) . . from adrenal cells

[C12N 2506/074](#) . . from pinealocytes

[C12N 2506/076](#) . . from pituitary cells

[C12N 2506/078](#) . . from thyroid, parathyroid cells

[C12N 2506/08](#) . from cells of the nervous system

[C12N 2506/09](#) . from epidermal cells, from skin cells, from oral mucosa cells

[C12N 2506/091](#) . . from melanocytes

[C12N 2506/092](#) . . from hair cells

[C12N 2506/094](#) . . from keratinocytes

[C12N 2506/095](#) . . from mammary cells

[C12N 2506/097](#) . . from oral mucosa cells

[C12N 2506/098](#) . . from cells of secretory glands, e.g. parotid gland, salivary glands, sweat glands, lacrymal glands

[C12N 2506/11](#) . from blood or immune system cells

[C12N 2506/115](#) . . from monocytes, from macrophages

[C12N 2506/13](#) . from connective tissue cells, from mesenchymal cells

- C12N 2506/1307 . . from adult fibroblasts
- C12N 2506/1315 . . from cardiomyocytes
- C12N 2506/1323 . . from skeletal muscle cells
- C12N 2506/133 . . from tenocytes
- C12N 2506/1338 . . from smooth muscle cells
- C12N 2506/1346 . . from mesenchymal stem cells
- C12N 2506/1353 . . . from bone marrow mesenchymal stem cells (BM-MSC)
- C12N 2506/1361 . . . from dental pulp or dental follicle stem cells
- C12N 2506/1369 . . . from blood-borne mesenchymal stem cells, e.g. MSC from umbilical blood
- C12N 2506/1376 . . . from mesenchymal stem cells derived from hair follicles
- C12N 2506/1384 . . . from adipose-derived stem cells (ADSC), from adipose stromal stem cells
- C12N 2506/1392 . . . from mesenchymal stem cells from other natural sources

- C12N 2506/14 . from hepatocytes

- C12N 2506/21 . from bone marrow stromal cells ; from mesenchymal stem cells

WARNING

This group is no longer used for the classification of new documents as from January 1, 2012. The backlog of this group is being continuously reclassified to subgroups of [C12N 2502/13](#)

- C12N 2506/22 . from pancreatic cells

- C12N 2506/23 . from cells of the gastro-intestinal tract

- C12N 2506/24 . from cells of the genital tract, from non-germinal gonad cells
- C12N 2506/243 . . from cells of the female genital tract cells, from non-germinal ovarian cells
- C12N 2506/246 . . from cells of the male genital tract cells, from non-germinal testis cells

- C12N 2506/25 . from renal cells, from cells of the urinary tract

- C12N 2506/27 . from lung cells, from cells of the respiratory tract

- C12N 2506/28 . from vascular endothelial cells

- C12N 2506/30 . from cancer cells, e.g. reversion of tumour cells

NOTE

Unless the tumourigenic phenotype is totally reversed, the end product is still classified under [C12N 5/0693](#) .

- C12N 2506/45 . from artificially induced pluripotent stem cells

C12N 2509/00 Methods for the dissociation of cells, e.g. specific use of enzymes

C12N 2509/10	. Mechanical dissociation
C12N 2510/00	Genetically modified cells
C12N 2510/02	. Cells for production
C12N 2510/04	. Immortalised cells
C12N 2511/00	Cells for large scale production
C12N 2513/00	3D culture
C12N 2517/00	Cells related to new breeds of animals
C12N 2517/02	. Cells from transgenic animals
C12N 2517/04	. Cells produced using nuclear transfer
C12N 2517/10	. Conditioning of cells for in vitro fecondation or nuclear transfer
C12N 2521/00	Culture process characterised by the use of hydrostatic pressure, flow or shear forces
C12N 2521/10	. Sound, e.g. ultrasounds
C12N 2523/00	Culture process characterised by temperature
C12N 2525/00	Culture process characterised by gravity, e.g. microgravity
C12N 2527/00	Culture process characterised by the use of mechanical forces, e.g. strain, vibration
C12N 2529/00	Culture process characterised by the use of electromagnetic stimulation
C12N 2529/10	. Stimulation by light
C12N 2531/00	Microcarriers
C12N 2533/00	Supports or coatings for cell culture, characterised by material
C12N 2533/10	. Mineral substrates
C12N 2533/12	. . Glass
C12N 2533/14	. . Ceramic

- C12N 2533/18 . . Calcium salts, e.g. apatite, Mineral components from bones, teeth, shells
- C12N 2533/20 . Small organic molecules
- C12N 2533/30 . Synthetic polymers ([thermoreactive polymers](#), e.g. PNIPAm, [C12N 2539/10](#))
- C12N 2533/32 . . Polylysine, polyornithine
- C12N 2533/40 . . Polyhydroxyacids, e.g. polymers of glycolic or lactic acid ([PGA](#), [PLA](#), [PLGA](#)) ;
Bioresorbable polymers
- C12N 2533/50 . Proteins
- C12N 2533/52 . . Fibronectin ; Laminin
- C12N 2533/54 . . Collagen ; Gelatin
- C12N 2533/56 . . Fibrin ; Thrombin
- C12N 2533/70 . Polysaccharides
- C12N 2533/72 . . Chitin, chitosan
- C12N 2533/74 . . Alginate
- C12N 2533/76 . . Agarose, agar-agar
- C12N 2533/78 . . Cellulose
- C12N 2533/80 . . Hyaluronan
- C12N 2533/90 . Substrates of biological origin, e.g. extracellular matrix, decellularised tissue
- C12N 2533/92 . . Amnion ; Decellularised dermis or mucosa
- C12N 2535/00 Supports or coatings for cell culture characterised by topography**
- C12N 2535/10 . Patterned coating
- C12N 2537/00 Supports and/or coatings for cell culture characterised by physical or chemical treatment**
- C12N 2537/10 . Cross-linking
- C12N 2539/00 Supports and/or coatings for cell culture characterised by properties**
- C12N 2539/10 . Coating allowing for selective detachment of cells, e.g. thermoreactive coating
- Guidance heading:**
- C12N 2700/00 Viruses**
- Guidance heading:**
- C12N 2710/00 dsDNA Viruses ([not used](#))**

C12N 2710/00011	. dsDNA Viruses
C12N 2710/00021	.. Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2710/00022	.. New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2710/00023	.. Virus like particles [VLP]
C12N 2710/00031	.. Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2710/00032	.. Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2710/00033	.. Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2710/00034	.. Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2710/00041	.. Use of virus, viral particle or viral elements as a vector
C12N 2710/00042	... virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2710/00043	... viral genome or elements thereof as genetic vector
C12N 2710/00044	... Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2710/00045	... Special targeting system for viral vectors
C12N 2710/00051	.. Methods of production or purification of viral material
C12N 2710/00052	... relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2710/00061	.. Methods of inactivation or attenuation
C12N 2710/00062	... by genetic engineering
C12N 2710/00063	... by chemical treatment
C12N 2710/00064	... by serial passage
C12N 2710/00071	.. Demonstrated in vivo effect
C12N 2710/00088	.. For redistribution
C12N 2710/10011	.. Adenoviridae
C12N 2710/10021	... Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2710/10022	... New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2710/10023	... Virus like particles [VLP]
C12N 2710/10031	... Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2710/10032	... Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2710/10033	... Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2710/10034	... Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2710/10041	... Use of virus, viral particle or viral elements as a vector
C12N 2710/10042	.... virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2710/10043	.... viral genome or elements thereof as genetic vector
C12N 2710/10044	.... Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2710/10045	.... Special targeting system for viral vectors
C12N 2710/10051	... Methods of production or purification of viral material

C12N 2710/10052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2710/10061	...	Methods of inactivation or attenuation
C12N 2710/10062	....	by genetic engineering
C12N 2710/10063	....	by chemical treatment
C12N 2710/10064	....	by serial passage
C12N 2710/10071	...	Demonstrated in vivo effect
C12N 2710/10088	...	For redistribution
C12N 2710/10111	...	Atadenovirus, e.g. ovine adenovirus D
C12N 2710/10121	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2710/10122	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2710/10123	....	Virus like particles [VLP]
C12N 2710/10131	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2710/10132	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2710/10133	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2710/10134	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2710/10141	....	Use of virus, viral particle or viral elements as a vector
C12N 2710/10142	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2710/10143	.....	viral genome or elements thereof as genetic vector
C12N 2710/10144	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2710/10145	.....	Special targeting system for viral vectors
C12N 2710/10151	....	Methods of production or purification of viral material
C12N 2710/10152	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2710/10161	....	Methods of inactivation or attenuation
C12N 2710/10162	.....	by genetic engineering
C12N 2710/10163	.....	by chemical treatment
C12N 2710/10164	.....	by serial passage
C12N 2710/10171	....	Demonstrated in vivo effect
C12N 2710/10188	....	For redistribution
C12N 2710/10211	...	Aviadenovirus, e.g. fowl adenovirus A
C12N 2710/10221	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2710/10222	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2710/10223	....	Virus like particles [VLP]
C12N 2710/10231	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2710/10232	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2710/10233	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2710/10234	....	Use of virus or viral component as vaccine, e.g. live-attenuated or

		inactivated virus, VLP, viral protein
C12N 2710/10241	....	Use of virus, viral particle or viral elements as a vector
C12N 2710/10242	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2710/10243	.....	viral genome or elements thereof as genetic vector
C12N 2710/10244	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2710/10245	.....	Special targeting system for viral vectors
C12N 2710/10251	....	Methods of production or purification of viral material
C12N 2710/10252	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2710/10261	....	Methods of inactivation or attenuation
C12N 2710/10262	.....	by genetic engineering
C12N 2710/10263	.....	by chemical treatment
C12N 2710/10264	.....	by serial passage
C12N 2710/10271	....	Demonstrated in vivo effect
C12N 2710/10288	....	For redistribution
C12N 2710/10311	...	Mastadenovirus, e.g. human or simian adenoviruses
C12N 2710/10321	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2710/10322	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2710/10323	....	Virus like particles [VLP]
C12N 2710/10331	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2710/10332	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2710/10333	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2710/10334	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2710/10341	....	Use of virus, viral particle or viral elements as a vector
C12N 2710/10342	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2710/10343	.....	viral genome or elements thereof as genetic vector
C12N 2710/10344	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2710/10345	.....	Special targeting system for viral vectors
C12N 2710/10351	....	Methods of production or purification of viral material
C12N 2710/10352	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2710/10361	....	Methods of inactivation or attenuation
C12N 2710/10362	.....	by genetic engineering
C12N 2710/10363	.....	by chemical treatment
C12N 2710/10364	.....	by serial passage
C12N 2710/10371	....	Demonstrated in vivo effect
C12N 2710/10388	....	For redistribution
C12N 2710/12011	..	Asfarviridae

C12N 2710/12021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2710/12022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2710/12023	...	Virus like particles [VLP]
C12N 2710/12031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2710/12032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2710/12033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2710/12034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2710/12041	...	Use of virus, viral particle or viral elements as a vector
C12N 2710/12042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2710/12043	....	viral genome or elements thereof as genetic vector
C12N 2710/12044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2710/12045	....	Special targeting system for viral vectors
C12N 2710/12051	...	Methods of production or purification of viral material
C12N 2710/12052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2710/12061	...	Methods of inactivation or attenuation
C12N 2710/12062	....	by genetic engineering
C12N 2710/12063	....	by chemical treatment
C12N 2710/12064	....	by serial passage
C12N 2710/12071	...	Demonstrated in vivo effect
C12N 2710/12088	...	For redistribution
C12N 2710/14011	..	Baculoviridae
C12N 2710/14021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2710/14022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2710/14023	...	Virus like particles [VLP]
C12N 2710/14031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2710/14032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2710/14033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2710/14034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2710/14041	...	Use of virus, viral particle or viral elements as a vector
C12N 2710/14042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2710/14043	....	viral genome or elements thereof as genetic vectore
C12N 2710/14044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2710/14045	....	Special targeting system for viral vectors
C12N 2710/14051	...	Methods of production or purification of viral material
C12N 2710/14052	....	relating to complementing cells and packaging systems for producing virus or viral particles

C12N 2710/14061	...	Methods of inactivation or attenuation
C12N 2710/14062	....	by genetic engineering
C12N 2710/14063	....	by chemical treatment
C12N 2710/14064	....	by serial passage
C12N 2710/14071	...	Demonstrated in vivo effect
C12N 2710/14088	...	For redistribution
C12N 2710/14111	...	Nucleopolyhedrovirus, e.g. autographa californica nucleopolyhedrovirus
C12N 2710/14121	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2710/14122	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2710/14123	....	Virus like particles [VLP]
C12N 2710/14131	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2710/14132	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2710/14133	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2710/14134	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2710/14141	....	Use of virus, viral particle or viral elements as a vector
C12N 2710/14142	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2710/14143	.....	viral genome or elements thereof as genetic vector
C12N 2710/14144	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2710/14145	.....	Special targeting system for viral vectors
C12N 2710/14151	....	Methods of production or purification of viral material
C12N 2710/14152	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2710/14161	....	Methods of inactivation or attenuation
C12N 2710/14162	.....	by genetic engineering
C12N 2710/14163	.....	by chemical treatment
C12N 2710/14164	.....	by serial passage
C12N 2710/14171	....	Demonstrated in vivo effect
C12N 2710/14188	....	For redistribution
C12N 2710/16011	..	Herpesviridae
C12N 2710/16021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2710/16022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2710/16023	...	Virus like particles [VLP]
C12N 2710/16031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2710/16032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2710/16033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2710/16034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2710/16041	...	Use of virus, viral particle or viral elements as a vector

C12N 2710/16042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2710/16043	....	viral genome or elements thereof as genetic vector
C12N 2710/16044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2710/16045	....	Special targeting system for viral vectors
C12N 2710/16051	...	Methods of production or purification of viral material
C12N 2710/16052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2710/16061	...	Methods of inactivation or attenuation
C12N 2710/16062	....	by genetic engineering
C12N 2710/16063	....	by chemical treatment
C12N 2710/16064	....	by serial passage
C12N 2710/16071	...	Demonstrated in vivo effect
C12N 2710/16088	...	For redistribution
C12N 2710/16111	...	Cytomegalovirus, e.g. human herpesvirus 5
C12N 2710/16121	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2710/16122	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2710/16123	....	Virus like particles [VLP]
C12N 2710/16131	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2710/16132	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2710/16133	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2710/16134	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2710/16141	....	Use of virus, viral particle or viral elements as a vector
C12N 2710/16142	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2710/16143	.....	viral genome or elements thereof as genetic vector
C12N 2710/16144	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2710/16145	.....	Special targeting system for viral vectors
C12N 2710/16151	....	Methods of production or purification of viral material
C12N 2710/16152	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2710/16161	....	Methods of inactivation or attenuation
C12N 2710/16162	.....	by genetic engineering
C12N 2710/16163	.....	by chemical treatment
C12N 2710/16164	.....	by serial passage
C12N 2710/16171	....	Demonstrated in vivo effect
C12N 2710/16188	....	For redistribution
C12N 2710/16211	...	Lymphocryptovirus, e.g. human herpesvirus 4, Epstein-Barr Virus
C12N 2710/16221	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2710/16222	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes

C12N 2710/16223	....	Virus like particles [VLP]
C12N 2710/16231	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2710/16232	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2710/16233	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2710/16234	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2710/16241	....	Use of virus, viral particle or viral elements as a vector
C12N 2710/16242	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2710/16243	.....	viral genome or elements thereof as genetic vector
C12N 2710/16244	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2710/16245	.....	Special targeting system for viral vectors
C12N 2710/16251	....	Methods of production or purification of viral material
C12N 2710/16252	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2710/16261	....	Methods of inactivation or attenuation
C12N 2710/16262	.....	by genetic engineering
C12N 2710/16263	.....	by chemical treatment
C12N 2710/16264	.....	by serial passage
C12N 2710/16271	....	Demonstrated in vivo effect
C12N 2710/16288	....	For redistribution
C12N 2710/16311	...	Mardivirus, e.g. Gallid herpesvirus 2, Marek-like viruses, turkey HV
C12N 2710/16321	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2710/16322	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2710/16323	....	Virus like particles [VLP]
C12N 2710/16331	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2710/16332	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2710/16333	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2710/16334	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2710/16341	....	Use of virus, viral particle or viral elements as a vector
C12N 2710/16342	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2710/16343	.....	viral genome or elements thereof as genetic vector
C12N 2710/16344	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2710/16345	.....	Special targeting system for viral vectors
C12N 2710/16351	....	Methods of production or purification of viral material
C12N 2710/16352	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2710/16361	....	Methods of inactivation or attenuation

C12N 2710/16362	.....	by genetic engineering
C12N 2710/16363	.....	by chemical treatment
C12N 2710/16364	.....	by serial passage
C12N 2710/16371	....	Demonstrated in vivo effect
C12N 2710/16388	....	For redistribution
C12N 2710/16411	...	Rhadinovirus, e.g. human herpesvirus 8
C12N 2710/16421	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2710/16422	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2710/16423	....	Virus like particles [VLP]
C12N 2710/16431	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2710/16432	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2710/16433	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2710/16434	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2710/16441	....	Use of virus, viral particle or viral elements as a vector
C12N 2710/16442	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2710/16443	.....	viral genome or elements thereof as genetic vector
C12N 2710/16444	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2710/16445	.....	Special targeting system for viral vectors
C12N 2710/16451	....	Methods of production or purification of viral material
C12N 2710/16452	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2710/16461	....	Methods of inactivation or attenuation
C12N 2710/16462	.....	by genetic engineering
C12N 2710/16463	.....	by chemical treatment
C12N 2710/16464	.....	by serial passage
C12N 2710/16471	....	Demonstrated in vivo effect
C12N 2710/16488	....	For redistribution
C12N 2710/16511	...	Roseolovirus, e.g. human herpesvirus 6, 7
C12N 2710/16521	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2710/16522	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2710/16523	....	Virus like particles [VLP]
C12N 2710/16531	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2710/16532	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2710/16533	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2710/16534	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral
C12N 2710/16541	....	Use of virus, viral particle or viral elements as a vector
C12N 2710/16542	.....	virus or viral particle as vehicle, e.g. encapsulating small organic

		molecule
C12N 2710/16543	.....	viral genome or elements thereof as genetic vector
C12N 2710/16544	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2710/16545	.....	Special targeting system for viral vectors
C12N 2710/16551	....	Methods of production or purification of viral material
C12N 2710/16552	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2710/16561	....	Methods of inactivation or attenuation
C12N 2710/16562	.....	by genetic engineering
C12N 2710/16563	.....	by chemical treatment
C12N 2710/16564	.....	by serial passage
C12N 2710/16571	....	Demonstrated in vivo effect
C12N 2710/16588	....	For redistribution
C12N 2710/16611	...	Simplexvirus, e.g. human herpesvirus 1, 2
C12N 2710/16621	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2710/16622	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2710/16623	....	Virus like particles [VLP]
C12N 2710/16631	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2710/16632	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2710/16633	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2710/16634	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2710/16641	....	Use of virus, viral particle or viral elements as a vector
C12N 2710/16642	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2710/16643	.....	viral genome or elements thereof as genetic vector
C12N 2710/16644	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2710/16645	.....	Special targeting system for viral vectors
C12N 2710/16651	....	Methods of production or purification of viral material
C12N 2710/16652	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2710/16661	....	Methods of inactivation or attenuation
C12N 2710/16662	.....	by genetic engineering
C12N 2710/16663	.....	by chemical treatment
C12N 2710/16664	.....	by serial passage
C12N 2710/16671	....	Demonstrated in vivo effect
C12N 2710/16688	....	For redistribution
C12N 2710/16711	...	Varicellovirus, e.g. human herpesvirus 3, Varicella Zoster, pseudorabies
C12N 2710/16721	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2710/16722	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes

C12N 2710/16723	....	Virus like particles [VLP]
C12N 2710/16731	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2710/16732	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2710/16733	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2710/16734	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2710/16741	....	Use of virus, viral particle or viral elements as a vector
C12N 2710/16742	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2710/16743	.....	viral genome or elements thereof as genetic vector
C12N 2710/16744	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2710/16745	.....	Special targeting system for viral vectors
C12N 2710/16751	....	Methods of production or purification of viral material
C12N 2710/16752	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2710/16761	....	Methods of inactivation or attenuation
C12N 2710/16762	.....	by genetic engineering
C12N 2710/16763	.....	by chemical treatment
C12N 2710/16764	.....	by serial passage
C12N 2710/16771	....	Demonstrated in vivo effect
C12N 2710/16788	....	For redistribution
C12N 2710/18011	..	Nimaviridae
C12N 2710/18021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2710/18022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2710/18023	...	Virus like particles [VLP]
C12N 2710/18031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2710/18032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2710/18033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2710/18034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2710/18041	...	Use of virus, viral particle or viral elements as a vector
C12N 2710/18042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2710/18043	....	viral genome or elements thereof as genetic vector
C12N 2710/18044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2710/18045	....	Special targeting system for viral vectors
C12N 2710/18051	...	Methods of production or purification of viral material
C12N 2710/18052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2710/18061	...	Methods of inactivation or attenuation
C12N 2710/18062	....	by genetic engineering

C12N 2710/18063	....	by chemical treatment
C12N 2710/18064	....	by serial passage
C12N 2710/18071	...	Demonstrated in vivo effect
C12N 2710/18088	...	For redistribution
C12N 2710/20011	..	Papillomaviridae
C12N 2710/20021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2710/20022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2710/20023	...	Virus like particles [VLP]
C12N 2710/20031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2710/20032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2710/20033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2710/20034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2710/20041	...	Use of virus, viral particle or viral elements as a vector
C12N 2710/20042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2710/20043	....	viral genome or elements thereof as genetic vector
C12N 2710/20044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2710/20045	....	Special targeting system for viral vectors
C12N 2710/20051	...	Methods of production or purification of viral material
C12N 2710/20052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2710/20061	...	Methods of inactivation or attenuation
C12N 2710/20062	....	by genetic engineering
C12N 2710/20063	....	by chemical treatment
C12N 2710/20064	....	by serial passage
C12N 2710/20071	...	Demonstrated in vivo effect
C12N 2710/20088	...	For redistribution
C12N 2710/22011	..	Polyomaviridae, e.g. polyoma, SV40, JC
C12N 2710/22021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2710/22022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2710/22023	...	Virus like particles [VLP]
C12N 2710/22031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2710/22032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2710/22033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2710/22034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2710/22041	...	Use of virus, viral particle or viral elements as a vector
C12N 2710/22042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2710/22043	....	viral genome or elements thereof as genetic vector

C12N 2710/22044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2710/22045	....	Special targeting system for viral vectors
C12N 2710/22051	...	Methods of production or purification of viral material
C12N 2710/22052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2710/22061	...	Methods of inactivation or attenuation
C12N 2710/22062	....	by genetic engineering
C12N 2710/22063	....	by chemical treatment
C12N 2710/22064	....	by serial passage
C12N 2710/22071	...	Demonstrated in vivo effect
C12N 2710/22088	...	For redistribution
C12N 2710/24011	..	Poxviridae
C12N 2710/24021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2710/24022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2710/24023	...	Virus like particles [VLP]
C12N 2710/24031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2710/24032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2710/24033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2710/24034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2710/24041	...	Use of virus, viral particle or viral elements as a vector
C12N 2710/24042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2710/24043	....	viral genome or elements thereof as genetic vector
C12N 2710/24044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2710/24045	....	Special targeting system for viral vectors
C12N 2710/24051	...	Methods of production or purification of viral material
C12N 2710/24052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2710/24061	...	Methods of inactivation or attenuation
C12N 2710/24062	....	by genetic engineering
C12N 2710/24063	....	by chemical treatment
C12N 2710/24064	....	by serial passage
C12N 2710/24071	...	Demonstrated in vivo effect
C12N 2710/24088	...	For redistribution
C12N 2710/24111	...	Orthopoxvirus, e.g. vaccinia virus, variola
C12N 2710/24121	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2710/24122	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2710/24123	....	Virus like particles [VLP]
C12N 2710/24131	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant

C12N 2710/24132	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2710/24133	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2710/24134	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2710/24141	....	Use of virus, viral particle or viral elements as a vector
C12N 2710/24142	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2710/24143	.....	viral genome or elements thereof as genetic vector
C12N 2710/24144	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2710/24145	.....	Special targeting system for viral vectors
C12N 2710/24151	....	Methods of production or purification of viral material
C12N 2710/24152	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2710/24161	....	Methods of inactivation or attenuation
C12N 2710/24162	.....	by genetic engineering
C12N 2710/24163	.....	by chemical treatment
C12N 2710/24164	.....	by serial passage
C12N 2710/24171	....	Demonstrated in vivo effect
C12N 2710/24188	....	For redistribution
C12N 2710/24211	...	Parapoxvirus, e.g. Orf virus
C12N 2710/24221	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2710/24222	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2710/24223	....	Virus like particles [VLP]
C12N 2710/24231	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2710/24232	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2710/24233	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2710/24234	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2710/24241	....	Use of virus, viral particle or viral elements as a vector
C12N 2710/24242	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2710/24243	.....	viral genome or elements thereof as genetic vector
C12N 2710/24244	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2710/24245	.....	Special targeting system for viral vectors
C12N 2710/24251	....	Methods of production or purification of viral material
C12N 2710/24252	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2710/24261	....	Methods of inactivation or attenuation
C12N 2710/24262	.....	by genetic engineering
C12N 2710/24263	.....	by chemical treatment

C12N 2710/24264 by serial passage
 C12N 2710/24271 Demonstrated in vivo effect
 C12N 2710/24288 For redistribution

C12N 2720/00 dsRNA Viruses (not used)

C12N 2720/00011 . dsRNA Viruses
 C12N 2720/00021 .. Viruses as such, e.g. new isolates, mutants or their genomic sequences
 C12N 2720/00022 .. New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
 C12N 2720/00023 .. Virus like particles [VLP]
 C12N 2720/00031 .. Uses of virus other than therapeutic or vaccine, e.g. disinfectant
 C12N 2720/00032 .. Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
 C12N 2720/00033 .. Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
 C12N 2720/00034 .. Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
 C12N 2720/00041 .. Use of virus, viral particle or viral elements as a vector
 C12N 2720/00042 ... virus or viral particle as vehicle, e.g. encapsulating small organic molecule
 C12N 2720/00043 ... viral genome or elements thereof as genetic vector
 C12N 2720/00044 ... Chimeric viral vector comprising heterologous viral elements for production of another viral vector
 C12N 2720/00045 ... Special targeting system for viral vectors
 C12N 2720/00051 .. Methods of production or purification of viral material
 C12N 2720/00052 ... relating to complementing cells and packaging systems for producing virus or viral particles
 C12N 2720/00061 .. Methods of inactivation or attenuation
 C12N 2720/00062 ... by genetic engineering
 C12N 2720/00063 ... by chemical treatment
 C12N 2720/00064 ... by serial passage
 C12N 2720/00071 .. Demonstrated in vivo effect
 C12N 2720/00088 .. For redistribution
 C12N 2720/10011 .. Birnaviridae
 C12N 2720/10021 ... Viruses as such, e.g. new isolates, mutants or their genomic sequences
 C12N 2720/10022 ... New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
 C12N 2720/10023 ... Virus like particles [VLP]
 C12N 2720/10031 ... Uses of virus other than therapeutic or vaccine, e.g. disinfectant
 C12N 2720/10032 ... Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
 C12N 2720/10033 ... Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
 C12N 2720/10034 ... Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
 C12N 2720/10041 ... Use of virus, viral particle or viral elements as a vectorn
 C12N 2720/10042 virus or viral particle as vehicle, e.g. encapsulating small organic molecule

C12N 2720/10043	....	viral genome or elements thereof as genetic vector
C12N 2720/10044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2720/10045	....	Special targeting system for viral vectors
C12N 2720/10051	...	Methods of production or purification of viral material
C12N 2720/10052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2720/10061	...	Methods of inactivation or attenuation
C12N 2720/10062	....	by genetic engineering
C12N 2720/10063	....	by chemical treatment
C12N 2720/10064	....	by serial passage
C12N 2720/10071	...	Demonstrated in vivo effect
C12N 2720/10088	...	For redistribution
C12N 2720/12011	..	Reoviridae
C12N 2720/12021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2720/12022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2720/12023	...	Virus like particles [VLP]
C12N 2720/12031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2720/12032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2720/12033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2720/12034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2720/12041	...	Use of virus, viral particle or viral elements as a vector
C12N 2720/12042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2720/12043	....	viral genome or elements thereof as genetic vector
C12N 2720/12044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2720/12045	....	Special targeting system for viral vectors
C12N 2720/12051	...	Methods of production or purification of viral material
C12N 2720/12052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2720/12061	...	Methods of inactivation or attenuation
C12N 2720/12062	....	by genetic engineering
C12N 2720/12063	....	by chemical treatment
C12N 2720/12064	....	by serial passage
C12N 2720/12071	...	Demonstrated in vivo effect
C12N 2720/12088	...	For redistribution
C12N 2720/12111	...	Orbivirus, e.g. bluetongue virus
C12N 2720/12121	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2720/12122	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2720/12123	....	Virus like particles [VLP]

C12N 2720/12131	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2720/12132	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2720/12133	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2720/12134	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2720/12141	....	Use of virus, viral particle or viral elements as a vectorn
C12N 2720/12142	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2720/12143	.....	viral genome or elements thereof as genetic vector
C12N 2720/12144	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2720/12145	.....	Special targeting system for viral vectors
C12N 2720/12151	....	Methods of production or purification of viral material
C12N 2720/12152	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2720/12161	....	Methods of inactivation or attenuation
C12N 2720/12162	.....	by genetic engineering
C12N 2720/12163	.....	by chemical treatment
C12N 2720/12164	.....	by serial passage
C12N 2720/12171	....	Demonstrated in vivo effect
C12N 2720/12188	....	For redistribution
C12N 2720/12211	...	Orthoreovirus, e.g. mammalian orthoreovirus
C12N 2720/12221	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2720/12222	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2720/12223	....	Virus like particles [VLP]
C12N 2720/12231	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2720/12232	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2720/12233	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2720/12234	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2720/12241	....	Use of virus, viral particle or viral elements as a vector
C12N 2720/12242	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2720/12243	.....	viral genome or elements thereof as genetic vector
C12N 2720/12244	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2720/12245	.....	Special targeting system for viral vectors
C12N 2720/12251	....	Methods of production or purification of viral material
C12N 2720/12252	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2720/12261	....	Methods of inactivation or attenuation
C12N 2720/12262	.....	by genetic engineering

C12N 2720/12263	.....	by chemical treatment
C12N 2720/12264	.....	by serial passage
C12N 2720/12271	....	Demonstrated in vivo effect
C12N 2720/12288	....	For redistribution
C12N 2720/12311	...	Rotavirus, e.g. rotavirus A
C12N 2720/12321	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2720/12322	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2720/12323	....	Virus like particles [VLP]
C12N 2720/12331	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2720/12332	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2720/12333	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2720/12334	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2720/12341	....	Use of virus, viral particle or viral elements as a vector
C12N 2720/12342	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2720/12343	.....	viral genome or elements thereof as genetic vector
C12N 2720/12344	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2720/12345	.....	Special targeting system for viral vectors
C12N 2720/12351	....	Methods of production or purification of viral material
C12N 2720/12352	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2720/12361	....	Methods of inactivation or attenuation
C12N 2720/12362	.....	by genetic engineering
C12N 2720/12363	.....	by chemical treatment
C12N 2720/12364	.....	by serial passage
C12N 2720/12371	....	Demonstrated in vivo effect
C12N 2720/12388	....	For redistribution

C12N 2730/00 **Reverse Transcribing DNA Viruses (not used)**

C12N 2730/00011	. . .	Reverse Transcribing DNA Viruses
C12N 2730/00021	..	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2730/00022	..	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2730/00023	..	Virus like particles [VLP]
C12N 2730/00031	..	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2730/00032	..	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2730/00033	..	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2730/00034	..	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein

C12N 2730/00041	..	Use of virus, viral particle or viral elements as a vector
C12N 2730/00042	...	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2730/00043	...	viral genome or elements thereof as genetic vector
C12N 2730/00044	...	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2730/00045	...	Special targeting system for viral vectors
C12N 2730/00051	..	Methods of production or purification of viral material
C12N 2730/00052	...	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2730/00061	..	Methods of inactivation or attenuation
C12N 2730/00062	...	by genetic engineering
C12N 2730/00063	...	by chemical treatment
C12N 2730/00064	...	by serial passage
C12N 2730/00071	..	Demonstrated in vivo effect
C12N 2730/00088	..	For redistribution
C12N 2730/10011	..	Hepadnaviridae
C12N 2730/10021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2730/10022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2730/10023	...	Virus like particles [VLP]
C12N 2730/10031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2730/10032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2730/10033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2730/10034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2730/10041	...	Use of virus, viral particle or viral elements as a vector
C12N 2730/10042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2730/10043	....	viral genome or elements thereof as genetic vector
C12N 2730/10044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2730/10045	....	Special targeting system for viral vectors
C12N 2730/10051	...	Methods of production or purification of viral material
C12N 2730/10052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2730/10061	...	Methods of inactivation or attenuation
C12N 2730/10062	....	by genetic engineering
C12N 2730/10063	....	by chemical treatment
C12N 2730/10064	....	by serial passage
C12N 2730/10071	...	Demonstrated in vivo effect
C12N 2730/10088	...	For redistribution
C12N 2730/10111	...	Orthohepadnavirus, e.g. hepatitis B virus
C12N 2730/10121	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2730/10122	....	New viral proteins or individual genes, new structural or functional aspects of

		known viral proteins or genes
C12N 2730/10123	....	Virus like particles [VLP]
C12N 2730/10131	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2730/10132	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2730/10133	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2730/10134	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2730/10141	....	Use of virus, viral particle or viral elements as a vector
C12N 2730/10142	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2730/10143	.....	viral genome or elements thereof as genetic vector
C12N 2730/10144	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2730/10145	.....	Special targeting system for viral vectors
C12N 2730/10151	....	Methods of production or purification of viral material
C12N 2730/10152	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2730/10161	....	Methods of inactivation or attenuation
C12N 2730/10162	.....	by genetic engineering
C12N 2730/10163	.....	by chemical treatment
C12N 2730/10164	.....	by serial passage
C12N 2730/10171	....	Demonstrated in vivo effect
C12N 2730/10188	....	For redistribution

C12N 2740/00 **Reverse Transcribing RNA Viruses (not used)**

C12N 2740/00011	. Reverse Transcribing RNA Viruses
C12N 2740/00021	.. Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2740/00022	.. New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2740/00023	.. Virus like particles [VLP]
C12N 2740/00031	.. Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2740/00032	.. Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2740/00033	.. Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2740/00034	.. Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2740/00041	.. Use of virus, viral particle or viral elements as a vector
C12N 2740/00042	... virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2740/00043	... viral genome or elements thereof as genetic vector
C12N 2740/00044	... Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2740/00045	... Special targeting system for viral vectors
C12N 2740/00051	.. Methods of production or purification of viral material

C12N 2740/00052	...	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2740/00061	..	Methods of inactivation or attenuation
C12N 2740/00062	...	by genetic engineering
C12N 2740/00063	...	by chemical treatment
C12N 2740/00064	...	by serial passage
C12N 2740/00071	..	Demonstrated in vivo effect
C12N 2740/00088	..	For redistribution
C12N 2740/10011	..	Retroviridae
C12N 2740/10021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2740/10022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2740/10023	...	Virus like particles [VLP]
C12N 2740/10031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2740/10032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2740/10033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2740/10034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2740/10041	...	Use of virus, viral particle or viral elements as a vector
C12N 2740/10042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2740/10043	....	viral genome or elements thereof as genetic vector
C12N 2740/10044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2740/10045	....	Special targeting system for viral vectors
C12N 2740/10051	...	Methods of production or purification of viral material
C12N 2740/10052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2740/10061	...	Methods of inactivation or attenuation
C12N 2740/10062	....	by genetic engineering
C12N 2740/10063	....	by chemical treatment
C12N 2740/10064	....	by serial passage
C12N 2740/10071	...	Demonstrated in vivo effect
C12N 2740/10088	...	For redistribution
C12N 2740/11011	...	Alpharetrovirus, e.g. avian leucosis virus
C12N 2740/11021	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2740/11022	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2740/11023	....	Virus like particles [VLP]
C12N 2740/11031	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2740/11032	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2740/11033	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2740/11034	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein

C12N 2740/11041	....	Use of virus, viral particle or viral elements as a vector
C12N 2740/11042	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2740/11043	.....	viral genome or elements thereof as genetic vector
C12N 2740/11044	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2740/11045	.....	Special targeting system for viral vectors
C12N 2740/11051	....	Methods of production or purification of viral material
C12N 2740/11052	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2740/11061	....	Methods of inactivation or attenuation
C12N 2740/11062	.....	by genetic engineering
C12N 2740/11063	.....	by chemical treatment
C12N 2740/11064	.....	by serial passage
C12N 2740/11071	....	Demonstrated in vivo effect
C12N 2740/11088	....	For redistribution
C12N 2740/12011	...	Betaretrovirus, e.g. mouse mammary tumour virus
C12N 2740/12021	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2740/12022	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2740/12023	....	Virus like particles [VLP]
C12N 2740/12031	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2740/12032	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2740/12033	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2740/12034	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2740/12041	....	Use of virus, viral particle or viral elements as a vector
C12N 2740/12042	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2740/12043	.....	viral genome or elements thereof as genetic vector
C12N 2740/12044	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2740/12045	.....	Special targeting system for viral vectors
C12N 2740/12051	....	Methods of production or purification of viral material
C12N 2740/12052	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2740/12061	....	Methods of inactivation or attenuation
C12N 2740/12062	.....	by genetic engineering
C12N 2740/12063	.....	by chemical treatment
C12N 2740/12064	.....	by serial passage
C12N 2740/12071	....	Demonstrated in vivo effect
C12N 2740/12088	....	For redistribution
C12N 2740/13011	...	Gammaretrovirus, e.g. murine leukaemia virus
C12N 2740/13021	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences

C12N 2740/13022	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2740/13023	....	Virus like particles [VLP]
C12N 2740/13031	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2740/13032	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2740/13033	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2740/13034	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2740/13041	....	Use of virus, viral particle or viral elements as a vector
C12N 2740/13042	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2740/13043	.....	viral genome or elements thereof as genetic vector
C12N 2740/13044	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2740/13045	.....	Special targeting system for viral vectors
C12N 2740/13051	....	Methods of production or purification of viral material
C12N 2740/13052	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2740/13061	....	Methods of inactivation or attenuation
C12N 2740/13062	.....	by genetic engineering
C12N 2740/13063	.....	by chemical treatment
C12N 2740/13064	.....	by serial passage
C12N 2740/13071	....	Demonstrated in vivo effect
C12N 2740/13088	....	For redistribution
C12N 2740/14011	...	Deltaretrovirus, e.g. bovine leukaemia virus
C12N 2740/14021	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2740/14022	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2740/14023	....	Virus like particles [VLP]
C12N 2740/14031	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2740/14032	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2740/14033	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2740/14034	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2740/14041	....	Use of virus, viral particle or viral elements as a vector
C12N 2740/14042	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2740/14043	.....	viral genome or elements thereof as genetic vector
C12N 2740/14044	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2740/14045	.....	Special targeting system for viral vectors
C12N 2740/14051	....	Methods of production or purification of viral material
C12N 2740/14052	.....	relating to complementing cells and packaging systems for producing virus or viral particles

C12N 2740/14061	....	Methods of inactivation or attenuation
C12N 2740/14062	.....	by genetic engineering
C12N 2740/14063	.....	by chemical treatment
C12N 2740/14064	.....	by serial passage
C12N 2740/14071	....	Demonstrated in vivo effect
C12N 2740/14088	....	For redistribution
C12N 2740/15011	...	Lentivirus, not HIV, e.g. FIV, SIV
C12N 2740/15021	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2740/15022	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2740/15023	....	Virus like particles [VLP]
C12N 2740/15031	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2740/15032	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2740/15033	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2740/15034	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2740/15041	....	Use of virus, viral particle or viral elements as a vector
C12N 2740/15042	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2740/15043	.....	viral genome or elements thereof as genetic vector
C12N 2740/15044	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2740/15045	.....	Special targeting system for viral vectors
C12N 2740/15051	....	Methods of production or purification of viral material
C12N 2740/15052	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2740/15061	....	Methods of inactivation or attenuation
C12N 2740/15062	.....	by genetic engineering
C12N 2740/15063	.....	by chemical treatment
C12N 2740/15064	.....	by serial passage
C12N 2740/15071	....	Demonstrated in vivo effect
C12N 2740/15088	....	For redistribution
C12N 2740/16011	...	Human Immunodeficiency Virus, HIV
C12N 2740/16021	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2740/16022	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2740/16023	....	Virus like particles [VLP]
C12N 2740/16031	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2740/16032	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2740/16033	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2740/16034	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2740/16041	....	Use of virus, viral particle or viral elements as a vector

C12N 2740/16042	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2740/16043	.....	viral genome or elements thereof as genetic vector
C12N 2740/16044	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2740/16045	.....	Special targeting system for viral vectors
C12N 2740/16051	....	Methods of production or purification of viral material
C12N 2740/16052	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2740/16061	....	Methods of inactivation or attenuation
C12N 2740/16062	.....	by genetic engineering
C12N 2740/16063	.....	by chemical treatment
C12N 2740/16064	.....	by serial passage
C12N 2740/16071	....	Demonstrated in vivo effect
C12N 2740/16088	....	For redistribution
C12N 2740/16111	....	concerning HIV env
C12N 2740/16122	.....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2740/16134	.....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2740/16171	.....	Demonstrated in vivo effect
C12N 2740/16188	.....	For redistribution
C12N 2740/16211	....	concerning HIV gagpol
C12N 2740/16222	.....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2740/16234	.....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2740/16271	.....	Demonstrated in vivo effect
C12N 2740/16288	.....	For redistribution
C12N 2740/16311	....	concerning HIV regulatory proteins
C12N 2740/16322	.....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2740/16334	.....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2740/16371	.....	Demonstrated in vivo effect
C12N 2740/16388	.....	For redistribution
C12N 2740/17011	...	Spumavirus, e.g. chimpanzee foamy virus
C12N 2740/17021	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2740/17022	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2740/17023	....	Virus like particles [VLP]
C12N 2740/17031	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2740/17032	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2740/17033	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory

C12N 2740/17034	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2740/17041	....	Use of virus, viral particle or viral elements as a vector
C12N 2740/17042	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2740/17043	.....	viral genome or elements thereof as genetic vector
C12N 2740/17044	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2740/17045	.....	Special targeting system for viral vectors
C12N 2740/17051	....	Methods of production or purification of viral material
C12N 2740/17052	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2740/17061	....	Methods of inactivation or attenuation
C12N 2740/17062	.....	by genetic engineering
C12N 2740/17063	.....	by chemical treatment
C12N 2740/17064	.....	by serial passage
C12N 2740/17071	....	Demonstrated in vivo effect
C12N 2740/17088	....	For redistribution
C12N 2750/00		ssDNA Viruses (not used)
C12N 2750/00011	. ssDNA Viruses	
C12N 2750/00021	..	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2750/00022	..	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2750/00023	..	Virus like particles [VLP]
C12N 2750/00031	..	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2750/00032	..	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2750/00033	..	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2750/00034	..	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2750/00041	..	Use of virus, viral particle or viral elements as a vector
C12N 2750/00042	...	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2750/00043	...	viral genome or elements thereof as genetic vector
C12N 2750/00044	...	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2750/00045	...	Special targeting system for viral vectors
C12N 2750/00051	..	Methods of production or purification of viral material
C12N 2750/00052	...	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2750/00061	..	Methods of inactivation or attenuation
C12N 2750/00062	...	by genetic engineering
C12N 2750/00063	...	by chemical treatment
C12N 2750/00064	...	by serial passage

C12N 2750/00071	..	Demonstrated in vivo effect
C12N 2750/00088	..	For redistribution
C12N 2750/10011	..	Circoviridae
C12N 2750/10021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2750/10022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2750/10023	...	Virus like particles [VLP]
C12N 2750/10031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2750/10032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2750/10033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2750/10034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2750/10041	...	Use of virus, viral particle or viral elements as a vector
C12N 2750/10042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2750/10043	....	viral genome or elements thereof as genetic vector
C12N 2750/10044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2750/10045	....	Special targeting system for viral vectors
C12N 2750/10051	...	Methods of production or purification of viral material
C12N 2750/10052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2750/10061	...	Methods of inactivation or attenuation
C12N 2750/10062	....	by genetic engineering
C12N 2750/10063	....	by chemical treatment
C12N 2750/10064	....	by serial passage
C12N 2750/10071	...	Demonstrated in vivo effect
C12N 2750/10088	...	For redistribution
C12N 2750/12011	..	Geminiviridae
C12N 2750/12021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2750/12022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2750/12023	...	Virus like particles [VLP]
C12N 2750/12031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2750/12032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2750/12033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2750/12034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2750/12041	...	Use of virus, viral particle or viral elements as a vector
C12N 2750/12042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2750/12043	....	viral genome or elements thereof as genetic vector
C12N 2750/12044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2750/12045	....	Special targeting system for viral vectors

C12N 2750/12051	...	Methods of production or purification of viral material
C12N 2750/12052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2750/12061	...	Methods of inactivation or attenuation
C12N 2750/12062	....	by genetic engineering
C12N 2750/12063	....	by chemical treatment
C12N 2750/12064	....	by serial passage
C12N 2750/12071	...	Demonstrated in vivo effect
C12N 2750/12088	...	For redistribution
C12N 2750/14011	..	Parvoviridae
C12N 2750/14021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2750/14022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2750/14023	...	Virus like particles [VLP]
C12N 2750/14031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2750/14032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2750/14033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2750/14034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2750/14041	...	Use of virus, viral particle or viral elements as a vector
C12N 2750/14042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2750/14043	....	viral genome or elements thereof as genetic vector
C12N 2750/14044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2750/14045	....	Special targeting system for viral vectors
C12N 2750/14051	...	Methods of production or purification of viral material
C12N 2750/14052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2750/14061	...	Methods of inactivation or attenuation
C12N 2750/14062	....	by genetic engineering
C12N 2750/14063	....	by chemical treatment
C12N 2750/14064	....	by serial passage
C12N 2750/14071	...	Demonstrated in vivo effect
C12N 2750/14088	...	For redistribution
C12N 2750/14111	...	Dependovirus, e.g. adenoassociated viruses
C12N 2750/14121	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2750/14122	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2750/14123	....	Virus like particles [VLP]
C12N 2750/14131	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2750/14132	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2750/14133	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory

C12N 2750/14134	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2750/14141	....	Use of virus, viral particle or viral elements as a vector
C12N 2750/14142	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2750/14143	.....	viral genome or elements thereof as genetic vector
C12N 2750/14144	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2750/14145	.....	Special targeting system for viral vectors
C12N 2750/14151	....	Methods of production or purification of viral material
C12N 2750/14152	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2750/14161	....	Methods of inactivation or attenuation
C12N 2750/14162	.....	by genetic engineering
C12N 2750/14163	.....	by chemical treatment
C12N 2750/14164	.....	by serial passage
C12N 2750/14171	....	Demonstrated in vivo effect
C12N 2750/14188	....	For redistribution
C12N 2750/14211	...	Erythrovirus, e.g. B19 virus
C12N 2750/14221	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2750/14222	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2750/14223	....	Virus like particles [VLP]
C12N 2750/14231	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2750/14232	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2750/14233	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2750/14234	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2750/14241	....	Use of virus, viral particle or viral elements as a vector
C12N 2750/14242	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2750/14243	.....	viral genome or elements thereof as genetic vector
C12N 2750/14244	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2750/14245	.....	Special targeting system for viral vectors
C12N 2750/14251	....	Methods of production or purification of viral material
C12N 2750/14252	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2750/14261	....	Methods of inactivation or attenuation
C12N 2750/14262	.....	by genetic engineering
C12N 2750/14263	.....	by chemical treatment
C12N 2750/14264	.....	by serial passage
C12N 2750/14271	....	Demonstrated in vivo effect
C12N 2750/14288	....	For redistribution

C12N 2750/14311	...	Parvovirus, e.g. minute virus of mice
C12N 2750/14321	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2750/14322	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2750/14323	....	Virus like particles [VLP]
C12N 2750/14331	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2750/14332	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2750/14333	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2750/14334	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2750/14341	....	Use of virus, viral particle or viral elements as a vector
C12N 2750/14342	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2750/14343	.....	viral genome or elements thereof as genetic vector
C12N 2750/14344	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2750/14345	.....	Special targeting system for viral vectors
C12N 2750/14351	....	Methods of production or purification of viral material
C12N 2750/14352	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2750/14361	....	Methods of inactivation or attenuation
C12N 2750/14362	.....	by genetic engineering
C12N 2750/14363	.....	by chemical treatment
C12N 2750/14364	.....	by serial passage
C12N 2750/14371	....	Demonstrated in vivo effect
C12N 2750/14388	....	For redistribution

C12N 2760/00 **ssRNA Viruses negative-sense (not used)**

C12N 2760/00011	.	ssRNA Viruses negative-sense
C12N 2760/00021	..	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/00022	..	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/00023	..	Virus like particles [VLP]
C12N 2760/00031	..	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/00032	..	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/00033	..	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/00034	..	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/00041	..	Use of virus, viral particle or viral elements as a vector
C12N 2760/00042	...	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/00043	...	viral genome or elements thereof as genetic vector
C12N 2760/00044	...	Chimeric viral vector comprising heterologous viral elements for production of

		another viral vector
C12N 2760/00045	...	Special targeting system for viral vectors
C12N 2760/00051	..	Methods of production or purification of viral material
C12N 2760/00052	...	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/00061	..	Methods of inactivation or attenuation
C12N 2760/00062	...	by genetic engineering
C12N 2760/00063	...	by chemical treatment
C12N 2760/00064	...	by serial passage
C12N 2760/00071	..	Demonstrated in vivo effect
C12N 2760/00088	..	For redistribution
C12N 2760/10011	..	Arenaviridae
C12N 2760/10021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/10022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/10023	...	Virus like particles [VLP]
C12N 2760/10031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/10032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/10033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/10034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/10041	...	Use of virus, viral particle or viral elements as a vector
C12N 2760/10042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/10043	....	viral genome or elements thereof as genetic vector
C12N 2760/10044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2760/10045	....	Special targeting system for viral vectors
C12N 2760/10051	...	Methods of production or purification of viral material
C12N 2760/10052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/10061	...	Methods of inactivation or attenuation
C12N 2760/10062	....	by genetic engineering
C12N 2760/10063	....	by chemical treatment
C12N 2760/10064	....	by serial passage
C12N 2760/10071	...	Demonstrated in vivo effect
C12N 2760/10088	...	For redistribution
C12N 2760/10111	...	Deltavirus, e.g. hepatitis delta virus
C12N 2760/10121	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/10122	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/10123	....	Virus like particles [VLP]
C12N 2760/10131	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/10132	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent

C12N 2760/10133	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/10134	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/10141	....	Use of virus, viral particle or viral elements as a vector
C12N 2760/10142	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/10143	.....	viral genome or elements thereof as genetic vector
C12N 2760/10144	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2760/10145	.....	Special targeting system for viral vectors
C12N 2760/10151	....	Methods of production or purification of viral material
C12N 2760/10152	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/10161	....	Methods of inactivation or attenuation
C12N 2760/10162	.....	by genetic engineering
C12N 2760/10163	.....	by chemical treatment
C12N 2760/10164	.....	by serial passage
C12N 2760/10171	....	Demonstrated in vivo effect
C12N 2760/10188	....	For redistribution
C12N 2760/12011	..	Bunyaviridae
C12N 2760/12021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/12022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/12023	...	Virus like particles [VLP]
C12N 2760/12031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/12032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/12033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/12034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/12041	...	Use of virus, viral particle or viral elements as a vector
C12N 2760/12042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/12043	....	viral genome or elements thereof as genetic vector
C12N 2760/12044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2760/12045	....	Special targeting system for viral vectors
C12N 2760/12051	...	Methods of production or purification of viral material
C12N 2760/12052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/12061	...	Methods of inactivation or attenuation
C12N 2760/12062	....	by genetic engineering
C12N 2760/12063	....	by chemical treatment
C12N 2760/12064	....	by serial passage
C12N 2760/12071	...	Demonstrated in vivo effect

C12N 2760/12088	...	For redistribution
C12N 2760/12111	...	Hantavirus, e.g. Hantaan virus
C12N 2760/12121	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/12122	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/12123	....	Virus like particles [VLP]
C12N 2760/12131	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/12132	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/12133	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/12134	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/12141	....	Use of virus, viral particle or viral elements as a vector
C12N 2760/12142	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/12143	.....	viral genome or elements thereof as genetic vector
C12N 2760/12144	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2760/12145	.....	Special targeting system for viral vectors
C12N 2760/12151	....	Methods of production or purification of viral material
C12N 2760/12152	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/12161	....	Methods of inactivation or attenuation
C12N 2760/12162	.....	by genetic engineering
C12N 2760/12163	.....	by chemical treatment
C12N 2760/12164	.....	by serial passage
C12N 2760/12171	....	Demonstrated in vivo effect
C12N 2760/12188	....	For redistribution
C12N 2760/12211	...	Phlebovirus, e.g. Rift Valley fever virus
C12N 2760/12221	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/12222	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/12223	....	Virus like particles [VLP]
C12N 2760/12231	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/12232	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/12233	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/12234	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/12241	....	Use of virus, viral particle or viral elements as a vector
C12N 2760/12242	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/12243	.....	viral genome or elements thereof as genetic vector
C12N 2760/12244	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector

C12N 2760/12245	.....	Special targeting system for viral vectors
C12N 2760/12251	....	Methods of production or purification of viral material
C12N 2760/12252	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/12261	....	Methods of inactivation or attenuation
C12N 2760/12262	.....	by genetic engineering
C12N 2760/12263	.....	by chemical treatment
C12N 2760/12264	.....	by serial passage
C12N 2760/12271	....	Demonstrated in vivo effect
C12N 2760/12288	....	For redistribution
C12N 2760/14011	..	Filoviridae
C12N 2760/14021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/14022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/14023	...	Virus like particles [VLP]
C12N 2760/14031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/14032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/14033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/14034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/14041	...	Use of virus, viral particle or viral elements as a vector
C12N 2760/14042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/14043	....	viral genome or elements thereof as genetic vector
C12N 2760/14044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2760/14045	....	Special targeting system for viral vectors
C12N 2760/14051	...	Methods of production or purification of viral material
C12N 2760/14052	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/14061	...	Methods of inactivation or attenuation
C12N 2760/14062	....	by genetic engineering
C12N 2760/14063	....	by chemical treatment
C12N 2760/14064	....	by serial passage
C12N 2760/14071	...	Demonstrated in vivo effect
C12N 2760/14088	...	For redistribution
C12N 2760/14111	...	Ebolavirus, e.g. Zaire ebolavirus
C12N 2760/14121	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/14122	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/14123	....	Virus like particles [VLP]
C12N 2760/14131	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/14132	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/14133	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis

		inducing or anti-inflammatory
C12N 2760/14134	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/14141	....	Use of virus, viral particle or viral elements as a vector
C12N 2760/14142	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/14143	.....	viral genome or elements thereof as genetic vector
C12N 2760/14144	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2760/14145	.....	Special targeting system for viral vectors
C12N 2760/14151	....	Methods of production or purification of viral material
C12N 2760/14152	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/14161	....	Methods of inactivation or attenuation
C12N 2760/14162	.....	by genetic engineering
C12N 2760/14163	.....	by chemical treatment
C12N 2760/14164	.....	by serial passage
C12N 2760/14171	....	Demonstrated in vivo effect
C12N 2760/14188	....	For redistribution
C12N 2760/14211	...	Marburgvirus, e.g. lake Victoria marburgvirus
C12N 2760/14221	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/14222	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/14223	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/14231	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/14232	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/14233	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/14234	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/14241	....	Use of virus, viral particle or viral elements as a vector
C12N 2760/14242	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/14243	.....	viral genome or elements thereof as genetic vector
C12N 2760/14244	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2760/14245	.....	Special targeting system for viral vectors
C12N 2760/14251	....	Methods of production or purification of viral material
C12N 2760/14252	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/14261	....	Methods of inactivation or attenuation
C12N 2760/14262	.....	by genetic engineering
C12N 2760/14263	.....	by chemical treatment
C12N 2760/14264	.....	by serial passage
C12N 2760/14271	....	Demonstrated in vivo effect

C12N 2760/14288	....	For redistribution
C12N 2760/16011	..	Orthomyxoviridae
C12N 2760/16021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/16022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/16023	...	Virus like particles [VLP]
C12N 2760/16031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/16032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/16033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/16034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/16041	...	Use of virus, viral particle or viral elements as a vector
C12N 2760/16042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/16043	....	viral genome or elements thereof as genetic vector
C12N 2760/16044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2760/16045	....	Special targeting system for viral vectors
C12N 2760/16051	...	Methods of production or purification of viral material
C12N 2760/16052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/16061	...	Methods of inactivation or attenuation
C12N 2760/16062	....	by genetic engineering
C12N 2760/16063	....	by chemical treatment
C12N 2760/16064	....	by serial passage
C12N 2760/16071	...	Demonstrated in vivo effect
C12N 2760/16088	...	For redistribution
C12N 2760/16111	...	Influenzavirus A, i.e. influenza A virus
C12N 2760/16121	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/16122	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/16123	....	Virus like particles [VLP]
C12N 2760/16131	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/16132	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/16133	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/16134	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/16141	....	Use of virus, viral particle or viral elements as a vector
C12N 2760/16142	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/16143	.....	viral genome or elements thereof as genetic vector
C12N 2760/16144	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2760/16145	.....	Special targeting system for viral vectors

C12N 2760/16151	....	Methods of production or purification of viral material
C12N 2760/16152	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/16161	....	Methods of inactivation or attenuation
C12N 2760/16162	.....	by genetic engineering
C12N 2760/16163	.....	by chemical treatment
C12N 2760/16164	.....	by serial passage
C12N 2760/16171	....	Demonstrated in vivo effect
C12N 2760/16188	....	For redistribution
C12N 2760/16211	...	Influenzavirus B, i.e. influenza B virus
C12N 2760/16221	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/16222	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/16223	....	Virus like particles [VLP]
C12N 2760/16231	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/16232	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/16233	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/16234	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/16241	....	Use of virus, viral particle or viral elements as a vector
C12N 2760/16242	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/16243	.....	viral genome or elements thereof as genetic vector
C12N 2760/16244	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2760/16245	.....	Special targeting system for viral vectors
C12N 2760/16251	....	Methods of production or purification of viral material
C12N 2760/16252	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/16261	....	Methods of inactivation or attenuation
C12N 2760/16262	.....	by genetic engineering
C12N 2760/16263	.....	by chemical treatment
C12N 2760/16264	.....	by serial passage
C12N 2760/16271	....	Demonstrated in vivo effect
C12N 2760/16288	....	For redistribution
C12N 2760/16311	...	Influenzavirus C, i.e. influenza C virus
C12N 2760/16321	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/16322	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/16323	....	Virus like particles [VLP]
C12N 2760/16331	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/16332	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/16333	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory

C12N 2760/16334	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/16341	....	Use of virus, viral particle or viral elements as a vector
C12N 2760/16342	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/16343	.....	viral genome or elements thereof as genetic vector
C12N 2760/16344	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2760/16345	.....	Special targeting system for viral vectors
C12N 2760/16351	....	Methods of production or purification of viral material
C12N 2760/16352	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/16361	....	Methods of inactivation or attenuation
C12N 2760/16362	.....	by genetic engineering
C12N 2760/16363	.....	by chemical treatment
C12N 2760/16364	.....	by serial passage
C12N 2760/16371	....	Demonstrated in vivo effect
C12N 2760/16388	....	For redistribution
C12N 2760/18011	..	Paramyxoviridae
C12N 2760/18021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/18022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/18023	...	Virus like particles [VLP]
C12N 2760/18031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/18032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/18033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/18034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/18041	...	Use of virus, viral particle or viral elements as a vector
C12N 2760/18042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/18043	....	viral genome or elements thereof as genetic vector
C12N 2760/18044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2760/18045	....	Special targeting system for viral vectors
C12N 2760/18051	...	Methods of production or purification of viral material
C12N 2760/18052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/18061	...	Methods of inactivation or attenuation
C12N 2760/18062	....	by genetic engineering
C12N 2760/18063	....	by chemical treatment
C12N 2760/18064	....	by serial passage
C12N 2760/18071	...	Demonstrated in vivo effect
C12N 2760/18088	...	For redistribution
C12N 2760/18111	...	Avulavirus, e.g. Newcastle disease virus

C12N 2760/18121	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/18122	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/18123	....	Virus like particles [VLP]
C12N 2760/18131	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/18132	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/18133	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/18134	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/18141	....	Use of virus, viral particle or viral elements as a vector
C12N 2760/18142	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/18143	.....	viral genome or elements thereof as genetic vector
C12N 2760/18144	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2760/18145	.....	Special targeting system for viral vectors
C12N 2760/18151	....	Methods of production or purification of viral material
C12N 2760/18152	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/18161	....	Methods of inactivation or attenuation
C12N 2760/18162	.....	by genetic engineering
C12N 2760/18163	.....	by chemical treatment
C12N 2760/18164	.....	by serial passage
C12N 2760/18171	....	Demonstrated in vivo effect
C12N 2760/18188	....	For redistribution
C12N 2760/18211	...	Henipavirus, e.g. hendra virus
C12N 2760/18221	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/18222	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/18223	....	Virus like particles [VLP]
C12N 2760/18231	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/18232	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/18233	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/18234	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/18241	....	Use of virus, viral particle or viral elements as a vector
C12N 2760/18242	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/18243	.....	viral genome or elements thereof as genetic vector
C12N 2760/18244	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2760/18245	.....	Special targeting system for viral vectors
C12N 2760/18251	....	Methods of production or purification of viral material

C12N 2760/18252	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/18261	....	Methods of inactivation or attenuation
C12N 2760/18262	.....	by genetic engineering
C12N 2760/18263	.....	by chemical treatment
C12N 2760/18264	.....	by serial passage
C12N 2760/18271	....	Demonstrated in vivo effect
C12N 2760/18288	....	For redistribution
C12N 2760/18311	...	Metapneumovirus, e.g. avian pneumovirus
C12N 2760/18321	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/18322	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/18323	....	Virus like particles [VLP]
C12N 2760/18331	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/18332	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/18333	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/18334	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/18341	....	Use of virus, viral particle or viral elements as a vector
C12N 2760/18342	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/18343	.....	viral genome or elements thereof as genetic vector
C12N 2760/18344	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2760/18345	.....	Special targeting system for viral vectors
C12N 2760/18351	....	Methods of production or purification of viral material
C12N 2760/18352	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/18361	....	Methods of inactivation or attenuation
C12N 2760/18362	.....	by genetic engineering
C12N 2760/18363	.....	by chemical treatment
C12N 2760/18364	.....	by serial passage
C12N 2760/18371	....	Demonstrated in vivo effect
C12N 2760/18388	....	For redistribution
C12N 2760/18411	...	Morbillivirus, e.g. Measles virus, canine distemper
C12N 2760/18421	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/18422	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/18423	....	Virus like particles [VLP]
C12N 2760/18431	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/18432	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/18433	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/18434	....	Use of virus or viral component as vaccine, e.g. live-attenuated or

		inactivated virus, VLP, viral protein
C12N 2760/18441	....	Use of virus, viral particle or viral elements as a vector
C12N 2760/18442	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/18443	.....	viral genome or elements thereof as genetic vector
C12N 2760/18444	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2760/18445	.....	Special targeting system for viral vectors
C12N 2760/18451	....	Methods of production or purification of viral material
C12N 2760/18452	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/18461	....	Methods of inactivation or attenuation
C12N 2760/18462	.....	by genetic engineering
C12N 2760/18463	.....	by chemical treatment
C12N 2760/18464	.....	by serial passage
C12N 2760/18471	....	Demonstrated in vivo effect
C12N 2760/18488	....	For redistribution
C12N 2760/18511	...	Pneumovirus, e.g. human respiratory syncytial virus
C12N 2760/18521	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/18522	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/18523	....	Virus like particles [VLP]
C12N 2760/18531	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/18532	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/18533	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/18534	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/18541	....	Use of virus, viral particle or viral elements as a vector
C12N 2760/18542	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/18543	.....	viral genome or elements thereof as genetic vector
C12N 2760/18544	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2760/18545	.....	Special targeting system for viral vectors
C12N 2760/18551	....	Methods of production or purification of viral material
C12N 2760/18552	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/18561	....	Methods of inactivation or attenuation
C12N 2760/18562	.....	by genetic engineering
C12N 2760/18563	.....	by chemical treatment
C12N 2760/18564	.....	by serial passage
C12N 2760/18571	....	Demonstrated in vivo effect
C12N 2760/18588	....	For redistribution
C12N 2760/18611	...	Respirovirus, e.g. Bovine, human parainfluenza 1,3

C12N 2760/18621	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/18622	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/18623	....	Virus like particles [VLP]
C12N 2760/18631	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/18632	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/18633	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/18634	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/18641	....	Use of virus, viral particle or viral elements as a vector
C12N 2760/18642	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/18643	.....	viral genome or elements thereof as genetic vector
C12N 2760/18644	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2760/18645	.....	Special targeting system for viral vectors
C12N 2760/18651	....	Methods of production or purification of viral material
C12N 2760/18652	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/18661	....	Methods of inactivation or attenuation
C12N 2760/18662	.....	by genetic engineering
C12N 2760/18663	.....	by chemical treatment
C12N 2760/18664	.....	by serial passage
C12N 2760/18671	....	Demonstrated in vivo effect
C12N 2760/18688	....	For redistribution
C12N 2760/18711	...	Rubulavirus, e.g. mumps virus, parainfluenza 2,4
C12N 2760/18721	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/18722	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/18723	....	Virus like particles [VLP]
C12N 2760/18731	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/18732	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/18733	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/18734	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/18741	....	Use of virus, viral particle or viral elements as a vector
C12N 2760/18742	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/18743	.....	viral genome or elements thereof as genetic vector
C12N 2760/18744	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2760/18745	.....	Special targeting system for viral vectors
C12N 2760/18751	....	Methods of production or purification of viral material

C12N 2760/18752	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/18761	....	Methods of inactivation or attenuation
C12N 2760/18762	.....	by genetic engineering
C12N 2760/18763	.....	by chemical treatment
C12N 2760/18764	.....	by serial passage
C12N 2760/18771	....	Demonstrated in vivo effect
C12N 2760/18788	....	For redistribution
C12N 2760/18811	...	Sendai virus
C12N 2760/18821	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/18822	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/18823	....	Virus like particles [VLP]
C12N 2760/18831	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/18832	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/18833	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/18834	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/18841	....	Use of virus, viral particle or viral elements as a vector
C12N 2760/18842	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/18843	.....	viral genome or elements thereof as genetic vector
C12N 2760/18845	.....	Special targeting system for viral vectors
C12N 2760/18851	....	Methods of production or purification of viral material
C12N 2760/18852	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/18861	....	Methods of inactivation or attenuation
C12N 2760/18862	.....	by genetic engineering
C12N 2760/18863	.....	by chemical treatment
C12N 2760/18864	.....	by serial passage
C12N 2760/18871	....	Demonstrated in vivo effect
C12N 2760/18888	....	For redistribution
C12N 2760/20011	..	Rhabdoviridae
C12N 2760/20021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/20022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/20023	...	Virus like particles [VLP]
C12N 2760/20031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/20032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/20033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/20034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/20041	...	Use of virus, viral particle or viral elements as a vector

C12N 2760/20042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/20043	....	viral genome or elements thereof as genetic vector
C12N 2760/20044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2760/20045	....	Special targeting system for viral vectors
C12N 2760/20051	...	Methods of production or purification of viral material
C12N 2760/20052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/20061	...	Methods of inactivation or attenuation
C12N 2760/20062	....	by genetic engineering
C12N 2760/20063	....	by chemical treatment
C12N 2760/20064	....	by serial passage
C12N 2760/20071	...	Demonstrated in vivo effect
C12N 2760/20088	...	For redistribution
C12N 2760/20111	...	Lyssavirus, e.g. rabies virus
C12N 2760/20121	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/20122	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2760/20123	....	Virus like particles [VLP]
C12N 2760/20131	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/20132	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/20133	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/20134	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/20141	....	Use of virus, viral particle or viral elements as a vector
C12N 2760/20142	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/20143	.....	viral genome or elements thereof as genetic vector
C12N 2760/20144	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2760/20145	.....	Special targeting system for viral vectors
C12N 2760/20151	....	Methods of production or purification of viral material
C12N 2760/20152	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/20161	....	Methods of inactivation or attenuation
C12N 2760/20162	.....	by genetic engineering
C12N 2760/20163	.....	by chemical treatment
C12N 2760/20164	.....	by serial passage
C12N 2760/20171	....	Demonstrated in vivo effect
C12N 2760/20188	....	For redistribution
C12N 2760/20211	...	Vesiculovirus, e.g. vesicular stomatitis Indiana virus
C12N 2760/20221	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2760/20222	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes

C12N 2760/20223	....	Virus like particles [VLP]
C12N 2760/20231	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2760/20232	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2760/20233	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2760/20234	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2760/20241	....	Use of virus, viral particle or viral elements as a vector
C12N 2760/20242	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2760/20243	.....	viral genome or elements thereof as genetic vector
C12N 2760/20244	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2760/20245	.....	Special targeting system for viral vectors
C12N 2760/20251	....	Methods of production or purification of viral material
C12N 2760/20252	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2760/20261	....	Methods of inactivation or attenuation
C12N 2760/20262	.....	by genetic engineering
C12N 2760/20263	.....	by chemical treatment
C12N 2760/20264	.....	by serial passage
C12N 2760/20271	....	Demonstrated in vivo effect
C12N 2760/20288	....	For redistribution

C12N 2770/00 **ssRNA Viruses positive-sense (not used)**

C12N 2770/00011	.	ssRNA Viruses positive-sense
C12N 2770/00021	..	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/00022	..	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/00023	..	Virus like particles [VLP]
C12N 2770/00031	..	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/00032	..	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/00033	..	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/00034	..	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/00041	..	Use of virus, viral particle or viral elements as a vector
C12N 2770/00042	...	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/00043	...	viral genome or elements thereof as genetic vector
C12N 2770/00044	...	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/00045	...	Special targeting system for viral vectors
C12N 2770/00051	..	Methods of production or purification of viral material
C12N 2770/00052	...	relating to complementing cells and packaging systems for producing virus or

		viral particles
C12N 2770/00061	..	Methods of inactivation or attenuation
C12N 2770/00062	...	by genetic engineering
C12N 2770/00063	...	by chemical treatment
C12N 2770/00064	...	by serial passage
C12N 2770/00071	..	Demonstrated in vivo effect
C12N 2770/00088	..	For redistribution
C12N 2770/10011	..	Arteriviridae
C12N 2770/10021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/10022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/10023	...	Virus like particles [VLP]
C12N 2770/10031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/10032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/10033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/10034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/10041	...	Use of virus, viral particle or viral elements as a vector
C12N 2770/10042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/10043	....	viral genome or elements thereof as genetic vector
C12N 2770/10044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/10045	....	Special targeting system for viral vectors
C12N 2770/10051	...	Methods of production or purification of viral material
C12N 2770/10052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/10061	...	Methods of inactivation or attenuation
C12N 2770/10062	....	by genetic engineering
C12N 2770/10063	....	by chemical treatment
C12N 2770/10064	....	by serial passage
C12N 2770/10071	...	Demonstrated in vivo effect
C12N 2770/10088	...	For redistribution
C12N 2770/12011	..	Astroviridae
C12N 2770/12021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/12022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/12023	...	Virus like particles [VLP]
C12N 2770/12031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/12032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/12033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/12034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein

C12N 2770/12041	...	Use of virus, viral particle or viral elements as a vector
C12N 2770/12042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/12043	....	viral genome or elements thereof as genetic vector
C12N 2770/12044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/12045	....	Special targeting system for viral vectors
C12N 2770/12051	...	Methods of production or purification of viral material
C12N 2770/12052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/12061	...	Methods of inactivation or attenuation
C12N 2770/12062	....	by genetic engineering
C12N 2770/12063	....	by chemical treatment
C12N 2770/12064	....	by serial passage
C12N 2770/12071	...	Demonstrated in vivo effect
C12N 2770/12088	...	For redistribution
C12N 2770/14011	..	Bromoviridae
C12N 2770/14021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/14022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/14023	...	Virus like particles [VLP]
C12N 2770/14031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/14032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/14033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/14034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/14041	...	Use of virus, viral particle or viral elements as a vector
C12N 2770/14042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/14043	....	viral genome or elements thereof as genetic vector
C12N 2770/14044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/14045	....	Special targeting system for viral vectors
C12N 2770/14051	...	Methods of production or purification of viral material
C12N 2770/14052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/14061	...	Methods of inactivation or attenuation
C12N 2770/14062	....	by genetic engineering
C12N 2770/14063	....	by chemical treatment
C12N 2770/14064	....	by serial passage
C12N 2770/14071	...	Demonstrated in vivo effect
C12N 2770/14088	...	For redistribution
C12N 2770/16011	..	Caliciviridae
C12N 2770/16021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/16022	...	New viral proteins or individual genes, new structural or functional aspects of

		known viral proteins or genes
C12N 2770/16023	...	Virus like particles [VLP]
C12N 2770/16031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/16032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/16033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/16034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/16041	...	Use of virus, viral particle or viral elements as a vector
C12N 2770/16042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/16043	....	viral genome or elements thereof as genetic vector
C12N 2770/16044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/16045	....	Special targeting system for viral vectors
C12N 2770/16051	...	Methods of production or purification of viral material
C12N 2770/16052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/16061	...	Methods of inactivation or attenuation
C12N 2770/16062	....	by genetic engineering
C12N 2770/16063	....	by chemical treatment
C12N 2770/16064	....	by serial passage
C12N 2770/16071	...	Demonstrated in vivo effect
C12N 2770/16088	...	For redistribution
C12N 2770/18011	..	Comoviridae
C12N 2770/18021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/18022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/18023	...	Virus like particles [VLP]
C12N 2770/18031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/18032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/18033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/18034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/18041	...	Use of virus, viral particle or viral elements as a vector
C12N 2770/18042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/18043	....	viral genome or elements thereof as genetic vector
C12N 2770/18044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/18045	....	Special targeting system for viral vectors
C12N 2770/18051	...	Methods of production or purification of viral material
C12N 2770/18052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/18061	...	Methods of inactivation or attenuation
C12N 2770/18062	....	by genetic engineering

C12N 2770/18063	....	by chemical treatment
C12N 2770/18064	....	by serial passage
C12N 2770/18071	...	Demonstrated in vivo effect
C12N 2770/18088	...	For redistribution
C12N 2770/20011	..	Coronaviridae
C12N 2770/20021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/20022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/20023	...	Virus like particles [VLP]
C12N 2770/20031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/20032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/20033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/20034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/20041	...	Use of virus, viral particle or viral elements as a vector
C12N 2770/20042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/20043	....	viral genome or elements thereof as genetic vector
C12N 2770/20044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/20045	....	Special targeting system for viral vectors
C12N 2770/20051	...	Methods of production or purification of viral material
C12N 2770/20052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/20061	...	Methods of inactivation or attenuation
C12N 2770/20062	....	by genetic engineering
C12N 2770/20063	....	by chemical treatment
C12N 2770/20064	....	by serial passage
C12N 2770/20071	...	Demonstrated in vivo effect
C12N 2770/20088	...	For redistribution
C12N 2770/22011	..	Dicistroviridae
C12N 2770/22021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/22022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/22023	...	Virus like particles [VLP]
C12N 2770/22031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/22032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/22033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/22034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/22041	...	Use of virus, viral particle or viral elements as a vector
C12N 2770/22042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/22043	....	viral genome or elements thereof as genetic vector

C12N 2770/22044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/22045	....	Special targeting system for viral vectors
C12N 2770/22051	...	Methods of production or purification of viral material
C12N 2770/22052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/22061	...	Methods of inactivation or attenuation
C12N 2770/22062	....	by genetic engineering
C12N 2770/22063	....	by chemical treatment
C12N 2770/22064	....	by serial passage
C12N 2770/22071	...	Demonstrated in vivo effect
C12N 2770/22088	...	For redistribution
C12N 2770/24011	..	Flaviviridae
C12N 2770/24021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/24022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/24023	...	Virus like particles [VLP]
C12N 2770/24031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/24032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/24033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/24034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/24041	...	Use of virus, viral particle or viral elements as a vector
C12N 2770/24042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/24043	....	viral genome or elements thereof as genetic vector
C12N 2770/24044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/24045	....	Special targeting system for viral vectors
C12N 2770/24051	...	Methods of production or purification of viral material
C12N 2770/24052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/24061	...	Methods of inactivation or attenuation
C12N 2770/24062	....	by genetic engineering
C12N 2770/24063	....	by chemical treatment
C12N 2770/24064	....	by serial passage
C12N 2770/24071	...	Demonstrated in vivo effect
C12N 2770/24088	...	For redistribution
C12N 2770/24111	...	Flavivirus, e.g. yellow fever virus, dengue, JEV
C12N 2770/24121	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/24122	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/24123	....	Virus like particles [VLP]
C12N 2770/24131	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant

C12N 2770/24132	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/24133	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/24134	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/24141	....	Use of virus, viral particle or viral elements as a vector
C12N 2770/24142	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/24143	.....	viral genome or elements thereof as genetic vector
C12N 2770/24144	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/24145	.....	Special targeting system for viral vectors
C12N 2770/24151	....	Methods of production or purification of viral material
C12N 2770/24152	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/24161	....	Methods of inactivation or attenuation
C12N 2770/24162	.....	by genetic engineering
C12N 2770/24163	.....	by chemical treatment
C12N 2770/24164	.....	by serial passage
C12N 2770/24171	....	Demonstrated in vivo effect
C12N 2770/24188	....	For redistribution
C12N 2770/24211	...	Hepacivirus, e.g. hepatitis C virus, hepatitis G virus
C12N 2770/24221	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/24222	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/24223	....	Virus like particles [VLP]
C12N 2770/24231	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/24232	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/24233	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/24234	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/24241	....	Use of virus, viral particle or viral elements as a vector
C12N 2770/24242	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/24243	.....	viral genome or elements thereof as genetic vector
C12N 2770/24244	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/24245	.....	Special targeting system for viral vectors
C12N 2770/24251	....	Methods of production or purification of viral material
C12N 2770/24252	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/24261	....	Methods of inactivation or attenuation
C12N 2770/24262	.....	by genetic engineering
C12N 2770/24263	.....	by chemical treatment

C12N 2770/24264	.....	by serial passage
C12N 2770/24271	....	Demonstrated in vivo effect
C12N 2770/24288	....	For redistribution
C12N 2770/24311	...	Pestivirus, e.g. bovine viral diarrhea virus
C12N 2770/24321	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/24322	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/24323	....	Virus like particles [VLP]
C12N 2770/24331	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/24332	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/24333	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/24334	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/24341	....	Use of virus, viral particle or viral elements as a vector
C12N 2770/24342	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/24343	.....	viral genome or elements thereof as genetic vector
C12N 2770/24344	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/24345	.....	Special targeting system for viral vectors
C12N 2770/24351	....	Methods of production or purification of viral material
C12N 2770/24352	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/24361	....	Methods of inactivation or attenuation
C12N 2770/24362	.....	by genetic engineering
C12N 2770/24363	.....	by chemical treatment
C12N 2770/24364	.....	by serial passage
C12N 2770/24371	....	Demonstrated in vivo effect
C12N 2770/24388	....	For redistribution
C12N 2770/26011	..	Flexiviridae
C12N 2770/26021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/26022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/26023	...	Virus like particles [VLP]
C12N 2770/26031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/26032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/26033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/26034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/26041	...	Use of virus, viral particle or viral elements as a vector
C12N 2770/26042	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/26043	.....	viral genome or elements thereof as genetic vector
C12N 2770/26044	.....	Chimeric viral vector comprising heterologous viral elements for production

		of another viral vector
C12N 2770/26045	....	Special targeting system for viral vectors
C12N 2770/26051	...	Methods of production or purification of viral material
C12N 2770/26052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/26061	...	Methods of inactivation or attenuation
C12N 2770/26062	....	by genetic engineering
C12N 2770/26063	....	by chemical treatment
C12N 2770/26064	....	by serial passage
C12N 2770/26071	...	Demonstrated in vivo effect
C12N 2770/26088	...	For redistribution
C12N 2770/28011	..	Hepeviridae
C12N 2770/28021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/28022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/28023	...	Virus like particles [VLP]
C12N 2770/28031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/28032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/28033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/28034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/28041	...	Use of virus, viral particle or viral elements as a vector
C12N 2770/28042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/28043	....	viral genome or elements thereof as genetic vector
C12N 2770/28044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/28045	....	Special targeting system for viral vectors
C12N 2770/28051	...	Methods of production or purification of viral material
C12N 2770/28052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/28061	...	Methods of inactivation or attenuation
C12N 2770/28062	....	by genetic engineering
C12N 2770/28063	....	by chemical treatment
C12N 2770/28064	....	by serial passage
C12N 2770/28071	...	Demonstrated in vivo effect
C12N 2770/28088	...	For redistribution
C12N 2770/28111	...	Hepevirus, e.g. hepatitis E virus
C12N 2770/28121	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/28122	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/28123	....	Virus like particles [VLP]
C12N 2770/28131	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/28132	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent

C12N 2770/28133	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/28134	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/28141	....	Use of virus, viral particle or viral elements as a vector
C12N 2770/28142	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/28143	.....	viral genome or elements thereof as genetic vector
C12N 2770/28144	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/28145	.....	Special targeting system for viral vectors
C12N 2770/28151	....	Methods of production or purification of viral material
C12N 2770/28152	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/28161	....	Methods of inactivation or attenuation
C12N 2770/28162	.....	by genetic engineering
C12N 2770/28163	.....	by chemical treatment
C12N 2770/28164	.....	by serial passage
C12N 2770/28171	....	Demonstrated in vivo effect
C12N 2770/28188	....	For redistribution
C12N 2770/30011	..	Nodaviridae
C12N 2770/30021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/30022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/30023	...	Virus like particles [VLP]
C12N 2770/30031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/30032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/30033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/30034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/30041	...	Use of virus, viral particle or viral elements as a vector
C12N 2770/30042	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/30043	.....	viral genome or elements thereof as genetic vector
C12N 2770/30044	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/30045	....	Special targeting system for viral vectors
C12N 2770/30051	...	Methods of production or purification of viral material
C12N 2770/30052	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/30061	...	Methods of inactivation or attenuation
C12N 2770/30062	.....	by genetic engineering
C12N 2770/30063	.....	by chemical treatment
C12N 2770/30064	.....	by serial passage
C12N 2770/30071	...	Demonstrated in vivo effect

C12N 2770/30088	...	For redistribution
C12N 2770/32011	..	Picornaviridae
C12N 2770/32021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/32022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/32023	...	Virus like particles [VLP]
C12N 2770/32031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/32032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/32033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/32034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/32041	...	Use of virus, viral particle or viral elements as a vector
C12N 2770/32042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/32043	....	viral genome or elements thereof as genetic vector
C12N 2770/32044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/32045	....	Special targeting system for viral vectors
C12N 2770/32051	...	Methods of production or purification of viral material
C12N 2770/32052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/32061	...	Methods of inactivation or attenuation
C12N 2770/32062	....	by genetic engineering
C12N 2770/32063	....	by chemical treatment
C12N 2770/32064	....	by serial passage
C12N 2770/32071	...	Demonstrated in vivo effect
C12N 2770/32088	...	For redistribution
C12N 2770/32111	...	Aphthovirus, e.g. footandmouth disease virus
C12N 2770/32121	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/32122	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/32123	....	Virus like particles [VLP]
C12N 2770/32131	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/32132	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/32133	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/32134	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/32141	....	Use of virus, viral particle or viral elements as a vector
C12N 2770/32142	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/32143	.....	viral genome or elements thereof as genetic vector
C12N 2770/32144	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/32145	.....	Special targeting system for viral vectors

C12N 2770/32151	....	Methods of production or purification of viral material
C12N 2770/32152	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/32161	....	Methods of inactivation or attenuation
C12N 2770/32162	.....	by genetic engineering
C12N 2770/32163	.....	by chemical treatment
C12N 2770/32164	.....	by serial passage
C12N 2770/32171	....	Demonstrated in vivo effect
C12N 2770/32188	....	For redistribution
C12N 2770/32211	...	Cardiovirus, e.g. encephalomyocarditis virus
C12N 2770/32221	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/32222	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/32223	....	Virus like particles [VLP]
C12N 2770/32231	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/32232	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/32233	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/32234	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/32241	....	Use of virus, viral particle or viral elements as a vector
C12N 2770/32242	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/32243	.....	viral genome or elements thereof as genetic vector
C12N 2770/32244	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/32245	.....	Special targeting system for viral vectors
C12N 2770/32251	....	Methods of production or purification of viral material
C12N 2770/32252	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/32261	....	Methods of inactivation or attenuation
C12N 2770/32262	.....	by genetic engineering
C12N 2770/32263	.....	by chemical treatment
C12N 2770/32264	.....	by serial passage
C12N 2770/32271	....	Demonstrated in vivo effect
C12N 2770/32288	....	For redistribution
C12N 2770/32311	...	Enterovirus
C12N 2770/32321	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/32322	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/32323	....	Virus like particles [VLP]
C12N 2770/32331	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/32332	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/32333	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory

C12N 2770/32334	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/32341	....	Use of virus, viral particle or viral elements as a vector
C12N 2770/32342	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/32343	.....	viral genome or elements thereof as genetic vector
C12N 2770/32344	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/32345	.....	Special targeting system for viral vectors
C12N 2770/32351	....	Methods of production or purification of viral material
C12N 2770/32352	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/32361	....	Methods of inactivation or attenuation
C12N 2770/32362	.....	by genetic engineering
C12N 2770/32363	.....	by chemical treatment
C12N 2770/32364	.....	by serial passage
C12N 2770/32371	....	Demonstrated in vivo effect
C12N 2770/32388	....	For redistribution
C12N 2770/32411	...	Hepatovirus, i.e. hepatitis A virus
C12N 2770/32421	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/32422	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/32423	....	Virus like particles [VLP]
C12N 2770/32431	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/32432	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/32433	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/32434	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/32441	....	Use of virus, viral particle or viral elements as a vector
C12N 2770/32442	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/32443	.....	viral genome or elements thereof as genetic vector
C12N 2770/32444	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/32445	.....	Special targeting system for viral vectors
C12N 2770/32451	....	Methods of production or purification of viral material
C12N 2770/32452	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/32461	....	Methods of inactivation or attenuation
C12N 2770/32462	.....	by genetic engineering
C12N 2770/32463	.....	by chemical treatment
C12N 2770/32464	.....	by serial passage
C12N 2770/32471	....	Demonstrated in vivo effect
C12N 2770/32488	....	For redistribution

C12N 2770/32511	...	Parechovirus, e.g. human parechovirus
C12N 2770/32521	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/32522	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/32523	....	Virus like particles [VLP]
C12N 2770/32531	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/32532	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/32533	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/32534	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/32541	....	Use of virus, viral particle or viral elements as a vector
C12N 2770/32542	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/32543	.....	viral genome or elements thereof as genetic vector
C12N 2770/32544	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/32545	.....	Special targeting system for viral vectors
C12N 2770/32551	....	Methods of production or purification of viral material
C12N 2770/32552	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/32561	....	Methods of inactivation or attenuation
C12N 2770/32562	.....	by genetic engineering
C12N 2770/32563	.....	by chemical treatment
C12N 2770/32564	.....	by serial passage
C12N 2770/32571	....	Demonstrated in vivo effect
C12N 2770/32588	....	For redistribution
C12N 2770/32611	...	Poliovirus
C12N 2770/32621	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/32622	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/32623	....	Virus like particles [VLP]
C12N 2770/32631	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/32632	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/32633	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/32634	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/32641	....	Use of virus, viral particle or viral elements as a vector
C12N 2770/32642	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/32643	.....	viral genome or elements thereof as genetic vector
C12N 2770/32644	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/32645	.....	Special targeting system for viral vectors

C12N 2770/32651	....	Methods of production or purification of viral material
C12N 2770/32652	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/32661	....	Methods of inactivation or attenuation
C12N 2770/32662	.....	by genetic engineering
C12N 2770/32663	.....	by chemical treatment
C12N 2770/32664	.....	by serial passage
C12N 2770/32671	....	Demonstrated in vivo effect
C12N 2770/32688	....	For redistribution
C12N 2770/32711	...	Rhinovirus
C12N 2770/32721	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/32722	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/32723	....	Virus like particles [VLP]
C12N 2770/32731	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/32732	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/32733	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/32734	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/32741	....	Use of virus, viral particle or viral elements as a vector
C12N 2770/32742	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/32743	.....	viral genome or elements thereof as genetic vector
C12N 2770/32744	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/32745	.....	Special targeting system for viral vectors
C12N 2770/32751	....	Methods of production or purification of viral material
C12N 2770/32752	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/32761	....	Methods of inactivation or attenuation
C12N 2770/32762	.....	by genetic engineering
C12N 2770/32763	.....	by chemical treatment
C12N 2770/32764	.....	by serial passage
C12N 2770/32771	....	Demonstrated in vivo effect
C12N 2770/32788	....	For redistribution
C12N 2770/34011	..	Potyviridae
C12N 2770/34021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/34022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/34023	...	Virus like particles [VLP]
C12N 2770/34031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/34032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/34033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory

C12N 2770/34034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/34041	...	Use of virus, viral particle or viral elements as a vector
C12N 2770/34042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/34043	....	viral genome or elements thereof as genetic vector
C12N 2770/34044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/34045	....	Special targeting system for viral vectors
C12N 2770/34051	...	Methods of production or purification of viral material
C12N 2770/34052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/34061	...	Methods of inactivation or attenuation
C12N 2770/34062	....	by genetic engineering
C12N 2770/34063	....	by chemical treatment
C12N 2770/34064	....	by serial passage
C12N 2770/34071	...	Demonstrated in vivo effect
C12N 2770/34088	...	For redistribution
C12N 2770/36011	..	Togaviridae
C12N 2770/36021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/36022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/36023	...	Virus like particles [VLP]
C12N 2770/36031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/36032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/36033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/36034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/36041	...	Use of virus, viral particle or viral elements as a vector
C12N 2770/36042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/36043	....	viral genome or elements thereof as genetic vector
C12N 2770/36044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/36045	....	Special targeting system for viral vectors
C12N 2770/36051	...	Methods of production or purification of viral material
C12N 2770/36052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/36061	...	Methods of inactivation or attenuation
C12N 2770/36062	....	by genetic engineering
C12N 2770/36063	....	by chemical treatment
C12N 2770/36064	....	by serial passage
C12N 2770/36071	...	Demonstrated in vivo effect
C12N 2770/36088	...	For redistribution
C12N 2770/36111	...	Alphavirus, e.g. Sindbis virus, VEE, EEE, WEE, Semliki

C12N 2770/36121	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/36122	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/36123	....	Virus like particles [VLP]
C12N 2770/36131	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/36132	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/36133	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/36134	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/36141	....	Use of virus, viral particle or viral elements as a vector
C12N 2770/36142	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/36143	.....	viral genome or elements thereof as genetic vector
C12N 2770/36144	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/36145	.....	Special targeting system for viral vectors
C12N 2770/36151	....	Methods of production or purification of viral material
C12N 2770/36152	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/36161	....	Methods of inactivation or attenuation
C12N 2770/36162	.....	by genetic engineering
C12N 2770/36163	.....	by chemical treatment
C12N 2770/36164	.....	by serial passage
C12N 2770/36171	....	Demonstrated in vivo effect
C12N 2770/36188	....	For redistribution
C12N 2770/36211	...	Rubivirus, e.g. rubella virus
C12N 2770/36221	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/36222	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/36223	....	Virus like particles [VLP]
C12N 2770/36231	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/36232	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/36233	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/36234	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/36241	....	Use of virus, viral particle or viral elements as a vector
C12N 2770/36242	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/36243	.....	viral genome or elements thereof as genetic vector
C12N 2770/36244	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/36245	.....	Special targeting system for viral vectors
C12N 2770/36251	....	Methods of production or purification of viral material

C12N 2770/36252	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/36261	....	Methods of inactivation or attenuation
C12N 2770/36262	.....	by genetic engineering
C12N 2770/36263	.....	by chemical treatment
C12N 2770/36264	.....	by serial passage
C12N 2770/36271	....	Demonstrated in vivo effect
C12N 2770/36288	....	For redistribution
C12N 2770/38011	..	Tombusviridae
C12N 2770/38021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/38022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/38023	...	Virus like particles [VLP]
C12N 2770/38031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/38032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/38033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/38034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2770/38041	...	Use of virus, viral particle or viral elements as a vector
C12N 2770/38042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/38043	....	viral genome or elements thereof as genetic vector
C12N 2770/38044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/38045	....	Special targeting system for viral vectors
C12N 2770/38051	...	Methods of production or purification of viral material
C12N 2770/38052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/38061	...	Methods of inactivation or attenuation
C12N 2770/38062	....	by genetic engineering
C12N 2770/38063	....	by chemical treatment
C12N 2770/38064	....	by serial passage
C12N 2770/38071	...	Demonstrated in vivo effect
C12N 2770/38088	...	For redistribution
C12N 2770/40011	..	Tymoviridae
C12N 2770/40021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2770/40022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2770/40023	...	Virus like particles [VLP]
C12N 2770/40031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2770/40032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2770/40033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2770/40034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein

C12N 2770/40041	...	Use of virus, viral particle or viral elements as a vector
C12N 2770/40042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2770/40043	....	viral genome or elements thereof as genetic vector
C12N 2770/40044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2770/40045	....	Special targeting system for viral vectors
C12N 2770/40051	...	Methods of production or purification of viral material
C12N 2770/40052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2770/40061	...	Methods of inactivation or attenuation
C12N 2770/40062	....	by genetic engineering
C12N 2770/40063	....	by chemical treatment
C12N 2770/40064	....	by serial passage
C12N 2770/40071	...	Demonstrated in vivo effect
C12N 2770/40088	...	For redistribution

C12N 2780/00 **Naked RNA Viruses (not used)**

C12N 2780/00011	.	Naked RNA Viruses
C12N 2780/00021	..	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2780/00022	..	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2780/00023	..	Virus like particles [VLP]
C12N 2780/00031	..	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2780/00032	..	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2780/00033	..	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2780/00034	..	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2780/00041	..	Use of virus, viral particle or viral elements as a vector
C12N 2780/00042	...	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2780/00043	...	viral genome or elements thereof as genetic vector
C12N 2780/00044	...	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2780/00045	...	Special targeting system for viral vectors
C12N 2780/00051	..	Methods of production or purification of viral material
C12N 2780/00052	...	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2780/00061	..	Methods of inactivation or attenuation
C12N 2780/00062	...	by genetic engineering
C12N 2780/00063	...	by chemical treatment
C12N 2780/00064	...	by serial passage
C12N 2780/00071	..	Demonstrated in vivo effect
C12N 2780/00088	..	For redistribution

C12N 2780/10011	..	Narnaviridae
C12N 2780/10021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2780/10022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2780/10023	...	Virus like particles [VLP]
C12N 2780/10031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2780/10032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2780/10033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2780/10034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2780/10041	...	Use of virus, viral particle or viral elements as a vector
C12N 2780/10042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2780/10043	....	viral genome or elements thereof as genetic vector
C12N 2780/10044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2780/10045	....	Special targeting system for viral vectors
C12N 2780/10051	...	Methods of production or purification of viral material
C12N 2780/10052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2780/10061	...	Methods of inactivation or attenuation
C12N 2780/10062	....	by genetic engineering
C12N 2780/10063	....	by chemical treatment
C12N 2780/10064	....	by serial passage
C12N 2780/10071	...	Demonstrated in vivo effect
C12N 2780/10088	...	For redistribution

C12N 2790/00 **Viroids and subviral agents (not used)**

C12N 2790/00011	.	Viroids and subviral agents
C12N 2790/00021	..	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2790/00022	..	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2790/00023	..	Virus like particles [VLP]
C12N 2790/00031	..	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2790/00032	..	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2790/00033	..	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2790/00034	..	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2790/00041	..	Use of virus, viral particle or viral elements as a vector
C12N 2790/00042	...	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2790/00043	...	viral genome or elements thereof as genetic vector
C12N 2790/00044	...	Chimeric viral vector comprising heterologous viral elements for production of another viral vector

C12N 2790/00045	...	Special targeting system for viral vectors
C12N 2790/00051	..	Methods of production or purification of viral material
C12N 2790/00052	...	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2790/00061	..	Methods of inactivation or attenuation
C12N 2790/00062	...	by genetic engineering
C12N 2790/00063	...	by chemical treatment
C12N 2790/00064	...	by serial passage
C12N 2790/00071	..	Demonstrated in vivo effect
C12N 2790/00088	..	For redistribution
C12N 2790/10011	..	Prions
C12N 2790/10021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2790/10022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2790/10023	...	Virus like particles [VLP]
C12N 2790/10031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2790/10032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2790/10033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2790/10034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2790/10041	...	Use of virus, viral particle or viral elements as a vector
C12N 2790/10042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2790/10043	....	viral genome or elements thereof as genetic vector
C12N 2790/10044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2790/10045	....	Special targeting system for viral vectors
C12N 2790/10051	...	Methods of production or purification of viral material
C12N 2790/10052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2790/10061	...	Methods of inactivation or attenuation
C12N 2790/10062	....	by genetic engineering
C12N 2790/10063	....	by chemical treatment
C12N 2790/10064	....	by serial passage
C12N 2790/10071	...	Demonstrated in vivo effect
C12N 2790/10088	...	For redistribution
C12N 2790/12011	..	Satellite viruses
C12N 2790/12021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2790/12022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2790/12023	...	Virus like particles [VLP]
C12N 2790/12031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2790/12032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2790/12033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis

		inducing or anti-inflammatory
C12N 2790/12034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2790/12041	...	Use of virus, viral particle or viral elements as a vector
C12N 2790/12042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2790/12043	....	viral genome or elements thereof as genetic vector
C12N 2790/12044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2790/12045	....	Special targeting system for viral vectors
C12N 2790/12051	...	Methods of production or purification of viral material
C12N 2790/12052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2790/12061	...	Methods of inactivation or attenuation
C12N 2790/12062	....	by genetic engineering
C12N 2790/12063	....	by chemical treatment
C12N 2790/12064	....	by serial passage
C12N 2790/12071	...	Demonstrated in vivo effect
C12N 2790/12088	...	For redistribution
C12N 2790/14011	..	Viroids
C12N 2790/14021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2790/14022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2790/14023	...	Virus like particles [VLP]
C12N 2790/14031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2790/14032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2790/14033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2790/14034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2790/14041	...	Use of virus, viral particle or viral elements as a vector
C12N 2790/14042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2790/14043	....	viral genome or elements thereof as genetic vector
C12N 2790/14044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2790/14045	....	Special targeting system for viral vectors
C12N 2790/14051	...	Methods of production or purification of viral material
C12N 2790/14052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2790/14061	...	Methods of inactivation or attenuation
C12N 2790/14062	....	by genetic engineering
C12N 2790/14063	....	by chemical treatment
C12N 2790/14064	....	by serial passage
C12N 2790/14071	...	Demonstrated in vivo effect
C12N 2790/14088	...	For redistribution

C12N 2792/00**Archaeabacteria viruses (not used)**

- C12N 2792/00011 . Archaeabacteria viruses
- C12N 2792/00021 .. Viruses as such, e.g. new isolates, mutants or their genomic sequences
- C12N 2792/00022 .. New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
- C12N 2792/00023 .. Virus like particles [VLP]
- C12N 2792/00031 .. Uses of virus other than therapeutic or vaccine, e.g. disinfectant
- C12N 2792/00032 .. Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
- C12N 2792/00033 .. Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
- C12N 2792/00034 .. Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
- C12N 2792/00041 .. Use of virus, viral particle or viral elements as a vector
- C12N 2792/00042 ... virus or viral particle as vehicle, e.g. encapsulating small organic molecule
- C12N 2792/00043 ... viral genome or elements thereof as genetic vector
- C12N 2792/00044 ... Chimeric viral vector comprising heterologous viral elements for production of another viral vector
- C12N 2792/00045 ... Special targeting system for viral vectors
- C12N 2792/00051 .. Methods of production or purification of viral material
- C12N 2792/00052 ... relating to complementing cells and packaging systems for producing virus or viral particles
- C12N 2792/00061 .. Methods of inactivation or attenuation
- C12N 2792/00062 ... by genetic engineering
- C12N 2792/00063 ... by chemical treatment
- C12N 2792/00064 ... by serial passage
- C12N 2792/00071 .. Demonstrated in vivo effect
- C12N 2792/00088 .. For redistribution
- C12N 2792/10011 .. Fuselloviridae
- C12N 2792/10021 ... Viruses as such, e.g. new isolates, mutants or their genomic sequences
- C12N 2792/10022 ... New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
- C12N 2792/10023 ... Virus like particles [VLP]
- C12N 2792/10031 ... Uses of virus other than therapeutic or vaccine, e.g. disinfectant
- C12N 2792/10032 ... Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
- C12N 2792/10033 ... Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
- C12N 2792/10034 ... Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
- C12N 2792/10041 ... Use of virus, viral particle or viral elements as a vector
- C12N 2792/10042 virus or viral particle as vehicle, e.g. encapsulating small organic molecule
- C12N 2792/10043 viral genome or elements thereof as genetic vector
- C12N 2792/10044 Chimeric viral vector comprising heterologous viral elements for production of another viral vector

C12N 2792/10045	....	Special targeting system for viral vectors
C12N 2792/10051	...	Methods of production or purification of viral material
C12N 2792/10052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2792/10061	...	Methods of inactivation or attenuation
C12N 2792/10062	....	by genetic engineering
C12N 2792/10063	....	by chemical treatment
C12N 2792/10064	....	by serial passage
C12N 2792/10071	...	Demonstrated in vivo effect
C12N 2792/10088	...	For redistribution
C12N 2792/12011	..	Guttaviridae
C12N 2792/12021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2792/12022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2792/12023	...	Virus like particles [VLP]
C12N 2792/12031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2792/12032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2792/12033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2792/12034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2792/12041	...	Use of virus, viral particle or viral elements as a vector
C12N 2792/12042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2792/12043	....	viral genome or elements thereof as genetic vector
C12N 2792/12044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2792/12045	....	Special targeting system for viral vectors
C12N 2792/12051	...	Methods of production or purification of viral material
C12N 2792/12052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2792/12061	...	Methods of inactivation or attenuation
C12N 2792/12062	....	by genetic engineering
C12N 2792/12063	....	by chemical treatment
C12N 2792/12064	....	by serial passage
C12N 2792/12071	...	Demonstrated in vivo effect
C12N 2792/12088	...	For redistribution

C12N 2795/00 Bacteriophages (not used)

C12N 2795/00011	.	Bacteriophages
C12N 2795/00021	..	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2795/00022	..	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2795/00023	..	Virus like particles [VLP]

C12N 2795/00031	..	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2795/00032	..	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2795/00033	..	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2795/00034	..	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2795/00041	..	Use of virus, viral particle or viral elements as a vector
C12N 2795/00042	...	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2795/00043	...	viral genome or elements thereof as genetic vector
C12N 2795/00044	...	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2795/00045	...	Special targeting system for viral vectors
C12N 2795/00051	..	Methods of production or purification of viral material
C12N 2795/00052	...	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2795/00061	..	Methods of inactivation or attenuation
C12N 2795/00062	...	by genetic engineering
C12N 2795/00063	...	by chemical treatment
C12N 2795/00064	...	by serial passage
C12N 2795/00071	..	Demonstrated in vivo effect
C12N 2795/00088	..	For redistribution
C12N 2795/10011	..	dsDNA Bacteriophages
C12N 2795/10021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2795/10022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2795/10023	...	Virus like particles [VLP]
C12N 2795/10031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2795/10032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2795/10033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2795/10034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2795/10041	...	Use of virus, viral particle or viral elements as a vector
C12N 2795/10042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2795/10043	....	viral genome or elements thereof as genetic vector
C12N 2795/10044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2795/10045	....	Special targeting system for viral vectors
C12N 2795/10051	...	Methods of production or purification of viral material
C12N 2795/10052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2795/10061	...	Methods of inactivation or attenuation
C12N 2795/10062	....	by genetic engineering
C12N 2795/10063	....	by chemical treatment
C12N 2795/10064	....	by serial passage

C12N 2795/10071	...	Demonstrated in vivo effect
C12N 2795/10088	...	For redistribution
C12N 2795/10111	...	Myoviridae
C12N 2795/10121	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2795/10122	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2795/10123	....	Virus like particles [VLP]
C12N 2795/10131	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2795/10132	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2795/10133	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2795/10134	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2795/10141	....	Use of virus, viral particle or viral elements as a vector
C12N 2795/10142	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2795/10143	.....	viral genome or elements thereof as genetic vector
C12N 2795/10144	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2795/10145	.....	Special targeting system for viral vectors
C12N 2795/10151	....	Methods of production or purification of viral material
C12N 2795/10152	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2795/10161	....	Methods of inactivation or attenuation
C12N 2795/10162	.....	by genetic engineering
C12N 2795/10163	.....	by chemical treatment
C12N 2795/10164	.....	by serial passage
C12N 2795/10171	....	Demonstrated in vivo effect
C12N 2795/10188	....	For redistribution
C12N 2795/10211	...	Podoviridae
C12N 2795/10221	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2795/10222	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2795/10223	....	Virus like particles [VLP]
C12N 2795/10231	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2795/10232	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2795/10233	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2795/10234	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2795/10241	....	Use of virus, viral particle or viral elements as a vector
C12N 2795/10242	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2795/10243	.....	viral genome or elements thereof as genetic vector
C12N 2795/10244	.....	Chimeric viral vector comprising heterologous viral elements for

		production of another viral vector
C12N 2795/10245	.....	Special targeting system for viral vectors
C12N 2795/10251	....	Methods of production or purification of viral material
C12N 2795/10252	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2795/10261	....	Methods of inactivation or attenuation
C12N 2795/10262	.....	by genetic engineering
C12N 2795/10263	.....	by chemical treatment
C12N 2795/10264	.....	by serial passage
C12N 2795/10271	....	Demonstrated in vivo effect
C12N 2795/10288	....	For redistribution
C12N 2795/10311	...	Siphoviridae
C12N 2795/10321	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2795/10322	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2795/10323	....	Virus like particles [VLP]
C12N 2795/10331	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2795/10332	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2795/10333	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2795/10334	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2795/10341	....	Use of virus, viral particle or viral elements as a vector
C12N 2795/10342	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2795/10343	.....	viral genome or elements thereof as genetic vector
C12N 2795/10344	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2795/10345	.....	Special targeting system for viral vectors
C12N 2795/10351	....	Methods of production or purification of viral material
C12N 2795/10352	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2795/10361	....	Methods of inactivation or attenuation
C12N 2795/10362	.....	by genetic engineering
C12N 2795/10363	.....	by chemical treatment
C12N 2795/10364	.....	by serial passage
C12N 2795/10371	....	Demonstrated in vivo effect
C12N 2795/10388	....	For redistribution
C12N 2795/12011	..	dsRNA Bacteriophages
C12N 2795/12021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2795/12022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2795/12023	...	Virus like particles [VLP]
C12N 2795/12031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant

C12N 2795/12032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2795/12033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2795/12034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2795/12041	...	Use of virus, viral particle or viral elements as a vector
C12N 2795/12042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2795/12043	....	viral genome or elements thereof as genetic vector
C12N 2795/12044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2795/12045	....	Special targeting system for viral vectors
C12N 2795/12051	...	Methods of production or purification of viral material
C12N 2795/12052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2795/12061	...	Methods of inactivation or attenuation
C12N 2795/12062	....	by genetic engineering
C12N 2795/12063	....	by chemical treatment
C12N 2795/12064	....	by serial passage
C12N 2795/12071	...	Demonstrated in vivo effect
C12N 2795/12088	...	For redistribution
C12N 2795/14011	..	ssDNA Bacteriophages
C12N 2795/14021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2795/14022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2795/14023	...	Virus like particles [VLP]
C12N 2795/14031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2795/14032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2795/14033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2795/14034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2795/14041	...	Use of virus, viral particle or viral elements as a vector
C12N 2795/14042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2795/14043	....	viral genome or elements thereof as genetic vector
C12N 2795/14044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2795/14045	....	Special targeting system for viral vectors
C12N 2795/14051	...	Methods of production or purification of viral material
C12N 2795/14052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2795/14061	...	Methods of inactivation or attenuation
C12N 2795/14062	....	by genetic engineering
C12N 2795/14063	....	by chemical treatment
C12N 2795/14064	....	by serial passage
C12N 2795/14071	...	Demonstrated in vivo effect

C12N 2795/14088	...	For redistribution
C12N 2795/14111	...	Inoviridae
C12N 2795/14121	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2795/14122	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2795/14123	....	Virus like particles [VLP]
C12N 2795/14131	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2795/14132	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2795/14133	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2795/14134	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2795/14141	....	Use of virus, viral particle or viral elements as a vector
C12N 2795/14142	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2795/14143	.....	viral genome or elements thereof as genetic vector
C12N 2795/14144	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2795/14145	.....	Special targeting system for viral vectors
C12N 2795/14151	....	Methods of production or purification of viral material
C12N 2795/14152	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2795/14161	....	Methods of inactivation or attenuation
C12N 2795/14162	.....	by genetic engineering
C12N 2795/14163	.....	by chemical treatment
C12N 2795/14164	.....	by serial passage
C12N 2795/14171	....	Demonstrated in vivo effect
C12N 2795/14188	....	For redistribution
C12N 2795/14211	...	Microviridae
C12N 2795/14221	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2795/14222	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2795/14223	....	Virus like particles [VLP]
C12N 2795/14231	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2795/14232	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2795/14233	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2795/14234	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2795/14241	....	Use of virus, viral particle or viral elements as a vector
C12N 2795/14242	.....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2795/14243	.....	viral genome or elements thereof as genetic vector
C12N 2795/14244	.....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector

C12N 2795/14245	.....	Special targeting system for viral vectors
C12N 2795/14251	....	Methods of production or purification of viral material
C12N 2795/14252	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2795/14261	....	Methods of inactivation or attenuation
C12N 2795/14262	.....	by genetic engineering
C12N 2795/14263	.....	by chemical treatment
C12N 2795/14264	.....	by serial passage
C12N 2795/14271	....	Demonstrated in vivo effect
C12N 2795/14288	....	For redistribution
C12N 2795/16011	..	ssRNA Bacteriophages negative-sense
C12N 2795/16021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2795/16022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2795/16023	...	Virus like particles [VLP]
C12N 2795/16031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2795/16032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2795/16033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2795/16034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2795/16041	...	Use of virus, viral particle or viral elements as a vector
C12N 2795/16042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2795/16043	....	viral genome or elements thereof as genetic vector
C12N 2795/16044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2795/16045	....	Special targeting system for viral vectors
C12N 2795/16051	...	Methods of production or purification of viral material
C12N 2795/16052	.....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2795/16061	...	Methods of inactivation or attenuation
C12N 2795/16062	....	by genetic engineering
C12N 2795/16063	....	by chemical treatment
C12N 2795/16064	....	by serial passage
C12N 2795/16071	...	Demonstrated in vivo effect
C12N 2795/16088	...	For redistribution
C12N 2795/18011	..	ssRNA Bacteriophages positive-sense
C12N 2795/18021	...	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2795/18022	...	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2795/18023	...	Virus like particles [VLP]
C12N 2795/18031	...	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2795/18032	...	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2795/18033	...	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis

		inducing or anti-inflammatory
C12N 2795/18034	...	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2795/18041	...	Use of virus, viral particle or viral elements as a vector
C12N 2795/18042	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2795/18043	....	viral genome or elements thereof as genetic vector
C12N 2795/18044	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2795/18045	....	Special targeting system for viral vectors
C12N 2795/18051	...	Methods of production or purification of viral material
C12N 2795/18052	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2795/18061	...	Methods of inactivation or attenuation
C12N 2795/18062	....	by genetic engineering
C12N 2795/18063	....	by chemical treatment
C12N 2795/18064	....	by serial passage
C12N 2795/18071	...	Demonstrated in vivo effect
C12N 2795/18088	...	For redistribution
C12N 2795/18111	...	Leviviridae
C12N 2795/18121	....	Viruses as such, e.g. new isolates, mutants or their genomic sequences
C12N 2795/18122	....	New viral proteins or individual genes, new structural or functional aspects of known viral proteins or genes
C12N 2795/18123	....	Virus like particles [VLP]
C12N 2795/18131	....	Uses of virus other than therapeutic or vaccine, e.g. disinfectant
C12N 2795/18132	....	Use of virus as therapeutic agent, other than vaccine, e.g. as cytolytic agent
C12N 2795/18133	....	Use of viral protein as therapeutic agent other than vaccine, e.g. apoptosis inducing or anti-inflammatory
C12N 2795/18134	....	Use of virus or viral component as vaccine, e.g. live-attenuated or inactivated virus, VLP, viral protein
C12N 2795/18141	....	Use of virus, viral particle or viral elements as a vector
C12N 2795/18142	....	virus or viral particle as vehicle, e.g. encapsulating small organic molecule
C12N 2795/18143	....	viral genome or elements thereof as genetic vector
C12N 2795/18144	....	Chimeric viral vector comprising heterologous viral elements for production of another viral vector
C12N 2795/18145	....	Special targeting system for viral vectors
C12N 2795/18151	....	Methods of production or purification of viral material
C12N 2795/18152	....	relating to complementing cells and packaging systems for producing virus or viral particles
C12N 2795/18161	....	Methods of inactivation or attenuation
C12N 2795/18162	....	by genetic engineering
C12N 2795/18163	....	by chemical treatment
C12N 2795/18164	....	by serial passage
C12N 2795/18171	....	Demonstrated in vivo effect
C12N 2795/18188	....	For redistribution

C12N 2799/00**Uses of viruses****WARNING**

From March 15, 2012 codes in the range [C12N 2799/00](#) - [C12N 2799/06](#) are no longer used for the classification of new documents. The documents in this range are being reclassified to the corresponding codes in M12N710-M12N795

- [C12N 2799/02](#) . as vector
- [C12N 2799/021](#) . . for the expression of a heterologous nucleic acid
- [C12N 2799/022](#) . . . where the vector is derived from an adenovirus
- [C12N 2799/023](#) . . . where the vector is derived from a poxvirus
- [C12N 2799/025](#) . . . where the vector is derived from a parvovirus
- [C12N 2799/026](#) . . . where the vector is derived from a baculovirus
- [C12N 2799/027](#) . . . where the vector is derived from a retrovirus
- [C12N 2799/028](#) . . . where the vector is derived from a herpesvirus
- [C12N 2799/04](#) . . in vivo
- [C12N 2799/06](#) . . in vitro

C12N 2800/00**Nucleic acids vectors**

- [C12N 2800/10](#) . Plasmid DNA
- [C12N 2800/101](#) . . for bacteria
- [C12N 2800/102](#) . . for yeast
- [C12N 2800/103](#) . . for invertebrates
- [C12N 2800/105](#) . . . for insects
- [C12N 2800/106](#) . . for vertebrates
- [C12N 2800/107](#) . . . for mammalian
- [C12N 2800/108](#) . . episomal vectors
- [C12N 2800/20](#) . Pseudochromosomes, minichromosomes
- [C12N 2800/202](#) . . of bacteriophage origin
- [C12N 2800/204](#) . . of bacterial origin, e.g. BAC
- [C12N 2800/206](#) . . of yeast origin, e.g. YAC, 2u
- [C12N 2800/208](#) . . of mammalian origin, e.g. minichromosome
- [C12N 2800/22](#) . Vectors comprising a coding region that has been codon optimised for expression in a respective host
- [C12N 2800/24](#) . Vectors characterised by the absence of particular element, e.g. selectable marker, viral origin of replication
- [C12N 2800/30](#) . Vector systems comprising sequences for excision in presence of a recombinase, e.g. loxP or FRT
- [C12N 2800/40](#) . Systems of functionally co-operating vectors

- C12N 2800/50 . Vectors for producing vectors
- C12N 2800/60 . Vectors containing traps for, e.g. exons, promoters
- C12N 2800/70 . Vectors containing special elements for cloning, e.g. topoisomerase, adaptor sites
- C12N 2800/80 . Vectors containing sites for inducing double-stranded breaks, e.g. meganuclease restriction sites
- C12N 2800/90 . Vectors containing a transposable element
- C12N 2800/95 . Protection of vectors from inactivation by agents such as antibodies or enzymes, e.g. using polymers

- C12N 2810/00 Vectors comprising a targeting moiety**
- C12N 2810/10 . Vectors comprising a non-peptidic targeting moiety
- C12N 2810/40 . Vectors comprising a peptide as targeting moiety, e.g. a synthetic peptide, from undefined source
- C12N 2810/405 .. Vectors comprising RGD peptide
- C12N 2810/50 . Vectors comprising as targeting moiety peptide derived from defined protein
- C12N 2810/55 .. from bacteria
- C12N 2810/60 .. from viruses
- C12N 2810/6009 ... dsDNA viruses
- C12N 2810/6018 Adenoviridae
- C12N 2810/6027 ... ssDNA viruses
- C12N 2810/6036 ... DNA rev transcr viruses
- C12N 2810/6045 ... RNA rev transcr viruses
- C12N 2810/6054 Retroviridae
- C12N 2810/6063 ... ds RNA viruses
- C12N 2810/6072 ... negative strand RNA viruses
- C12N 2810/6081 rhabdoviridae, e.g. VSV
- C12N 2810/609 ... positive strand RNA viruses
- C12N 2810/65 .. from plants
- C12N 2810/70 .. from fungi
- C12N 2810/75 .. from invertebrates
- C12N 2810/80 .. from vertebrates
- C12N 2810/85 ... mammalian
- C12N 2810/851 from growth factors ; from growth regulators
- C12N 2810/852 from cytokines ; from lymphokines ; from interferons
- C12N 2810/853 from tumor necrosis factor, TNF
- C12N 2810/854 from hormones
- C12N 2810/855 from receptors ; from cell surface antigens ; from cell surface determinants

C12N 2810/856	.....	from integrins
C12N 2810/857	....	from blood coagulation or fibrinolysis factors
C12N 2810/858	....	from apolipopptides
C12N 2810/859	....	from immunoglobulins
C12N 2810/90	...	avian

C12N 2820/00 Vectors comprising a special origin of replication system

C12N 2820/002	.	inducible or controllable
C12N 2820/005	.	cell-cycle regulated
C12N 2820/007	.	tissue or cell-specific
C12N 2820/10	.	multiple origins of replication
C12N 2820/55	.	from bacteria
C12N 2820/60	.	from viruses
C12N 2820/65	.	from plants
C12N 2820/70	.	from fungi
C12N 2820/702	..	yeast
C12N 2820/704	...	S. cerevisiae
C12N 2820/706	...	S. pombe
C12N 2820/708	...	C. albicans
C12N 2820/75	.	from invertebrates
C12N 2820/80	.	from vertebrates
C12N 2820/85	..	mammalian
C12N 2820/90	..	avian

C12N 2830/00 Vector systems having a special element relevant for transcription

C12N 2830/001	.	controllable enhancer/promoter combination
C12N 2830/002	..	inducible enhancer/promoter combination, e.g. hypoxia, iron, transcription factor
C12N 2830/003	...	tet inducible
C12N 2830/005	..	repressible enhancer/promoter combination, e.g. KRAB
C12N 2830/006	...	tet repressible
C12N 2830/007	.	cell cycle specific enhancer/promoter combination
C12N 2830/008	.	cell type or tissue specific enhancer/promoter combination
C12N 2830/15	.	chimeric enhancer/promoter combination

C12N 2830/20	. transcription of more than one cistron
C12N 2830/205	.. bidirectional
C12N 2830/30	. being an enhancer not forming part of the promoter region
C12N 2830/32	. being an silencer not forming part of the promoter region
C12N 2830/34	. being a transcription initiation element
C12N 2830/36	. being a transcription termination element
C12N 2830/38	. being a stuffer
C12N 2830/40	. being an insulator
C12N 2830/42	. being an intron or intervening sequence for splicing and/or stability of RNA
C12N 2830/46	. elements influencing chromatin structure, e.g. scaffold/matrix attachment region, methylation free island
C12N 2830/48	. regulating transport or export of RNA, e.g. RRE, PRE, WPRE, CTE
C12N 2830/50	. regulating RNA stability, not being an intron, e.g. poly A signal
C12N 2830/52	. encoding ribozyme for self-inactivation
C12N 2830/55	. from bacteria
C12N 2830/60	. from viruses
C12N 2830/65	. from plants
C12N 2830/70	. from fungi
C12N 2830/702	.. yeast
C12N 2830/704	... S. cerevisiae
C12N 2830/706	... S. pombe
C12N 2830/708	... C. albicans
C12N 2830/75	. from invertebrates
C12N 2830/80	. from vertebrates
C12N 2830/85	.. mammalian
C12N 2830/90	.. avian
C12N 2840/00	Vectors comprising a special translation-regulating system
C12N 2840/002	. controllable or inducible
C12N 2840/005	. cell cycle specific

- C12N 2840/007 . cell or tissue specific
- C12N 2840/10 . regulates levels of translation
- C12N 2840/102 . . inhibiting translation
- C12N 2840/105 . . enhancing translation
- C12N 2840/107 . . inhibiting translational read-through
- C12N 2840/20 . translation of more than one cistron
- C12N 2840/203 . . having an IRES
- C12N 2840/206 . . . having multiple IRES
- C12N 2840/44 . being a specific part of the splice mechanism, e.g. donor, acceptor
- C12N 2840/445 . . for trans-splicing, e.g. polypyrimidine tract, branch point splicing
- C12N 2840/50 . utilisation of non-ATG initiation codon

NOTE

This groups covers artificial modification only, i.e. naturally occurring use of non-ATG start codon is not classified here

- C12N 2840/55 . from bacteria
- C12N 2840/60 . from viruses
- C12N 2840/65 . from plants
- C12N 2840/70 . from fungi
- C12N 2840/702 . . yeast
- C12N 2840/704 . . . S. cerevisiae
- C12N 2840/706 . . . S. pombe
- C12N 2840/708 . . . C. albicans
- C12N 2840/75 . from invertebrates
- C12N 2840/80 . from vertebrates
- C12N 2840/85 . . mammalian
- C12N 2840/90 . . avian

C12N 2999/00 Further aspects of viruses or vectors not covered by the M12N700 or M12N800 series

NOTE

This group is for classification of patent and non-patent literature documents.

When classifying non-patent literature in this group, classification must also be

given for the relevant CPC groups, to define the technical area to which they relate.

- C12N 2999/002 . Adverse teaching
- C12N 2999/005 . Biological teaching, e.g. a link between protein and disease, new virus causing pandemic
- C12N 2999/007 . Technological advancements, e.g. new system for producing known virus, cre-lox system for production of transgenic animals